

Dilapidated Abandoned Buildings (DABs)
and Socio-Spatial Vulnerability:

Application of Spatial Liminality
for Revitalising Historic Iranian Cities

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Abstract

The research seeks to identify socio-spatial vulnerability through the lens of liminality to recalibrate current revitalisation programs and policies in historic Iranian cities. The research identifies dilapidated-abandoned buildings (DABs) as a potential threat and an emerging problem since the 1930s. DABs initiated when modern roads cut through the fabric of historic urban environments. DABs have a deleterious effect, created as a result of modern socio-spatial transformation. Such problems have stigmatised Iranian cities and transformed them into super-cheap immigrant ghettos. DABs and historic areas are neither evincing their previous characteristics (e.g. structure/land use) nor becoming a part of contemporary cities. Therefore, both DABs and heritage fabrics are suspended in-between the old and new, in a state that could be considered as a 'liminal' condition.

This exploratory case study has discovered two types of spatial liminality in historic Iranian cities. Firstly, type-A, which has become associated with the influx of non-local disadvantaged residents, who attempt to obtain cheaper housing options in conditions similar to refugee camps. Type-A can assist individuals or groups in non-Iranian disadvantaged communities experience their liminal rites of passage. The liminal population may become vulnerable, suspended in-between their past and future. Secondly, type-B, which may be extrapolated to have existed among residents during the medieval epoch in historic urban contexts. Type-B endows a strong sense of territorial-interdependence on residents, which facilitates rites of passage among heterogeneous social groups in traditional neighbourhoods.

As a quantitative inquiry, the research sets up a numerical method for understanding correlations between DABs and several aspects of spatial liminality, specified by ordinal/categorical variables. Thus, mixed methods in data collection and analysis is used, based on pilot studies, street surveys, field studies and in-depth interviews. The investigation was conducted in fifteen urban blocks selected as case studies, located in seven urban tissues in three historic Iranian cities of Kashan, Isfahan and Yazd. The collected data is analysed through four layers of spatial liminality, namely: spatial, demographic, and attitudinal, along with an inquiry of the implications regarding the current planning context. Data analysis is conducted to measure the maximum variation of DABs as a dependent variable against several aspects of spatial liminality as independent variables in selected urban blocks. The analysis demonstrates a significant association between the extent of DABs, levels of spatial liminality, the devaluation of properties and ramifications of the current socio-spatial planning context.

The discourse highlights spatial liminality as an analytical tool for understanding the vulnerability of DABs in historic Iranian cities. The argument explicitly advocates that because of their deleterious-liminal qualities, DABs need to be re-utilised into existing land resources, while maintaining their cultural heritage value, to provide pathways out of liminality type-A. The discussion elaborates on urban elements that facilitate spatial liminality type-B in historic Iranian cities. This interpretation demonstrates a guideline that can facilitate morphologically-informed design methods, precisely in historic areas where there are no reasonable economic stimulations for reutilising DABs. The research allows practitioners, policymakers and academicians to understand the revitalisation of historic cities through the lens of spatial liminality.

Keywords: Spatial liminality, dilapidated abandoned buildings (DABs), socio-spatial vulnerability, revitalisation of historic cities, territorial interdependence.

Thesis Declaration

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name, in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

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Glossary of Key Terms

Term	Definition
Active urban areas	Urban areas where local Iranian residents live or occupy excluding DABs and refugee settlements
Dilapidated abandoned buildings (DABs)	Disused buildings, land areas and/or urban fabrics in a state of disrepair or ruin as a result of age, neglect or abandonment
Historic Iranian and Middle-Eastern cities	Active human settlements strongly conditioned by a physical structure originating in the medieval era in Iranian and Middle Eastern cities. Abandoned cities and monumental or archaeological complexes are excluded because they lack a continuous organized social life.
In-between threshold spaces	An opening and intermediate space that generates an invisible barrier indicating inside or outside usually at the same time. In historic neighbourhoods of Middle Eastern and Iranian cities, identity-territorialities had been inevitably formulated due to socio-spatial interactions attributed to such osmotic borders (i.e. in-between spaces/thresholds), which in turn generated a strong sense of belonging to place among cohorts in a social group.
Liminality (Anthropology)	Relating to a transitional or initial stage of a process situated at a sensory threshold, during which participating individuals or social groups lack social status or rank, remain anonymous, show obedience and humility, and follow prescribed forms of conduct. In a state of suspension, separated from their previous conditions and not yet incorporated into a new one, they may become vulnerable, constitute a threat to themselves and the entire group.
Local Iranian residents	Iran-born persons who live in historic cities of Iran permanently or on a long-term basis
Non-local disadvantaged residents	Individuals or groups of persons that experience a higher risk of poverty, social exclusion, discrimination and violence than the general-local population, including, ethnic minorities refugees and poor migrants in historic Iranian/Middle-Eastern cities.
Prophetic Zoning	Urban zoning for the Muslim environment implemented by Prophet Muhammad upon his arrival in Qubah (in 662 AD), where he granted the quarters for tribes with different, though homogeneous, ethnic backgrounds without consideration of wealth or poverty; i.e. an attempt to maintain social unity and relationship amongst members of each tribe and between the tribes themselves.
Refugee settlements	Deteriorated or ruined urban areas where non-local disadvantaged residents and/or poor foreign refugees are settled inside historic Iranian cities, due to excessive poverty. Such locations may include, but not limited to historic areas of Yazd, Kashan and Isfahan in Iran.

Revitalisation of historic cities	Physical intervention for the reconstruction of building activities, and/or modification/preservation of places for compatible use, and/or adaptation processes which include alteration and addition of new life into historic cities while retaining their cultural heritage value
Rites of passage	Ceremonies that mark the passage of an individual or social group from one status to another (e.g. birth, puberty, death), from those rites which mark transitions in the passage of time, for instance, harvesting and New Year, or social revolutions, and usually involve ritual activities and teachings designed to strip individuals of their original roles and prepare them for new roles.
Social grouping	A group of people who interact with one another, share similar characteristics formed and structured by mutual language, ethnicity, profession, religious affiliation, etc., and collectively have a sense of unity.
Socio-spatial vulnerability	The inability of people and communities to withstand adverse impacts from multiple social and spatial stressors to which they are exposed.
Spatial liminality	A transient condition where space can solely generate liminality amongst participating individuals or social groups, indicating socio-spatial vulnerability. The spatial dimension of liminality can include specific places such as refugee camps, processing centres and refugee settlements in historic cities or similar conditions. On a grander scale, spatial liminality can include parts of a city or traditional neighbourhoods, larger district or areas, or entire countries and even larger regions.
Spatial liminality type-A	A liminal situation when refugees/nonlocal disadvantaged residents exist in a state of suspension where they have lost their former status as members of a community in their homeland but have not been able to join the surrounding society in their new location, whether living in refugee camps or semi-restricted ghettos in historic cities.
Spatial liminality type-B	A liminal situation where social groups or diverse societies establish territorial interdependence, based on reciprocal exchange. Type-B can engender the rite of passage amongst subjected communities as a result of their spatial positioning via in-between threshold spaces.
Territorial interdependence	The dependence of two or more adjacent social groups that are/were identified by their specific territoriality via in-between threshold space. Such socio-spatial interdependence facilitated the rites of passage amongst neighbouring communities during the medieval era in historic Iranian/Middle-Eastern cities.
Territoriality	Persistent attachment to a specific territory and the monopolisation of space by a social group that limits the outsider's access to such monopolised areas

List of Abbreviations

CAPMAS	.....Central Agency for Public Mobilization and Statistics (Egypt)
CBD	.....Central Business District
CIAM	.....Congrès Internationaux d'Architecture Moderne
DABs	.....Dilapidated Abandoned Buildings
EU	.....European Union
ICCROM	..... International Centre for the Conservation and Restoration of Monuments
ICHHTO	.....Iran Cultural Heritage, Handcraft and Tourism Organization
ICOMOS	.....International Council on Monuments and Sites
IUCN	.....International Union for Conservation of Nature
JCP	.....Japan planners, Architects and consulting engineering (Japan)
JCPOA	.....The Joint Comprehensive Plan of Action
MRUD	.....Ministry of Roads and Urban Development (Iran)
MS	.....Ministry of State (Iran)
NGO	.....None Governmental Organization
NJP Consultants	.....Naghsh-i-Jahan Pars Consultants (Iran)
NOUH	.....National Organisation for Urban Harmony (Egypt)
OUV	.....Outstanding Universal Value
UK	.....United Kingdom
UNESCO	.....United Nations Educational, Scientific and Cultural Organization
USA	.....United States of America
USSR	..... Union of Soviet Socialist Republics
WHL	.....World Heritage List
WHS	.....World Heritage Site
WWII	.....World War II

**Part I: Definition of spatial liminality
in historic Iranian cities**

Chapter 1: Introduction



A dilapidated abandoned building in historic Kashan, 2018 (Source: author)

1.1. Preamble

Today, urban deterioration is a socio-spatial process by which a previously functioning city, or part of it, falls into disrepair and infirmity. Such a deterioration process may encompass modern cities as well as historic urban fabrics worldwide (Skifter Andersen, 2003). In this regard, the key factor underlying the problem is not solely population growth but a combination of rapidly expanding surrounding settlements, lower land value, and overcrowded and deteriorated dwellings (Tolksdorf, 2013). Another major factor which can generate serious urban problems is the failure of city authorities to ensure sufficient sanitation, waste collection and health care (Koop & van Leeuwen, 2017), as well as the inability of government agencies to adapt their institutional frameworks in order to deal with rapidly changing urban forms and contexts (Pelling, 2003).

Such urban problems project an extensive risk, pertaining to premature death, injury, impoverishment, and destruction of buildings and infrastructure (Dodman et al., 2013). Thus, the concept of vulnerability is claimed to be a proper indicator for measuring such socio-spatial problems in deteriorated urban areas (Bankoff et al., 2004). In this sense, vulnerability is not synonymous with poverty but means defencelessness, insecurity and exposure to risk, shocks and stress (Wratten, 1995). Today, an unprecedented urban decline in Iranian historic cities has generated extensive socio-spatial vulnerability issues among local and non-local residents (Ebadati & Adib, 2012). In this case, poverty is just one aspect of social-spatial vulnerability and can be measured as the condition of people at a specific moment in time (Moser, 1998).

On the other hand, measuring vulnerability demands much more forward thinking, so in contrast to poverty, the examination of vulnerability needs to focus on possible future exposure to risk and sensitivity (Cafiero & Vakis, 2006; Chaudhuri et al., 2002). Accordingly, the current thesis aims to redefine the socio-spatial vulnerability of residents through a new epistemological lens (i.e. spatial liminality), for the purpose of revitalising historic Iranian cities. Hence, due to the complexities of a city, such theoretical frameworks are needed to explore the location decisions of utility-maximizing households and profit-maximizing firms, by showing how market forces, land use, transportation, housing, government policies and public policy decisions can cause the reformation of cities in different sizes and shapes (Madanipour & Hull, 2017; O'Sullivan, 2012).

1.2. Unprecedented socio-spatial transformation in historic Iranian cities

After hundreds of years of morphological consistency and organic growth, today Iranian cities have become subject to an unprecedented phenomenon that initially occurred at the beginning of the 20th century, when modern lifestyles were introduced in the Middle East. In this sense, modernity demolished the old city walls and dramatically changed the physical-spatial configurations of the old cities (Habibi, 2005). Accordingly, in contemporary Iranian urbanism, it is acknowledged that from the 1920s to 1960s (and during the timespan of the Pahlavi Kingdom) exogenous socio-spatial movements started to reshape historic cities (Pakzad, 2015). Traditional cities have since been carved out and transformed under capitalism and modernity to accommodate vehicular access and modern urban functionalities inside historic urban areas (Figure 1.1).

As a consequence, today traditional commercial structures have lost their consistency and significance, as a result of ever-rising demands for modern modalities (e.g. vehicular accessibility), while contemporary city fringe developments have expanded outwards, stretching far beyond historic centres (Habibi, 2005). Therefore, historic urban fabrics in Iranian cities have mainly been subject to gradual decay, with an exodus of the population and abandonment of buildings. This has been the case for more than half a century, as has been discussed by many urbanists and scholars (Ehlers & Floor, 1993; Faghih, 1976; Habibi, 2010). Such rapid socio-spatial transformation has generated multiple urban issues. For instance, today the residential fabric adjacent to the traditional city have lost its value and the historic city has become devastated with segregated urban textures, which are further depopulated, decayed and destroyed (Habibi, 2010).

Based on such chronic socio-spatial problems, researchers in the Iranian planning context have endeavoured to define visual deterioration as a model for recalibrating revitalisation projects and processes and facilitating incentive policy areas, while it is already proven that such efforts have until now remained substantially ineffective (Masoud & Beigzadeh, 2012). Consequently, this section aims to touch on some of the less-discussed issues relevant to socio-spatial vulnerability and the formation of dilapidated-abandoned buildings (DABs) in the context of historic Iranian cities. In this case, socio-spatial vulnerability signifies the inability of people and communities to withstand adverse impacts from multiple social and spatial stressors associated with DABs.



Figure 1.1: Today, historic cities are carved by new road developments that have turned traditional fabrics into disaggregated and fragmentary urban tissues (Yazd, Iran 2018), (Source: author)

1.2.1. DABs as a chronic problem in historic Iranian cities

As a result of unprecedented contemporary urban transformation in traditional cities, today large areas of historic fabrics could be considered as dilapidated-abandoned buildings (DABs), while some disused areas have existed in this state for more than sixty years (Mohajeri, 2014). In this case, the formation of such uncertain transitional situations (such as DABs and disused historic cores) has been extensively reported (mainly as dilapidated remains) since the reign of the First Pahlavi (Faghih, 1976). Mirmiran (2011, p.63), for example, suggested that in Kashan 12.7% of all historic areas are made up of DABs. He recommended urgent consideration for developing methods which can recycle DABs into active urban land resources.

In Yazd, Behzadfar (2012d, p.73) has also indicated that about 15% of urban areas inside historic fabrics can be considered as DABs, which attract antisocial behaviours, poor communities and generate a perceived (or actual) lack of safety. He also emphasises a need for reutilising DABs in such historic areas. A mass proportion of DABs is also clearly observed and reported as a deleterious phenomenon, even in the major heritage cities of Iran, such as Kerman and Isfahan (Faghih, 1976; Mohajeri, 2014). As a result, today historic Iranian urban centres have transformed into disaggregated and fragmentary fabrics, that have either remained unattended for decades or replaced by new developments that do not have harmonious relationships with their surrounding environs (Masoud & Beigzadeh, 2012). Thus, DABs and their relevant redevelopment regulations can be considered as a challenging concept that has

yet been largely neglected in the context of Iranian historic cities and socio-spatial planning (Figure 1.2).



Figure 1.2: DABs in historic Iranian cities have become a serious socio-spatial problem (Kashan, Iran 2018), (Source: author)

1.2.2. Influx of non-Iranian, disadvantaged communities in Iranian cities

Today, inside Iranian cities, socio-spatial marginality is clearly relevant in the clustering of low-income disadvantaged communities (e.g. foreign refugees); mainly comprising an extremely poor urban social stratum, encompassing families whose household incomes place them marginally above or below the officially defined poverty line (Curtis & Hooglund, 2008). Accordingly, in contemporary cities with populations greater than 250,000, the lower class make up an average of 40% to 50% of the total population; while in larger metropolitan areas (e.g. Yazd with 530,000 residents and Isfahan with about 1.9 million residents) a high ratio of marginal:overall communities exist.

In this case, such disadvantaged communities may settle in cheaper urban areas (such as historic fabrics) because of their financial situation, and of course are in no position to maintain these houses and other properties (Behzadfar, 2012c). Furthermore, smaller historic cities with a population between 50,000 to 250,000 (e.g. Kashan) could generally yield a significant proportion of non-local disadvantaged communities (Mirmiran, 2011) that can be divided into two groups (Curtis & Hooglund, 2008, p.107):

[These groups consist of] the marginally poor, who receive regular incomes on a weekly or monthly basis; and the very poor, whose incomes vary from month to month and who thus experience difficulty in paying

for food, housing and utilities. Recipients of regular incomes include pensioners, industrial and construction workers, and people employed in the diverse services sector, such as attendants in barbershops, beauty salons, and public bathhouses, bakery workers, sales clerks, domestic servants, gardeners, garbage and trash collectors, painters and plasterers (of homes), porters, street cleaners, peddlers, street vendors, office cleaners, and laundry workers. These job categories, as well as others, also include workers who are employed only occasionally or seasonally, primarily as a result of the shortage of full-time positions in an economy that has had an official unemployment rate ranging between 10 and 15 percent of the labour force since the early 1990s...

1.2.3. The formation of informal refugee camps inside historic fabrics

At the current time, it is estimated that there are about one and a half to two million undocumented Afghan refugees present in Iran (Lomax, 2018), among whom 98% are living in Iranian cities (Naseh et al., 2018). Inside old Iranian cities, refugees and exogenous minorities are gradually occupying heritage fabrics while original residents are leaving such areas (Abbaszadeh and Mirzaei, 2014). For instance, from 1996 to 2006 in historic areas of Yazd, the local (Yazd-born) population declined from 54,287 to 42,868 people, of which about 14% (5887 people) were identified as refugees occupying the old city of Yazd (Behzadfar, 2012a).

Arguably, the higher proportion of refugees in historic cities has a meaningful relationship with the 2016 national Census. For example, among the 656,474 people currently living in Yazd, 37,931 (i.e. about 6% of the entire population) are identified as refugees or disadvantaged non-Iranians (Behzadfar, 2012b). Correspondingly, Iranian cities with historic cores had become the first migration destination by 2016.

For instance, among the 42,970 documented refugee population in Iran, 8475 were settled in Yazd between 2011 and 2016. This huge proportion of refugees singles out Yazd, which attracted almost 20% of migrant communities, far ahead of Tehran (the capital city), which attracted only 7.4% of migrants during the same period (Statistical-Centre-of-Iran, 2016). Therefore, such an influx of refugees could be a phenomenon strongly linked to the accumulation of cheaper housing opportunities inside historic urban areas (Abbaszadeh & Mirzaei, 2014).

In Iranian historic Iranian cities, for instance in Kashan, the presence of villagers (i.e. non-local economic migrants) and foreign refugees could be noticeably correlated to the formation of a high ratio of DABs and building deterioration (Figure 1.3). For those whose lives are unstable in the diaspora, it is best to seek sanctuary in minimal living facilities inside historic zones,

which can be quite tolerable to them, either because of their original life in villages or because of their severe poverty and homelessness (Mirmiran, 2011).



Figure 1.3: A refugee settlement within DABs can be seen as an explicit sign of socio-spatial vulnerability in a historic city (March 2018, Kashan, Iran), (Source: author)

1.2.4. The irresponsible nature of historic cities versus modern lifestyle

In the current time, quite in line with the influx of refugees, the lack of vehicular accessibility could be seen as another reason for the emigration of local-Iranian residents and the formation of further DABs in historic cities. In historic Yazd for instance, it is proven that the lack of vehicular accessibility has made original residents leave historic areas, while such emigration has generated inexpensive and unsupervised accommodation opportunities for non-Iranian disadvantaged communities (Behzadfar, 2012d).

Respectively, the lack of vehicular accessibility can be seen as one of the major factors which has encouraged the emigration of original residents, facilitating an influx of refugees and concomitant anti-social behaviours (a consequence of the lack of police control and surveillance) inside the historic city, which in turn has yielded further socio-spatial deterioration (Mirmiran, 2011). Today, such unprecedented socio-spatial transformation has exceedingly undermined social capital in such areas, while residents seriously doubt that authorities can achieve effective change; and this can create further DABs (Andalib, 2010).

Currently, due to narrow winding streets, areas inside historic urban contexts often cannot facilitate vehicular accessibility, which in turn has deprived communities of essential public services (Tavassoli, 1987a). As a result of the irresponsible nature of heritage fabrics, car-

parking on site also remains an insoluble issue, and this also further encourages local residents to leave historic cities (Hanachi et al., 2007). Respectively, the form and spatial arrangements of traditional houses do not respond to modern human needs, and such a lack of spatial responsiveness is causing more DABs and urban dereliction (Tavassoli, 1987b).

Additionally, in Iranian urban heritage cores, many old buildings are unstable and insecure in the face of possible natural disasters, such as earthquakes and floods. In this sense, residents of such dwellings can be perceived as vulnerable and/or disadvantaged, while such negative qualities facilitate further emigration of local residents, and may increasingly attract non-local disadvantaged communities towards historic urban cores (Andalib, 2010).

1.2.5. Lack of sense of belonging to place and emigration of local residents

In historic urban areas, several factors may contribute to a lack of sense of belonging to place among residents, which in turn causes original inhabitants to leave. This lack of sense of belonging to place among residents can happen as a result of lack of sense of place-satisfaction, which in turn may be generated as a result of social-spatial deterioration, the exposure to a large extent of DABs, or lack of vehicular accessibility (Mahdavinejad, 2014). Furthermore, in many circumstances, an absence of a sense of social safety, the existence of hygienic and cultural problems, lack of socio-spatial infrastructure and/or social-capital may also contribute to lack of a sense of belonging, which consequently makes local residents leave heritage cores (Behzadfar, 2012a).

On the other hand, cheaper housing opportunities can be seen as the major reason for immigration of refugees and non-local disadvantaged communities to historic cities (Behzadfar, 2012e). In this sense, cultural incompatibility and unfamiliarity of non-local migrants with traditions, rituals and habits of original residents can generate a social mismatch, which in turn may cause unpleasant socio-spatial consequences and/or a further lack of sense of belonging to place. Moreover, the presence of non-local, disadvantaged residents who are not familiar with heritage values of affected urban tissues can further contribute to the debilitation of historic cores and intensify lack of sense of belonging among all residents (Hanachi et al., 2007).

Accordingly, this issue can be seen to be in line with Shamai (1991). He suggests that a sense of place consists of three phases: 'The first phase is belonging to a place, the middle phase is an attachment to a place, and the highest phase is the commitment to a place' (p.349). Amongst residents of historic cities, the lowest level in the scale of sense of place may be applicable. In

this case, many residents either do not have any sense of belonging or have a limited knowledge of being located in a place (Behzadfar, 2012c).

1.2.6. Identity crisis, DABs and formation of refugee settlements in historic urban fabrics

A lack of place identity can be relevant to the disinterest that residents feel towards their inherited family houses or their current traditional inhabitants. The issue of identity in old Iranian cities is not a new topic (Bazrgar, 2003). Nowadays, in the historic Iranian cities, a lack of a sense of place-identity can be seen to be directly relevant to the rapid socio-spatial transformations that have coincided with the initiation of contemporary lifestyles. Thus, changing trends and developments in technology can be perceived as significant factors that have damaged the sense of place-identity among residents in historic cities (Tavakoli, 2010).

Inside historic urban fabrics, there are meaningful grounds on which to believe that physical deterioration and lack of spatial identity are strongly correlated. For instance, in Kashan there are correlations observable between physical-environmental qualities, levels of social capital, facilitation of socio-spatial infrastructure and the sense of place-identity among residents (Varesi et al., 2013).

Accordingly, lack of a sense of place-identity can cause emigration of the original residents, which in turn can attract exogenous young villagers, refugees, and other minorities to reside in low-cost housing opportunities in historic cities. Since there is no sense of spatial identity and/or belonging to place among exogenous residents, socio-spatial deterioration can be exacerbated (Falamaki, 2015).

A loss of place-identity among residents is widely reported in many historic cities such as Yazd (Behzadfar, 2012c, Tavassoli, 1987b), Kashan (Varesi et al., 2013) and Kermanshah (Mahdavinejad, 2014). Hence, the reiteration of similar themes can clearly establish an assumption regarding a severe identity crisis and its consequent lack of sense of belonging to place, which results from the influx of socio-economic migrants who choose to reside in Iranian historic urban areas for accessing cheap and unsupervised housing options (Figure 1.4).



Figure 1.4: An anti-refugee slogan in historic urban fabrics of Yazd, March 2018 (Source: author)

1.2.7. Preventative restoration/building policies and devaluation of land in historic cities

Today, Iran's Cultural Heritage Handicrafts and Tourism Organization (ICHHTO) along with two other relevant agencies¹ have provided several assemblies of development regulations for implementing building/restoration projects within suggested proximities around historic sites. For example, inside the primary and secondary heritage buffer zones of Kashan, Yazd or Isfahan in Iran, there are building height restrictions up to five meters or less in practice (Iwan-naghsh-jahan, 1996).

Heritage buffer zones are potential, buildable areas inside Iranian historic urban fabrics, although unusual restrictions in land possession and building procedures are producing deleterious effects within such valuable areas. Such red tape can discourage public restoration or other building activities inside historic urban fabrics, further provoking spatial and fabric deterioration in old cities (Abbaszadeh & Mirzaei, 2014).

In addition, inside traditional historic areas, expensive rates for restoration force owners to either abandon or rent their houses out as half-destroyed properties. Accordingly, all factors mentioned together have culminated in a devaluation of land, which could generate further social-spatial marginality inside historic fabrics (Hanachi & Fadaei Nezhad, 2019). Therefore, such deleterious socio-spatial effects also indicate a state of abnormality which, in essence, has

¹ These two relevant agencies are the Ministry for Road and Urban Development and Local Municipalities, further discussed in sections 2.4.6 (see Chapter 2) and 8.3 (see Chapter 8).

formed amorously, and consequently affects larger areas within a historic city (Tavassoli, 1987b).

1.2.8. Inefficiency of revitalisation projects and programs inside historic cities

In the present day, rehabilitation of historic cities in Iran is, for the main part, not seen as a priority among relevant government agencies (Pakseresht, 2017). Such inattention can be happening either because of the obsolete image of historic areas among the public, or lack of technical and/or institutional capability (and capacity) to come to grips with the complex mix of physical and social rehabilitation problems (Balbo, 2012).

Hence, whether the issue is wholesale demolition or widespread neglect of DABs, the common problem is that most decision-makers identify themselves with a development process alien to the cultural traditions of their societies. In this sense, the decision-makers are rarely provided with technical approaches and institutional tools which could demonstrate the viability of alternative, more appropriate models of intervention (Bianca, 2000).

Accordingly, historic urban cores in Iranian cities have been undermined in the various moves for redevelopment. For instance, there has been an underlying emphasis on Western physical-linear regeneration (e.g. urban design methodologies adapted from Kevin Lynch's environmental psychology base that emphasises the urban image) and delivery of flagship projects as a prevalent approach, mainly employed by the central government (Masoud and Beigzadeh, 2012).

Nonetheless, interventions carried out within such physical frameworks have further exacerbated existing problems. Furthermore, current preventative building controls have discouraged building investment in historic areas, a process that has led to further devaluation of land, which may yield more DABs and deteriorated fabrics (Izadi, 2008).

1.3. The research hypothesis

As elaborated in section 1.2, today, the simultaneous growth of DABs and the immigration of exogenous disadvantaged communities towards historic areas could be respectively interpreted as a state of socio-spatial vulnerability. Such transitions can form a deleterious and circular phenomenon, through which the lack of vehicular access along with inefficient planning models can diminish the value of land. This in turn encourages emigration of the original residents and facilitates the immigration of non-Iranian disadvantaged communities to historic cities.

Consequently, such faulty interaction generates further socio-spatial vulnerability, along with, to a larger extent, DABs in historic cities (Figure 1.5).

In this sense, DABs become a tangible (i.e. physical not social) dependent variable suspended between past and present, which may further accelerate the formation of socio-spatial vulnerability. Such undesirable socio-spatial conditions can be suspended between traditional and contemporary urban contexts for a long time. This can create additional physical dilapidation, uncertainty, stigmatization, racism, marginality, the perception and perhaps reality of lack of safety, abandonment, dissatisfaction of residents, criminalities, a lack of sense of belonging to place, and so forth. In this sense, DABs attract even larger clusters of refugees and low-income disadvantaged communities into historic cores of cities.

Based on this hypothesis, the contemporary correlation between the extent of DABs and the formation of such detrimental conditions of ‘in-betweenness’ need to be considered as a serious urban issue, that could disclose socio-spatial vulnerability in historic cities and realistically recalibrate revitalisation projects and policies inside the traditional urban fabrics of Iran.

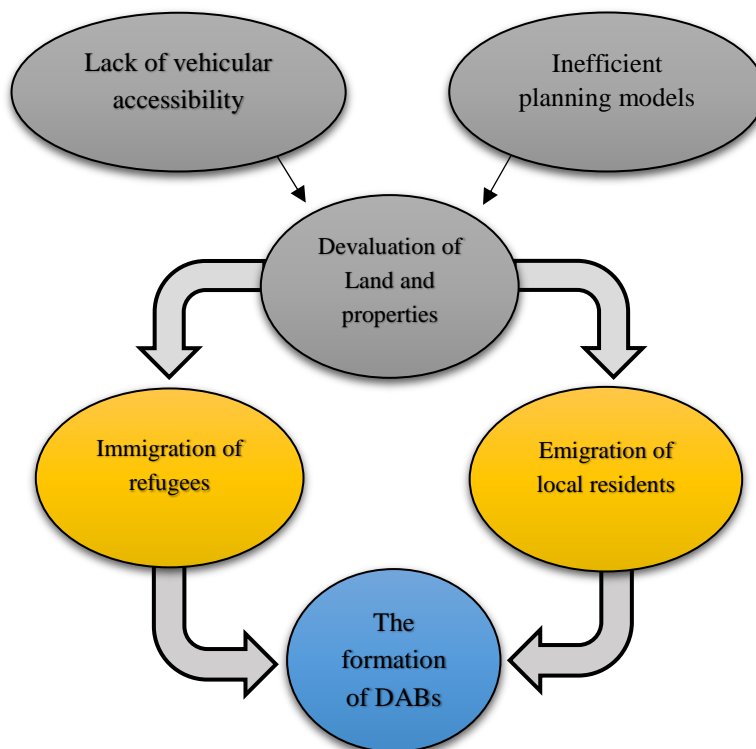


Figure 1.5: The image presents a deleterious-circular phenomenon proposed as a hypothesis in this chapter, which shows how DABs could contribute to the formation of socio-spatial vulnerability in historic Iranian cities

1.4. Aims and objectives

The broad aim of the current research is to provide an innovative method for understanding socio-spatial vulnerability and to develop strategies for revitalising historic Iranian cities. To do so, the research firstly aims to define and identify several aspects of a deleterious and transient situation² in historic cities and compares them against the proportion of DABs in several case studies. Secondly, the research endeavours to exploit the results of the first part (i.e. the correlation between DABs and socio-spatial vulnerability) to inform revitalisation strategies, and to broaden design to include social, cultural and economic strategies. Hence, the objectives of this research can be elaborated in greater detail as per the following:

- A. Identifying DABs as a significant socio-spatial problem in historic Iranian cities (Chapter 1)
- B. Assessing the current conditions of revitalisation projects and processes in historic Iranian cities and worldwide (Chapter 2)
- C. Identifying numerous types of socio-spatial vulnerability, by classifying several deleterious transitory conditions³ in historic Iranian cities, also translating the role of in-between spaces in the formation of progressive transitory conditions amongst social-groups in historic Iranian cities during medieval eras (Chapter 3)
- D. Proposing methods for measuring socio-spatial vulnerability (by understanding transitional conditions) versus the proportion of DABs in historic urban fabrics (Chapter 4)
- E. Investigating correlations between the proportion of DABs versus spatial (factual), demographic and attitudinal aspects of socio-spatial vulnerability in historic Iranian cities (Chapters 5, 6 and 7)
- F. Understanding relationships between the formation of DABs, socio-spatial vulnerability and the current state of socio-spatial planning context in historic Iranian cities (Chapter 8)
- G. Informing revitalisation projects and processes in the current planning context in Iranian historic urban fabrics, based on transitory conditions of DABs and their consequent socio-spatial vulnerability that can be implemented as a reformist guideline in urban design (Chapter 9)

² Such transitory conditions will be measured through the lens of spatial liminality to be elaborated in Chapter 3.

³ See footnote 2.

1.5. Methodology and scope of the research

This thesis deliberates the transitory situations⁴ of residents as an analytical tool for measuring socio-spatial vulnerability associated with DABs, in historic Iranian cities. The scope of the research in the current study is restricted to collecting and analysing several sets of socio-spatial data, in seven urban tissues, among three historic Iranian cities including Kashan, Yazd and Isfahan. The research implements a mixed methods approach primarily based on scrutinising several instrumental case studies. The thesis specifies a comprehensive case-study selection procedure, and by studying the maximum variation of DABs among fifteen urban blocks, as deliberated in Section 4.5 (see Chapter 4). The approach utilised in the current research includes a combination of qualitative and quantitative methods.

There are four major methods of data collection implemented in this research including (1) pilot studies; (2) street surveys; (3) in-depth interviews; and (4) field observations, fully discussed in section 4.6. The methods of data analysis have utilised several computer-based programs, including ArcGIS and SPSS, and they are presented in four layers: (a) spatial analysis, (b) demographic analysis, (c) attitudinal analysis, and (d) socio-spatial planning context analysis (see section 4.7).

Accordingly, spatial analysis has exploited data trimming techniques to investigate factual-transitory qualities in several case studies. Besides, the demographic and attitudinal analyses are separately performed in three sub-levels among all residents, refugee residents and local residents. In this case, data clustering and segmentation techniques are utilised to extrapolate from the analysis and relevant outcomes.

The socio-spatial planning context analysis also includes the results of in-depth interviews analysed by the cutting and sorting procedure and performed by NVivo software. This qualitative process involved identifying quotes or expressions that seem somehow important and relevant. The results of such thematic comparisons later were undertaken through a critical narrative analysis, which formed the backbone of discussion and informed recommendations.

The discussion is formed as a result of triangulating the findings obtained from the four types of analytical approaches (spatial, demographic, attitudinal and socio-spatial planning context) and further supported by conducting several statistical tests including Pearson's correlation and Chi-square tests of independence (see section 4.7.5, Chapter 4).

⁴ The transitory situations amongst residents are equated to a state of “liminality” as discussed in this research.

1.6. Thesis structure

As discussed in section 1.4, this thesis directly responds to each research objective by presenting a separate chapter. The thesis is presented in three parts and consists of ten chapters. Part One (Definition of spatial liminality in historic Iranian cities) tracks and defines transitory conditions in historic urban fabrics and consists of four chapters. Accordingly, Chapter 1 (Introduction) responds to the first objective (A) of the research, regarding the identification of DABs as a significant socio-spatial problem in historic Iranian cities. Chapter 2 (A Critical Literature Review) responds to the second objective (B) while evaluating the current conditions of revitalisation projects and processes in historic cities in Iran and worldwide. Chapter 3 (Spatial Liminality as a Theoretical Framework) responds to the third objective (C), specifies different types of socio-spatial transitory conditions in historic cities and interprets the role of in-between spaces in the formation of progressive transitory conditions amongst social-groups in historic Iranian cities during medieval eras. Chapter 4 (Methodology and Methods) responds to the fourth objective (D) of the research and proposes practical methods for measuring several aspects of transient conditions versus the extent of DABs in historic Iranian cities.

Part Two (Identification of spatial liminality in historic Iranian cities) presents outcomes and critical evaluations regarding the correlation between several aspects of transitory situations and the extent of DABs in three historic cities. Part Two comprises four chapters: Chapter 5 (Spatial Results and Analysis), Chapter 6 (Demographic Results and Analysis) and Chapter 7 (Attitudinal Results and Analysis) will respectively respond to the fifth objective (E) regarding correlations between the extent of DABs and the formation of socio-spatial transitory situations in historic Iranian cities. Chapter 8 (Socio-Spatial Planning Context Analysis) responds to the sixth objective (F), regarding associations between the contemporary socio-spatial planning conditions, transitory situations and the formation of DABs in historic Iranian cities.

Part three (Revitalisation of spatial liminality in historic Iranian cities) presents practical methods for recalibrating revitalisation projects and processes in historic Iranian cities. This final component includes two chapters. Chapter 9 (Discussions) responds to the seventh research objective (G) and informs the revitalisation projects and processes, by interpreting cause and effect of several types of transitory situations in Iranian historic urban fabrics, and implements such transient conditions as an operational guideline for eliminating the harmful effects of DABs in Iranian historic urban fabrics. Finally, Chapter 10 (Conclusions and

Recommendations) recaps the whole discussion, highlights the summary of key findings and original contributions to knowledge, while suggesting recommendations for further research (see Chapter 4, Figure 4.2).

1.7. Summary

This chapter elaborated contemporary problems related to the formation of DABs versus socio-spatial vulnerability in historic Iranian cities. Through an introductory context analysis, it is highlighted that the irresponsive nature of historic urban fabrics (e.g. incapability to accommodate new infrastructures and lack of vehicular accessibility) along with the implementation of inefficient planning models could make local-Iranian residents leave historic areas.

Thus, a hypothesis is developed that the formation of DABs in historic urban areas could be chiefly relevant to the emigration of local-Iranian residents, which in turn may trigger the immigration of refugees and/or non-Iranian disadvantaged communities, that altogether generates more socio-spatial vulnerability. In this sense, a need was articulated for finding new methodological tools that can thoroughly study the correlation between DABs and socio-spatial vulnerability.

The chapter introduces the research aims and objectives and outlines the methodology, the scope of the research and general structure for the present study. The concern of this study focuses on ameliorating socio-spatial vulnerability for the purpose of revitalising historic Iranian cities. To do so, the next chapter will conduct a critical literature review on the concept of urban revitalisation in historic cities in Iran and worldwide. Thus, Chapter 2 will concentrate on identifying gaps in the literature by defining a new methodology for understanding and treating socio-spatial vulnerability accompanied by DABs in historic Iranian cities.

Chapter 2: A Critical Literature Review



Revitalization of historic Yazd 2018 (Source: author)

2.1. Introduction

This chapter reviews the literature and discusses how urban space conservation and regeneration have become vital to historic cities. The literature review covers methods and arguments that both Eastern and Western schools of thought have proposed for revitalising historic urban fabrics. The review starts with a definition of urban regeneration and how it differs with urban conservation and restoration. Contemporary trends toward urban revitalisation in historic cities, global agreements and recommendations are further scrutinised.

In line with sections 1.2.2 and 1.2.3 in Chapter 1, this chapter elaborates that a transitory condition (as an indicator of socio-spatial vulnerability) can be clearly traced in many historic cities around the world. It is argued here that DABs and historic areas are neither evincing their previous characteristics (e.g. structure/land use) nor becoming a part of contemporary cities. In this case, both DABs and heritage fabrics are suspended in-between the old and the new, a state that could be clearly considered as a transitory condition.

The chapter outlines how the influx of poor immigrants in historic cities could also represent a clear state of transition, where non-local disadvantaged communities are suspended between their past and future. As a result of the current literature review, several gaps in the knowledge of urban revitalisation are highlighted that indicate a need for utilising new methodological tools for revitalising historic cities, specifically in Iran and the Middle East. Thus, in response to transitory circumstances in historic urban cores, liminality is viewed as an appropriate epistemological framework for understanding aspects of vulnerability and treating historic urban fabrics.

It is specified that liminality as an analytical tool in historic Iranian cities (solely or in conjunction with DABs) has never been subject to academic investigation, nor has this term been used for understanding current conditions of socio-spatial vulnerability. Thus, the chapter proposes an approach for studying correlational aspects of DABs and socio-spatial vulnerability, via the lens of liminality.

2.2. The assembly of historic cities

A city can be formed as a result of multiple factors such as population development, economic considerations, the morphology of military necessities, sociological humanistic interactions, religious-cultural reasons and infrastructure needs, technological activities and geopolitical affairs of which clean running water is the most critical to human settlement (Kostof, 2005).

Such complex exchanges can affect the standard of living and levels of mobility in historic cities. Nonetheless, the morphology of a city can be shaped as the result of the evolution of spatial, social and cultural contexts specified by two processes, namely planned and semi-organic developments (Kostof, 2019). While planning cannot be separated from its spatial configurations, the city as a whole includes two significant and intertwined aspects: physical features as a manifestation of spatial elements, and the human aspect as subject and user of spatial elements (Permana et al., 2019).

2.3. Socio-spatial deterioration and global rehabilitation of historic cities

All natural structures and human built environments are subject to constant deterioration, and in this sense urban decay can be seen as an indispensable part of urban life, which may occur at different paces and for various reasons (Moffatt & Kohler, 2008). Urban deterioration is a result of interrelated socio-economic conditions, which may be caused by de-industrialisation, a lower land value, economic breakdown and failure of businesses, which in turn lead to increased crime rates, growing unemployment and rising poverty (Breger, 1967).

These conditions are evident in abandoned buildings, overrun sewers, trash and rubble on the streets, and a deserted landscape (Leone, 1976; Madanipour, 2004). Another compelling reason for the generation of urban decay can be socio-economic development of nearby areas, to which the population has migrated for better opportunities (Daroudi & Sami, 2016; Madanipour, 2017), not unlike the historic cities of Iran (see section 1.2, Chapter 1).

Urban deterioration can impose a deleterious effect on historic cities, creating disorganisation, imbalance, a decline in socio-spatial characteristics, illegibility, lack of vehicular accessibility and a shortage of socio-physical urban infrastructure, that can eradicate social-spatial memories (Abdelmonem & Selim, 2012). In this case, three types of socio-spatial scenarios may be evident. Firstly, social-functional deterioration accompanies unflawed spaces; secondly, when physical deterioration is accompanied by vigorous socio-spatial functionality and thirdly, when both social and spatial deterioration occur simultaneously (Hanachi & Fadaei Nezhad, 2019).

2.3.1. Definitions of revitalisation in historic cities

Today, methods of urban revitalisation may include several approaches from mere preservation to physical intervention or a combination of both (Doratli, 2005). The levels of intervention for the revitalisation of historic cities should be directed by the cultural heritage value of a place, and the policies for its management as identified in a conservation plan. Any intervention that would lessen or compromise cultural heritage value is objectionable and should not occur (ICOMOS, 1993).

In this thesis, the definition of urban revitalisation explicitly indicates physical intervention for the reconstruction of building activities, and/or modification of places for compatible use, and/or adaptation processes which include alteration and addition of new life into historic cities while retaining their cultural heritage value. In this sense, the preservation and restoration of historic sites and buildings are generally outside the scope of this thesis (Table 2.1).

Table 2.1: Proposed methods for conservation-regeneration of places of cultural heritage value (ICOMOS, 1993)

Type of intervention	Description of the activity
Conservation	Maintaining the structure of a building in its current state by slowing down its deterioration, which involves as little intervention as possible, to ensure its long-term survival and the continuation of its cultural heritage value
Stabilisation	Processes of decay should be slowed by providing treatment or support
Maintenance	Cultural heritage should be maintained regularly and the work must be carried out according to a plan or work program
Repair	Any repair in historic buildings should utilise matching or similar materials and where it is necessary to employ new materials, they should be distinguishable by experts, and should be documented
Restoration	Returning the existing fabric of a place to the known earlier state by reassembly and reinstatement, which may involve the removal of accretions that detract from cultural heritage value of a place
Assembly- Reinstatement	Uses existing material and, through the process of reinstatement, returns it to its former position. Reassembly is more likely to involve work on the part of a place rather than the whole place
Removal	May be implemented for reasons of advanced decay, or loss of structural integrity. Removal also may be implemented because of the particular fabric which has been identified in a conservation plan as detracting from the cultural heritage value of the place
Reconstruction*	Reconstruction is distinguished from restoration by the introduction of new material to replace the material that has been lost
Adaptation*	Proposals for adaptation of a place may arise from maintaining its continuing use or contains any work to a building in order to change its function, performance and capacity
*The act of urban revitalisation as suggested in this thesis	

2.3.2. Urban revitalisation in historic cities

The revitalisation of historic sites and human built environments encompass a very long history which dates back to the development of early civilisations, who perceived continuous and symbolic meanings in buildings that received religious veneration (Jokilehto, 2002). Physical intervention for the revitalisation of heritage cities was first implemented in the 16th century

by Pope Sixtus V (Frommel, 1986). Inspired by the ideal of the Renaissance city, his ambitious urban reform program transformed the old environment to emulate the 'long straight streets, wide regular spaces, uniformity and repetitiveness of structures, lavish use of commemorative and ornamental elements, and maximum visibility from both linear and circular perspectives to attract pilgrims (Petrucci & Lappin, 1993, p.38). The first experience of physical revitalisation in historic cities after the industrial revolution was employed by Barron Haussmann in Paris, between 1853 and 1870 (Jordan, 1992). It included: the demolition of medieval neighbourhoods considered overcrowded and unhealthy; the construction of broad avenues; new parks and squares; the appropriation of the suburbs surrounding Paris; and the creation of new sewers, fountains and channels (Jordan, 1996).

In response to deleterious effects of urban decay in historic cities worldwide since the 18th century, several global movements such as The Society of Antiquaries of London have reiterated a need for revitalisation of heritage sites and cultural properties (Murray, 2008). Since the 1970s, historic cities have undergone a reassessment of their importance. The first wave of historic preservation policies/programs protected individual buildings and structures, while the second wave was concerned with groups of historic buildings, townscape, and the spaces in-between buildings (Heath et al., 2013). Two leading proponents of preservation and revitalisation in the 20th century were UNESCO and CIAM. Such organisations were generated in response to Modernism and its architectural viewpoint, which avoided sentimental attachment to heritage built environments, in favour of technological and architectural progress and change (Zuccari & Larson, 2017). In the 21st century, historic revitalisation is largely associated with city planning and development. Advocates promote preservation as a key driver of urban revitalisation, however, there is a shortage of empirical research that addresses this connection (Ryberg-Webster & Kinahan, 2014).

2.3.3. UNESCO, CIAM, Council of Europe and other international organisations

The Athens Charter 1931 by CIAM can be perceived as the first modern movement that has specified frameworks for the physical revitalisation of historic cities. The charter for the first time introduced the concept of international heritage that facilitated the establishment of global organisations for restoration-revitalisation of historic areas on operational and advisory levels (ICOMOS, 2011).

In 1964, UNESCO held the second congress of architects and specialists of historic buildings in Venice, which covered conservation movements and directly introduced adaptive reuse as a way of conserving heritage buildings. For the first time, the Athens Charter emphasised that the concept of a historic monument embraces not only a single architectural work, but also the

urban or rural setting in which the evidence of a particular civilisation, significant development or historic event is evident (ICOMOS, 1964).

As a result of the 1972 UNESCO convention concerning the protection of the 'World Cultural and Natural Heritage' held in Paris, a greater global awareness of natural and human-made landscapes was articulated (UNESCO, 1972a, p.8). Such an integrated, socially conscious approach to conservation inspired the Declaration of Amsterdam and the European Charter of Architectural Heritage issued by the Council of Europe in 1975. These international documents acknowledged the importance of historic urban areas as well as towns, villages, and their surrounding regions. As a result, the 1980s and 1990s have been accompanied by a progressive extension of the concepts of conservation and revitalisation (ICOMOS, 1975).

The establishment of the UNESCO list of World Heritage Sites, following the World Heritage Convention in 1972, brought together natural and human-made sites of global significance. The list closed the gap between environmental and cultural conservation, demonstrating that similar criteria and methodologies could be applied to ensure preservation and promote sustainable development for both (UNESCO, 1972b).

This enhanced notion of environmental and cultural heritage was broadened to include specific reference to management criteria and the determination of significance, respectively in the 1979 Burra Charter, and followed by the 1994 Nara Document on Authenticity (Siravo, 2011). Correspondingly, the UNESCO Convention for the Safeguarding of Intangible Cultural Heritage in 2003 elaborated the conservation of cultural identities and their associated intangible values, together with their implications for planning, generating a response to globalisation and the concern that cultural identities may be lost (UNESCO, 2003).

In 1983 the Brundtland Report introduced the idea of sustainable development. It indicated that the use and development of environmental resources for the immediate necessities of humankind must not compromise the capacity of future generations to meet their needs. An extension of this concept some years later called for developments to be attuned with the cultural traditions and values of a community; this forged the way for the identification of culturally determined forms of revitalisation and expanded the notion of cultural heritage (Brundtland, 1987). From the Athens Charter (1931) to the Hangzhou Declaration (2013), an idea was developed that planning and conservation cannot be separated from the cultural beliefs and historic knowledge of each society and that human cultural heritage must be protected to safeguard survival. The Hangzhou Declaration as the last frontier of conservation reminds us that places are the tangible manifestations of our humanity, including their intangible meanings

and socio-cultural continuity while destroying our heritage habitats or obliterating our old cities is analogous to destroying the essence of our humanity (UNESCO, 2013) (Table 2.2).

Table 2.2. Major charters and conventions held by UNESCO, CIAM, Council of Europe and other organisations

Charters/Conventions	Agendas/ Topics
Athens Charter 1931 (CIAM)	The first international document addressing restoration of heritage buildings as well as the modern conservation movement Criticizing stylistic restoration by valuing styles of all periods Supporting regular as well as permanent maintenance and conservation Preservation of a heritage building and its authentic features and heritage values Restoration of a heritage building when the building experienced decay or destruction Ruined structure of a heritage building must be replaced by identifiable materials Considering restoration as a way of retaining a heritage building usable; however, it should be recognisable
Hague Convention 1954 (UNESCO)	The Protection of Cultural Property in the Event of Armed Conflict
Gubbio Conference 1960, Italy (ANCSA)	Safeguarding and rehabilitation of the historic and artistic centres
Venice Charter 1964 (UNESCO)	The international document covered conservation movement and directly introduced adaptive reuse as a way of conserving a heritage building Conservation of a heritage building was considered as a strategy to make the building practical Consideration of architectural integrity and historic authenticity of a heritage building
Paris Convention 1972 (UNESCO)	The Protection of World Cultural and Natural Heritage, The World Heritage Convention
Stockholm Conference 1972 (UNESCO)	United Nations Conference on Human Rights and the Environment
The Declaration of Amsterdam 1975 (Council of Europe)	Emphasises the role of planning, education, legal and administrative measures in protecting the region's architectural heritage
Brundtland Report 1983: World Commission on Environment and Development (WCED)	The report highlighted three fundamental components to sustainable development: environmental protection, economic growth and social equity
Santa Fe Convention 1992 (UNESCO)	Recognition of cultural landscapes for the World Heritage list
Maastricht 1992 (Council of Europe)	Instrumentalisation of cultural heritage to create European identity
Nara Japan 1994 (UNESCO)	Cultural diversity and heritage diversity, values and authenticity
Declaration of St Antonio, Texas 1996 (American countries)	Cultural identity is the foundation of the cultural heritage of the Americas and its conservation
Stockholm Charter 1998 (UNESCO)	The wide diffusion of culture and the education of humanity for justice and liberty and peace are indispensable to the dignity of man

The European Landscape Convention, Florence 2000 (Council of Europe)	Promotes the protection, management and planning of European landscapes and organises European co-operation on landscape issues
Paris Convention 2003 (UNESCO)	Convention for the Safeguarding of Intangible Cultural Heritage
Vienna Convention 2005 (UNESCO)	World Heritage and Contemporary Architecture, Managing the Historic Urban Landscape
Faro Convention 2005 (Council of Europe)	The value of Cultural Heritage for Society, emphasizes important aspects of heritage as they relate to human rights and democracy
United Nations Declaration 2007	The rights of indigenous peoples to maintain and strengthen their own institutions, cultures and traditions
Hangzhou Declaration 2013	To place culture at the heart of sustainable development policies

2.3.4. ICOMOS¹

The International Council on Monuments and Sites (ICOMOS) was shaped as a result of the Athens Conference on the restoration of historic buildings, organised by the International Museums Office. The Athens Charter first shaped the International Charter on the Conservation and Restoration of Monuments and Sites, better known as the Venice Charter 1964, which in turn created ICOMOS in 1965 in the Warsaw Constitutive Assembly as suggested by UNESCO (Cleere, 1989, p.74). In 1972, UNESCO named ICOMOS one of three official advisory bodies² to counsel the World Heritage Committee on candidates for inclusion in the World Heritage List (WHL). ICOMOS considers individual monuments, sites and places for nomination. The fundamental quality for consideration as outlined by the ‘World Heritage Convention’, is ‘Outstanding Universal Value’ (OUV) (Cameron et al., 2008, p.11).

¹ Similar to ICOMOS, ICCROM and IUCN are also intergovernmental organisations that help their member states promote the conservation of all forms of cultural heritage. Since the main duty of ICCROM and IUCN is focusing on the conservation-preservation of cultural-natural heritage, both remain outside the scope of this literature review.

² See footnote 1.

The comprehensive definition of cultural heritage represents a dynamic variety of approaches to the conservation and protection of monuments, sites and places. Numerous charters and documents have continued to reform the role of ICOMOS in recognising possible candidates for the World Heritage List. One of the most critical documents in the development of the notion of cultural heritage is the Florence Charter, presented as an addendum to the Venice Charter. This 1982 policy was formed in order to include living entities (e.g. gardens) as candidates for World Heritage sites (Madole, 2014). As a part of the 2005 World Heritage Convention, the Vienna Memorandum clarified the potential candidacy of entire cities (or historic urban landscapes) for inclusion in the WHL (Araoz, 2008). Such assessments of technical criteria highlight the dynamic and cooperative objectives of ICOMOS in proposing and safeguarding world heritage, reflected in the Fukuoka Convention 2015 (Table 2.3).

Table 2.3: ICOMOS major general assemblies, charters and relevant agendas

General Assembly and Declarations (ICOMOS)	Agendas/Topics
Warsaw Constitutive Assembly, Poland 1965	Regulations, by-laws and national committees
Quito Ecuador, 1967	Preservation and utilisation of monuments and sites of artistic and historic value
Oxford, United Kingdom, 1969	The value for tourism of the conservation and presentation of monuments and sites with particular reference to experience and practice in Great Britain
Budapest, Hungary, 1972	Modern architecture in historic ensembles and monuments
Rothenburg, Germany, 1975	The regeneration of small towns
Moscow, USSR, 1978	The protection of historic cities and historic quarters in the framework of urban development
Burra Charter, Australia 1979	Outlines the basic principles and procedures to be followed in the conservation of Australian heritage places
Rome, Italy, 1981	No Past, no future
Florence Charter 1982	Regeneration and preservation of historic gardens
Tlaxcala Declaration 1982	Revitalisation of Small Settlements
Dresden Declaration 1982	Reconstruction of Monuments Destroyed by War
Rome Declaration (1983)	Methods for revitalizing Italian heritage fabrics
Rostock, Germany, 1984	Monuments and Cultural Identity
Washington D.C., USA, 1987	Old Cultures in New Worlds
Lausanne, Switzerland, 1990	A Quarter Century, Achievements and Future Prospects
Colombo, Sri Lanka, 1993	Archaeological Heritage Management, Cultural Tourism and Conservation Economics

Sofia, Bulgaria, 1996	Heritage and Social Change
Stockholm Charter, Sweden 1998	The right to cultural heritage is an integral part of human rights considering the irreplaceable nature of the tangible and intangible legacy it constitutes
Mexico City, Mexico, 1999	The Wise Use of Heritage - Heritage and Development
Madrid, Spain 2002	Strategies for the World's Cultural Heritage - Preservation in a Globalised World - Principles, Practices, Perspectives
Victoria Falls, Zimbabwe, 2003	Place-Memory-Meaning: Preserving Intangible Values in Monuments and Sites
Xi'an, China, 2005	Monuments and sites in their setting - conserving cultural heritage in changing townscapes and landscapes
Vienna Memorandum, Austria 2005	World heritage and contemporary architecture, managing the historic urban landscape
Québec, Canada, 2008	Finding the spirit of place
New Zealand Charter 2010	The Conservation of Places of Cultural Heritage Value
Paris, France, 2011	Heritage, driver of development
Florence, Italy, 2014	Heritage and Landscape as Human Values
Fukuoka, Japan, 2015	Risks to Identity: Loss of Traditions and Collective Memory
Istanbul, Turkey, 2016	Evaluating past efforts

2.4. Urban revitalisation thoughts and procedures in historic cities worldwide

The urban revitalisation of historic cities is a process of inducing life into decaying assets and developing upcoming socio-spatial potential. These assets and their potential may consist of built heritage, outdated industries or cultural resources (Parlewar & Fukukawa, 2006). Since the 18th century, many scholars and theoreticians have presented their thoughts regarding the regeneration of historic cities. Those thoughts engendered several types of global awareness and action plans, which have yet to be implemented in historic cities worldwide (Jokilehto, 2002).

2.4.1. Schools of thought in revitalising historic cities

Eugene Viollet le Duc (1814--1879) was one of the pioneers in the regeneration of the old city in France during the 18th century, who believed in stylistic restoration, and emphasised reinstatement and/or insertion of new physical elements. His method advocated a historic building in a condition of completeness (Stanley-Price et al., 1996; Viollet-le-Duc, 1866). Around the same period, John Ruskin (1819--1900) was also one of the first leaders of the contemporary revitalisation movement and critic of Viollet-le-Duc's theory in stylistic restoration. He considered stylistic restoration as something which could result in the

fabrication of history, thus proposing regular maintenance and named it anti-restoration (Burman, 2010).

William Morris (1834--1896), one of the key figures in the conservation of historic buildings in Britain in the 19th century, was influenced by Ruskin. He argued that the essential unique features of a heritage building should not be removed or even restored but preserved, even if the function of the building might have changed. He also supported the adaptive reuse of heritage buildings in response to changes in society (Powell et al., 1999).

Camillo Boito (1836--1914) was the first person who established the Italian conservation movement, which proposed practical guidelines on the restoration and conservation of heritage buildings. He made a significant contribution to the anti-restoration movement and focused on conservation by preventing a large number of unnecessary restorations. His theory on the conservation of heritage buildings had a substantial impact and provided a basis for the Modern movement, including the Athens Charter (Rouhi, 2016).

During the early 20th century Alois Riegl (1858--1905) was a general conservator of the Central Commission of Austria. He defined several values related to heritage monuments and categorised them into two major groups of memorial values and present-day values. He rejected theories of restoration and anti-restoration, believing that each heritage building belonged to a certain period, and thus for the preservation of a building the values of its period needed to be defined (Rouhi, 2016). He assumed that all humanity is responsible for the protection of heritage structures. His concept is reflected in the UNESCO conventions as the notion of mutual cultural heritage of the human race (Falser, 2010).

Cesare Brandi's (1906--1988) theory of conservation was strongly connected to practice by proposing rational rules for conservation and restoration methods. His critical perspective on restoration emphasised returning a heritage building to its original state without introducing artificial objects or even removing signs of decay (Schädler-Saub, 2010). He defined conservation work based on three categories: physical forms and fabrics, history and contexts, which must be recognisable even after the alteration. His theory was globally acknowledged in the development of preservation strategies and UNESCO declarations (Wong, 2016).

Camillo Sitte (1843--1903) was an Austrian architect and planner who believed that traditional urban structures were not just the sum of individual monuments, but a coherent ensemble where every element was part of an organic pattern with aesthetic rules that can be observed and analysed. His work marked the beginning of an analytical appreciation of the historic city. He

established a method that can provide continuity in the building, planning and architectural expression, function, technology and aesthetics of cities (Siravo, 2011).

Luca Beltrami (1854--1933) was one of the pioneers who recognised the importance of documentation as a basis for any restoration. His approach (called 'historic restoration') was based on types of monuments. He advocated reconstruction of demolished monuments while allowing certain flexibility in reconstruction (Jokilehto, 2002).

Leonardo Benevolo (1923--2017) was the first to adapt the concept of typology in urban conservation (known as 'typological restoration') and protected the interests of the working classes living in historic centres. He suggested that restoration must facilitate the integral conservation of social, cultural, economic and artistic characteristics of a city. The typological restoration and integrated conservation as suggested by Benevolo largely influenced the Edinburgh and Bologna Symposiums in 1974, followed by the Council of Europe in 1975 and Amsterdam Charter (Esfanjary, 2017).

Ludovico Quaroni (1911--1987) was an Italian architect who proposed methods of integrating conservation and planning in historic cities, for instance in Tunisia. He demonstrated typological and functional adjustments of architectural heritage to foster a return to community. His approach included revitalisation of the historic city with different spatial spheres from the entire planning process to the patching-up of urban networks, and by executing a combination of removal, restoration and reuse in historic fabrics (Petruccioli, 1986)

Gustavo Giovanni (1873--1947) was the first figure to recognise the historic city's incompatibility with modern urban developments. He understood that the latter is based on decentralisation, mass transportation, unlimited expansion and larger scale design, and in opposition to the historic city. He encouraged city expansions away from the urban core and conceptualised the removal of vehicular traffic from historic areas. His theory of retreating the built fabric suggested a balance between integral preservation and limited forms of intervention. He believed the new city must live side by side with the older one, not replace it (Siravo, 2011).

Patrick Geddes (1854--1932) emphasised the fundamental unity and interdependence of culture and nature. He introduced the concept of region in architecture and planning. He believed that the profound societal change emerges from the bottom up and direct participation of citizens (Siravo, 2011). He shared the belief with John Ruskin that social processes and spatial forms are related; therefore, it is possible to change the social structures by altering spatial forms. The idea was particularly important in the late 19th and early 20th centuries when industrialisation was dramatically transforming living conditions in historic cities (Goist, 1974).

Among modern architects, Le Corbusier's (1887--1965) approach for revitalising historic cities was based on large scale demolitions and restructuring of new, modern buildings. He promoted the selective preservation of monuments and buildings identified as valuable cultural treasures in a historic city. He believed that stripped of their surrounding ancient fabric these structures would be preserved like museum pieces in the carpet of high-rise buildings that one would come across while walking through the city (Shaw, 1984).

Lewis Mumford's (1895--1990) philosophy can be best defined via three ideas: naturalism, evolutionism, and humanism (Mumford, 1989). He claimed Geddes and the organic view of the society as his guide and was worried about the ruin of cities through wholesale urban renewal, the growing dominance of highways, and the prevalence of urban sprawl. Mumford argues that the structure of modern cities is partially responsible for many social problems that can be seen in western societies. He also argues that urban planning should emphasise an organic relationship between people and their traditional living spaces (cited in Hill, 1985).

Kevin Lynch (1918--1984) was a significant contributor to 20th century city planning and design. He claimed that place users understand their urban surroundings consistently and predictably by forming mental maps with five elements including paths, edges, districts, nodes and landmarks (Lynch, 1960). The notions of imageability and wayfinding strongly influence fields of urban studies, and separate urban planning from beautification of the cityscape (Damayanti, 2015). However, today the limited understanding of Lynchian perspectives have led revitalisation movements to be implemented as merely physical solutions (e.g. paving and façade making), and/or to be seen as flagship projects in historic cities of Iran (Masoud and Beigzadeh, 2012).

Aldo Rossi (1931--1997) suggested that the city is made up of urban artefacts that withstand the passage of time. He argued that a city must be studied and valued as something constructed over time. Rossi held the notion that the city remembers its past via citizens' collective memories, and that citizens use such memories through monuments, which give structure to the city (Mishra & Singh, 2013). Based on his theory and inspired by the continuance of Europe's ancient cities, he started to design morphologically informed architecture that could be included in historic areas and thus become immune to obsolescence (Rossi, 1982).

Gordon Cullen (1914--1994) was also a key motivator and activist in the development of British theories of urban design in the postwar period. He describes three primary methods in which our environment produces an emotional reaction while offering a key to the planner or architect, namely 'serial vision, place and content' (Cullen, 1971, p. 17). For him 'townscape' is the art

of generating visual consistency and organisation to the cluster of buildings, streets and spaces that altogether make up the urban environment. So far, the concept of ‘townscape’ has had a significant influence on architects, planners and practitioners concerned with the revitalisation of historic cities (cited in Buchanan, 1994, p.16).

Robert Krier (1938) is ranked as one of the most influential urban planners and architects of postmodernism, for whom the traditional repertoire, continuity and aestheticism are the best way to revive the art of architecture that has lost its way in modernism (Bors et al., 2016). He genuinely analyses the typological--morphological elements of the historic city as unobstructed spaces for movement in the open air, with public, semi-public and private zones made of squares, circles and triangles. These three shapes are affected by modulating factors which are angling, segmentation, addition, merging, overlapping and distortion. He suggests that the differentiation of scale and geometry in this way plays an enormous role in the formation of urban space in historic cities (Krier, 1979).

Christopher Alexander (1936) and his theories about the nature of human-centred design have affected fields beyond architecture including urban design and computer sciences. For him, wholeness is the global structural character of a given configuration existing in space (cited in Jiang, 2019). During his lifetime he searched for a pattern language and nature of order in the natural world as well as artificial built environments, which culminated in celebrating vernacular architecture. He convincingly argued that a spiritual, emotional and personal basis must underlie every act of building or construction (Alexander, 2005). His theory of urban design in historic cities sheds light on several rules of organic growth including ‘piecemeal growth, the growth of larger wholes, holistic visions, the basic rule of positive urban space, the layout of large buildings, construction and formation of larger centres’ (Alexander, 1987, p. 31).

Terry Farrel (1938) was a famous British architect and urban designer. His ideas regarding urban revitalisation embrace several passive and active moves including the provision of a greater understanding of place-based planning and design, the generation of a better connectedness between institutional stakeholders and the public, and the proposition of better public engagement through education. He articulated a need for a sustainable and low-carbon future and a commitment to improving the everyday built environment while making the ordinary better (Farrell, 2015).

Richard Rogers (1933) was a renown figure in urban design and architecture. For generating an urban Renaissance in cities, he suggested a need for providing greenfield spaces and building

at a density, which supports local services and fosters a strong sense of community (Rogers, 2017). He suggested funding projects that benefit pedestrians, cyclists and public transport users and the creation of housing zones that put the pedestrian first (Hassan and Lee, 2014). He recommended schemas for strengthening local authorities that could make the planning system more positive, introducing urban priority areas by local governments, and involving neighbourhoods in decision-making processes. He indicated a need for establishing a fund for local NGOs to improve historic neighbourhoods (Rogers, 2005).

In the revitalisation of historic cities, Renzo Piano (1937) indicated that suburbs are the centre of what needs to be regenerated. For him, urban culture and heritage are tools that can maintain a unique sense of place (Piano and Frampton, 2017). He was a proponent of the public space network for a compact, walkable and mixed-use smart city, which creates convenient mobility around the city. He endorsed that holistic planning and citizen engagement along with smart citizens, smart energy and high-quality architectural design can create a real Renaissance in our post-industrial cities (cited in Lehmann, 2019)(Table 2.4).

Table 2.4. Methods of intervention in historic sites/cities as suggested by significant theoreticians since the 19th century

Theoretician	Objectives of intervention	Methods of intervention
Eugene Viollet le Duc	Pioneer of the stylistic restoration movement. Possession of all the same resources as the original master.	Finding a proper use for heritage buildings to avoid further changes in future. Insertion of new physical elements into heritage buildings concerning the original style. Reinstatement of a heritage building in a condition of completeness.
John Ruskin	A critic of Viollet-le-Duc's approach in terms of the stylistic restoration. Leader of conservation (anti-restoration) movement.	Focus on the daily care of heritage buildings to prevent further restoration.
William Morris	Follower of Ruskin's approach to conservation of heritage buildings. A critic of stylistic restoration. Preservation of a unique work of artists in a specific historic period. Founder of the Society for the Protection of Ancient Buildings (SPAB) which is the oldest organisation in the world related to the preservation of historic places.	Main focus on repair and maintenance. Minimum levels of alteration to make a heritage building practical. Preservation of the important unique features of a heritage building even if the function changes.
Camillo Boito	Pioneered the restoration-conservation movement by addressing both Viollet-le-Duc	Separated levels of intervention to keep all authentic layers of a heritage building intact.

	<p>and Ruskin's approaches related to heritage buildings.</p> <p>Introduced three classes of age and stated that the main aim of restoration is to respect all these classes.</p> <p>Proposed different ways of distinguishing between old and new, as an important factor in the restoration of a heritage building.</p>	<p>Restoration of heritage buildings varies case by case and must respect the authentic features and heritage values of a building.</p> <p>Thoughtful maintenance can prevent restoration.</p> <p>His methods inspired modern conservation policies.</p>
Alois Riegl	<p>Distinguished between the practices of restoration and conservation, based on prioritizing various values.</p> <p>Preservation of a heritage building by identifying the values of its period as each heritage building belongs to a certain period.</p>	<p>Reproduction was justifiable if it was possible for a heritage building to lose the visual elements of its decoration.</p> <p>Pure conservation is impossible.</p> <p>Introduction of the three categories of intervention.</p>
Cesare Brandi	<p>Pioneered the modern restoration-conservation movement.</p> <p>Preservation of historic, functional, and aesthetic values of a heritage building.</p> <p>Influential role in the restoration and conservation practice and the development of international conservation policies.</p>	<p>Returning a heritage building to its original state without introducing artificial objects or removing the signs of decay.</p> <p>Thoughtful restoration must respect the original building and be identifiable.</p> <p>Respecting to a heritage building's original era through conservation, not imitate an original style and not removing signs of decay, not hide the real age of a heritage building.</p>
Camillo Sitte	<p>Interventions in historic city contexts must reestablish a closer relationship between city planning and architectural expression, between function, technology, and aesthetics.</p>	<p>Advocated a living urban environment in which architecture plays an integral role in determining the form and structure of spaces,</p> <p>Highlighted the complementarity between the practical and the aesthetic found in the historic city.</p>
Luca Beltrami	<p>Recognised the importance of documentation as a basis for any restoration (historic restoration).</p>	<p>His approach as historic restoration was based on the type of the monument.</p> <p>He advocated reconstruction of monuments and allowed certain flexibility.</p> <p>Involved in documentation and reconstruction of historic Campanile of St. Mark in Venice.</p>
Leonardo Benevolo	<p>Adapted the concept of typology for urban conservation (typological restoration).</p> <p>To protect the interests of the working classes living in historic centres.</p> <p>Typological restoration and integrated conservation largely influenced Edinburgh and Bologna Symposiums in 1974, followed by the Council of Europe in 1975 and the Amsterdam Charter.</p>	<p>Combines different forms of intervention to repair the damage inflicted decades earlier to the historic sector.</p> <p>Restoration must Program integral conservation of social, cultural economic and artistic characteristics of a city.</p>

Ludovico Quaroni	<p>Integration of conservation and planning in historic cities (e.g. Tunisia).</p> <p>Typological and functional adjustments of the architectural heritage to foster the return to the community.</p>	<p>Architectural problems in the historic city can be solved by planning tools which are consequential with the history of the city.</p> <p>Rehabilitation of historic city with different spatial ambits from the entire planning process to the patching up the urban network.</p> <p>Rehabilitation of historic areas by entailing in a combination of removal, restoration and reuse in historic fabrics.</p>
Gustavo Giovanni	<p>A need for methods of intervention in historic contexts that clearly distinct from those applied to the newer parts of cities.</p> <p>Confusing these two spheres can only lead to disruption in the homogeneous context of historic cities and excessive constraints on present-day developments.</p>	<p>Insistence on ensuring continuity of investment, action, and management through an appropriate public planning office draws on lessons from historic cities:</p> <p>only patient, ongoing implementation of consistent policies and interventions will yield a coherent and harmonious urban environment in the long term.</p>
Patrick Geddes	<p>Planning must be based on a thorough appreciation of the existing context and review of available data.</p> <p>Town design cannot be left to the casual dynamics of market forces or the improvisations of high-profile architects.</p> <p>Introducing the concept of region to architecture and planning.</p>	<p>The involvement of residents in the fundamental choices regarding their cities and countryside.</p> <p>A plan should be the expression of the aspirations, sense of place, and efforts of a community, and he warns against the dangers of top-down planning.</p>
Le Courbousier	<p>Regeneration of historic cities should be based on large scale demolition and the proposition of modern buildings.</p> <p>All great urban design and architecture moves brought drastic changes and were considered bold in the time of their creation (e.g. Modernism).</p>	<p>The ancient urban fabric would be preserved like museum pieces in the carpet of the skyscrapers and low rise buildings.</p> <p>Selective preservation of monuments and buildings in a historic city, identified as valuable cultural treasures.</p>
Louis Mumford	<p>Three ideas that define Mumford's philosophy best are naturalism, evolutionism, and humanism. Claimed Geddes (the organic view of society) as his mentor.</p> <p>The structure of modern cities is partially responsible for many social problems seen in Western society.</p>	<p>Pessimistic about wholesale urban renewal, the growing dominance of highways, and urban sprawl.</p> <p>Planning should emphasise an organic relationship between people and their traditional living spaces.</p>
Kevin Lynch	<p>The notions of imageability and wayfinding as the essential elements in the perception of urban space by users.</p>	<p>Place users understood the urban surroundings consistently and predictably, by forming mental maps with five elements including paths, edges, districts, nodes and landmarks</p>
Aldo Rossi	<p>The city is made by urban artefacts that withstand the passage of time.</p>	<p>In design, we use our collective memory through monuments, which give structure to the city.</p>

	<p>A city must be studied and valued as something constructed over time.</p> <p>He held that the city remembers its past via our collective memory.</p>	<p>Inspired by the continuation of ancient cities, he proposed morphologically informed architecture in historic areas.</p>
Gordon Cullen	<p>A renewed appreciation of the historic urban landscape.</p> <p>Describes three primary ways in which our environment produces an emotional reaction key to the planner or architect: optics, place, Content.</p>	<p>A city is a place of assembly made of non-natural enclosures, and in its most straightforward illustration divides the environment into HERE and THERE.</p>
Rob Krier	<p>The spatial forms of urban space derive from the three basic geometric shapes: square, circle and triangle.</p> <p>Historic repertoire, continuity and aestheticism are ways of reviving what he regards as the art of architecture.</p>	<p>These three shapes are affected by modulating factors which are angling, segmentation, addition, merging, overlapping and distortion.</p>
Christopher Alexander	<p>There is a pattern language in the universe that has conveyed to vernacular architecture.</p> <p>A spiritual, emotional, and personal basis must underlie every act of building or making</p>	<p>Rules of urban growth in historic cities. Piecemeal growth, the growth of larger wholes, holistic visions, the basic rule of positive urban space, the layout of large buildings, construction and formation of centres</p>
Charles Jenks	<p>Important public buildings, such as the cathedral and the city hall, must express shared meaning and convey it through well-known conventions.</p>	<p>The urban policy-codes yet to be developed to neutralise those mistakes that come with iconic buildings.</p>
Terry Farrell	<p>A greater understanding of place-based planning and design.</p> <p>Better connectedness between institutional stakeholders and the public.</p> <p>Better public engagement through education and outreach.</p> <p>A sustainable and low-carbon future.</p> <p>A commitment to improving the everyday built environment and making the ordinary better.</p>	<p>Education, outreach and skills.</p> <p>Design quality.</p> <p>Cultural heritage.</p> <p>Economic benefits.</p> <p>Built environment policy.</p>
Renzo Piano	<p>Regeneration of historic town centres through a mechanism to safeguard their physical aspects.</p> <p>Residents to actively participate in the regeneration work, thanks to the use of innovative technology.</p>	<p>Suburbs are the centre of the issues and need to be regenerated.</p> <p>Urban culture and heritage, maintaining a unique sense of place.</p> <p>A public space network for a compact, walkable and mixed-use city.</p> <p>Convenient mobility around the city.</p> <p>Holistic planning and citizen engagement.</p> <p>Smart citizens, smart energy and High-quality architectural design.</p>

Richard Rogers	Designing the urban environment. Making connections. Managing the urban environment. Delivering urban regeneration. Investing in skills and innovation. Planning for change. Managing the land supply. Cleaning up the land. Recycling the buildings. Making investment. Sustaining the renaissance.	Limiting the release of greenfield land. Building at a density which supports local services and fosters a strong sense of community. Better education and training. The development of local architecture centres. Expenditure on projects that benefit pedestrians, cyclists and public transport users. Creating Home Zones that put the pedestrian first. Strengthening local authorities. Making the planning system more positive and involving neighbourhoods in the decision-making process. Establishing a fund for local groups to improve their own neighbourhoods. Introducing Urban Priority Areas.
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2.4.2. European experience

The loss of historic urban fabric gained new urgency with the destruction of World War II and massive transformations in the postwar years. These arguments, along with the effects of Modernism on the transformation of city centres, led to a pro-conservation response all over Europe (Barakat, 2007). The response, however, was not the same everywhere. In Eastern Europe, the answer was a faithful reconstruction. Old paintings and photographs were used to reproduce the Warsaw historic core, although there was no attempt to reinstate their original functions and activities. In Western Europe cities, heavily bombed during the war, the response was different. The decision was to completely reconfigure the scale and layout according to the functionalist theories of the Modern movement (Cadell et al., 2008).

The emergence of European protection-revitalisation rules almost dates back to the 1950s and '60s. In Italy, new planning legislation introduced the notion of integrated conservation with the 1969 plan for the historic centre of Bologna. Its central principle was that conservation of historic ensembles cannot be limited to preservation of their visual and aesthetic character, but must also include consideration of underlying physical, social and economic configurations (Venuti, 1986). In the Bologna Plan, the priority was given to the city's typological and morphological character as a basis for future intervention. The plan also maintained existing residents through a housing rehabilitation program, funded by the municipality. The plan emphasised on the adaptive reuse of historic buildings to accommodate public services (Pieri & Scrivano, 2016).

In Italy, new national legislation was introduced to cover detailed forms of intervention in historic urban areas. These moves took into account the theoretical studies of Venice and Rome

by Saverio Muratori and Gianfranco Caniggia from the late 1950s to the 1970s (Marshall & Caliskan, 2011). These studies were given an operational dimension in upcoming plans during the 1970s, which remain prototypes for their vision and clarity of methods, and for their attempts to re-establish a sense of place and awareness of historic differences as a basis for planning (Malfroy, 1997).

In France from 1959 to 1969, the regulation was endorsed to identify, protect and manage city sectors based on comprehensive conservation plans. The guidelines were interpreted not only as a mechanism for preserving historic areas in their entirety, but allowed for a combination of conservation and modernisation (Versaci, 2016). The best-known example of this mixed approach was implemented in Paris, where the old city fabric was adapted with widespread demolitions, new construction and considerable social change. The most problematic move was the demolition of the ancient market, which resulted in the relocation of long-established trade activities away from the city centre (Kain & Phillips, 1987).

Parallel developments in the United Kingdom led to recognition of the value of historic assemblages and the introduction of Conservation Areas in the Civic Amenities Act of 1967 (Smith, 1969). Pilot projects for four historic cities (Bath, Chester, Chichester and York) were launched to test planning methods and conservation measures applicable to conservation areas. Chester (1968) was the most successful project, which made a significant contribution to the understanding of townscape values and the policies regarding the revitalisation of decayed city centres (Insall, 1968).

Little Germany, City of Bradford, London, England (2017--present): Established in the 18th century, once was the largest concentration of German speakers outside Germany. Currently, the physical, social and economic deterioration and the immigration of deprived communities have generated severe challenges in this area, which along with a mediocre retail and business sector have resulted in low visitor numbers and demolition of the historic zone (Lowe, 2018).

Since 2017, the City of Bradford initiated the regeneration project for providing significant economic and housing growth and facilitating dynamic business and entrepreneurship. The City of Bradford foresees the historic area as a centre of excellence for learning, an exemplar of 21st century urban lifestyle, and an important transport hub and urban destination (The City of Bradford, 2017). Introduced methods include:

- A. Provision of the central business core in the city centre, focusing on office buildings.
- B. Designation of an area for creating comparison retail in the Broadway Centre and residential mixed-use developments

- C. Provision of an active shopping and market area by focusing on small independent retailing and leisure activities, with the introduction of residential zones
- D. Designation of an area as the focus of city living, with supporting small-scale leisure and retail activities (Figure 2.1)
- E. A learning quarter that will focus on expanded education and student living options
- F. The Southern Gateway, transforming the area from a former industrial zone to a focus for residential development and supporting infrastructure.



Figure 2.1: Bradford City Park, a new public space opened as part of a revitalisation project. Picture courtesy of Lowe (2018)

The Euroméditerranée revitalisation project in Marseilles, France (1995--present): Euroméditerranée is an urban revitalisation project underway to create an eco-district in the historic La Joliette neighbourhood. The project was launched to rejuvenate a pre-determined perimeter of 310 hectares in the city centre, including housing, harbour views, warehouses, railways and a railway station for high-speed trains. To do so, the state appointed a public organisation as the main contractor, benefiting from the financial support of the state and local authorities. The expertise and projects of this organisation must be aligned with those of the still active self-governing port and local municipality (Chaline & Coccossis, 2004). The primary procedures have generated:

- A. New activities focused on cultural (e.g. Palais de la Méditerranée) and artistic fields (e.g. the transformation of a tobacco factory)
- B. Rejuvenation of warehouses to host offices and high-tech centres, as well as business headquarters
- C. Large surfaces dedicated to the creation of open public space, aligned with port authorities

- D. Restoration of dilapidated districts/ghettos by facilitating redevelopments
- E. The emergence of stronger centrality, proposing a modernised train station
- F. The capacity for the site to renew and host twice its initial population and offer new jobs
- G. Operations conducted over eight strategic sites, as a result of substantial levels of heterogeneity in the Euro-Mediterranean region.

The revitalisation of El Raval, Barcelona (1979--2003): In historic Barcelona, urban revitalisation involves highly different territories, included a wide range from renovation operations to specific rehabilitation programs (Chaline and Coccossis, 2004). The district of "El Raval", located in the Medieval city quarter of Barcelona, was until recently one of the most densely populated urban areas in the world (Barcelona-Field-Studies-Centre, 2018).

The name Raval indicates the poor and marginalised immigrants. Several socio-spatial problems among residents in the area included low income and occasional debts, health problems, drug addiction, accumulation of refugees, unemployment, lack of decent dwellings, domestic violence, conflicts between landlords and tenants, lack of work permits and school non-attendance among youngsters. The urban regeneration of El Raval has been led by public funding, including money from the EU Social Cohesion Fund (Arbaci & Tapada-Berteli, 2012).

Rehabilitation actions focused on:

- A. Promoting the role of public space in the newly transformed areas as a tool for generating identity and fostering social and cultural integration
- B. Improving infrastructure, municipal and district facilities
- C. Regeneration of housing, employment, health, education, social services, sports facilities, and restricting criminal and marginal activities
- D. Campaigns have been launched to restore the image of the neighbourhood while the promotion of historic and cultural heritage has increased tourism
- E. Depopulation policies continue, followed by the opening of a university campus, a police station and the museum of contemporary art
- F. The creation of mixed capital companies, introducing a model for public--private partnership management and mixed-use developments.

City centre revitalisation in Baixa Pombalina, Lisbon, Portugal (1990s--present): City centre redevelopment in Portugal followed the earthquake in 1755. The historic areas are examples of Moorish, Judaic and Christian Medieval urbanism and architecture. The Baixa is in a severe state of decay, with a small population and a poor local economy. Many buildings are rented by older people who pay very low rents, making it almost impossible for landlords to renovate

their buildings, while incentives are not attractive for property owners to restore their buildings (Balsas, 2001).

In response to such problems, in the early 1990s, the EU announced the approval of a national urban and environmental revitalisation program, classifying the suburb as a public asset worth preserving. During the second half of the 1990s, the Ministry of Economy created a program in order to fund the modernisation of retail stores and revitalisation of shopping precincts, mainly in the city centre with EU money. The philosophy was the creation of open-air shopping centres, not unlike British town centre regeneration programs (Balsas, 2007). Design moves included:

- A. Introduction of a comprehensive program for urban regeneration and environmental improvement
- B. Provision of effective management structures and a community support framework.
- C. Public--private partnerships were formed among municipalities, chambers of commerce, retailers and central government
- D. New legislation enabled the creation of urban rehabilitation companies throughout the country, known as SRUs that arrange a partnership between the central government and local municipalities
- E. Improved pedestrianisation by widening the pavements and reconstructing the central retail areas
- F. The modernisation of infrastructure, cluster developments, creation of associates and partnerships and provision of training for business owners
- G. The promotion of the Baixa as a cultural and entertainment centre, improved urban environments, provision of more car-parking and revision simplification of pertinent legislation and administrative procedures.

Regeneration of Dzsombuj (Jungle) Budapest, Hungary (2005--present): The so-called Jewish Quarter (Jungle) is a historic zone with accumulated run-down structures and dilapidated dwellings. The project's goal was to help low-income families tackle social exclusion and to provide support for starting a new life. The project also intended to demolish dismal ghettos, located in abandoned industrial zones, aimed to provide improvement for people living in the area (Negussie, 2007).

The project also intended to reconstruct the old community and help subjected families to start a new life elsewhere in or outside the city. By 2009 two hundred families had already been resettled into new flats, while the future of the remaining 100 families has become uncertain because of financial difficulties (Beliczay, 2009). The methods of implementation included:

- A. Piecemeal renovation of historic houses
- B. Provision of new housing developments on vacant plots or deteriorated areas
- C. Merging small lots of land to bigger areas to accommodate medium-rise reconstructions
- D. Preservation of original fabrics/streets
- E. Promoting the historic--cultural character of the area
- F. Gentrification of old buildings and redevelopment of new quarters
- G. Promotion of mixed-use buildings, public services and a wide variety of commercial zones
- H. Provision of cultural opportunities, such as schools and their supporting public transport connections.

2.4.3. American experience

The United States has encountered urban complications regarding the formation of decay and slums in historic cities, while the first federal legislation with specific provisions for heritage districts was postulated in 1966 (National Historic Preservation Act). Since then, several states have given municipalities the capacity to safeguard historic urban areas through selective zoning procedures, accompanied by a set of building regulations. So far, some of the best guidelines for repair and construction in traditional contexts are produced by U.S. municipalities (Lang, 1994).

Since the 1960s, the United States has produced a momentous stream of practical experiences in preservation planning, while a reaction to massive slum clearance and urban renewal projects (implemented from the 1930s to the 1970s) has been expressed. A new generation of urban critics has embraced Jane Jacob's (1961) passionate criticism of slum clearance programs, and community planners have promoted revitalisation projects and their pertinent initiatives (Roberts & Sykes, 2008).

During the 21st century, a flexible approach has so far been adapted for revitalising post-industrial urban problems. In this sense, urban revitalisation is comprehended as a continuous process of piecemeal growth while small-scale developments are carried out as opportunities arise. This process reflects the long-established city cycles of modification and organic adaptation, rather than distressing large-scale intervention and/or development, as pursued in postwar years. It recognises the cumulative value of sustainable investment and seeks to connect existing resources and capabilities toward ecological development while supporting socio-physical identity of the place (Gratz, 2015).

Lower Downtown Denver (1980--present): In the 1980s this area has encountered post-industrialism problems, namely housing crises, socio-spatial deterioration, crimes and

prostitution. The Lower Downtown Historic District, known as LoDo, was created by the enactment of new development regulations by Denver City Council on March 1988, contributing to the historic status of 127 structures within the area. The revitalisation plan aimed to provide a collection of mixed-use building developments based on a larger development plan (Noel, 2015). The methods implemented in this project included:

- A. Enactment of a holistic zoning regulation by Denver City Council
- B. A constructive partnership between the public and private sector, and community engagements
- C. Long-term strategies including placing sports arenas and major cultural facilities downtown and maintaining the area as a hub for regional transportation and a light rail system
- D. A multimillion-dollar revolving loan funded for housing and mixed-use developments.

2.4.4. Asian experience

Many of Asia's large cities functioned as centres of trade for centuries, while already possessing historic urban cores that formerly served as centres of commerce. Today, most of these cores still contain buildings, artefacts, and other features of historic and cultural value. These living museums fell into neglect during the 20th century, often an unintentional by-product of rapid urbanisation (Steinberg, 2008).

George Town, Malaysia (2013--present): Established in 1786 the city is renowned as a British crown colony. Contemporary problems in historic areas encompassing the depopulation of the inner-city, intensive and uncontrolled development pressures, changing lifestyles and irregular consumption patterns of city dwellers, insufficient legislation and environmental degradation that together threaten the existence of the historic city. The threats are categorised into four groups: disruption of the urban pattern, deterioration of townscape, unsuitable activity patterns, and visual dullness and spatial undesirability (Shamsuddin & Sulaiman, 2002).

In 2008, UNESCO declared George Town as a World Heritage Site. The proposed revitalisation project aimed to develop a strategic master plan to identify significant conservation and development projects within and around the designated heritage zone, and by enhancing public awareness and tourism. Actions taken were categorised into five sections (Said et al., 2013):

- A. Conservation, gentrification and buffer zonings
- B. Provision of policies for land use conservation and development, traffic, infrastructure and institutional management
- C. Pedestrianisation of the heritage city

- D. Diversification of tourism products combined with local training programs
- E. Development of heritage and tourism management programs
- F. Local participation in heritage conservation, training of young professionals in conservation and sustainable development of city heritage.

2.4.5. Middle-Eastern experience

The revitalisation of historic Middle-Eastern cities was initiated towards the end of the 1960s for two reasons: firstly, because thousands of rural migrants were trickling into the city where the medina was the obvious and only place to find cheap accommodation. Secondly, because of the rapid pace of urbanisation that transformed the historic Middle-Eastern city into a hollow space. Ever since, the cultural heritage character of such urban fabrics, as widely recognised by UNESCO, reiterates a need for regenerating Islamic cities (Balbo, 2012).

Revitalisation of the medina in the city of Fès, Morocco (2008--2012): Fes has been listed as a UNESCO heritage site since 1971. This medieval entity remains a labyrinth of narrow streets which includes 187 neighbourhoods, each having a mosque, a school, a bakery, a fountain and a hammam. The medina is home to over 200,000 inhabitants and hosts 60% of the city's craft and commercial activities. The regeneration process must modernise the medina while preserving the richness of its built heritage (Radoine, 2008).

The UNESCO program suggested that heritage is no longer a separate feature, but is a part of an integrated and sustainable approach to territorial development, that makes the city a pioneer in tourism. The program developed three themes including the provision of the knowledge of heritage (inventory), dissemination and sharing, regulatory regimes and urban planning documents that can best govern heritage preservation and management (Girardin & Dauge, 2015). The implementation moves include:

- A. Development of tourism promoting activities (e.g. direct flight connections, cultural exchange weeks, university exchanges and so on)
- B. Definition of projects in support of water and sanitation (infrastructure), establishing competitive grounds for industrial partnerships and investments
- C. The local host project that brings together tourism and socio-economic development. The project enabled some families to improve their daily lives and contribute to the promotion of their culture. The concept behind this solidarity-based tourism product is to offer tourists the opportunity to share in everyday life of a local family, and thus discover another aspect of the old city through its inhabitants, their culture and their daily lives. The families involved can earn a living and therefore they are more likely to stay in the medina

- D. Creation of tours that integrate handicrafts, thus fostering job opportunities and income-generating activities. These tours aim to strengthen the financial capacities and increase the income of more than 10,000 self-employed craftsmen or craftswomen. These initiatives also benefit the hotel industry and increase the flow of tourists towards heritage sites
- E. Proper signage was installed for improving the tourism industry, including signposts for directions, information and interpretations. Some of the posts are equipped with a digital code that can be read by smartphones, enabling visitors to locate themselves and obtain more information on the location and history of the social life in the medina.

Rehabilitation of the historic Cairo (1980--present): Cairo hosts a variety of historically significant districts and monuments, ranging from medieval Cairo, the citadel, palaces, to its urban domestic architecture, mausoleums and bazaars. Since the 1980s UNESCO has worked in conjunction with local authorities to address several socio-spatial problems, while legal and administrative protection measures were inadequately detailed in the nominal historic fabric (Suttona & Fahmib, 2002).

The urban challenges included socio-economic deterioration, poor infrastructure, accumulation of disadvantaged communities and illegal occupations, and traffic and transportation issues. The project aims to provide a conservation and rehabilitation strategy based on a clear definition of a World Heritage site and its buffer zones, while preserving/enhancing heritage values, regenerating the physical and socio-economic environment and establishing a management system for the WH site. The program also expected to create a shared information platform for urban conservation, which can launch public awareness (UNESCO, 2019). Several methods included:

- A. Generating micro-credit for business developments, housing rehabilitation, employment-generation, monument restoration, adaptive reuse of historic buildings, and promotion of infrastructure and open space projects
- B. Collection and record of documentation including a synthesis of the transformation of Cairo's urban fabrics
- C. Drafting the delimitation of the historic Cairo WH site and retrospective statement of Outstanding Universal Value
- D. Consultation with the concerned administrators and institutions including protocols of cooperation with the Central Agency for Public Mobilization and Statistics (CAPMAS), National Organisation for Urban Harmony (NOUH) and the Governorate of Cairo were signed
- E. Urgent protection measures drafted and/or are under discussion with NOUH

- F. Sector studies on housing rehabilitation, socio-economic regeneration, environmental risk assessments and the provision of ongoing community-oriented activities
- G. Field survey to identify the conservation of sub-areas and related protection regulation/measures, including extensive photographic data, have been completed for the central area and the cemeteries
- H. Tourist maps produced to launch a tourism-oriented awareness campaign
- I. An ongoing action plan identified to develop tools and processes of the development
- J. On-the-job and ongoing training for staff representing the leading institutions involved in the management of historic Cairo
- K. Workshops for community awareness and participation as a component of the action plan were carried out
- L. Synchronisation of all concerned agencies, based on effective institutional set-ups and legal frameworks.

Old Rusafa, Baghdad, Iraq (1980s--present): Rusafa forms a mixture of dense, irregular traditional fabrics from Abbasid Empire and the Ottoman period, that conflicts with the gridiron of modern developments regarding their form, scale and function. The area suffered from many problems such as socio-spatial debilitation and deterioration of urban fabrics and immigration of refugees. However, the revitalisation plan, as submitted by Japanese consultants (JCP) in 1984, did not consider citizens' participation as the central element in making decisions (Al-Saffar, 2018). Accordingly, some design moves in that schema included:

- A. The proposition of a buffer zone around the old centre by promoting the advancement of a Central Business District (CBD)
- B. The conservation of suqs, mosques, historic places and monuments
- C. Environmental rehabilitation by providing development controls and incentives for restoration and redevelopment
- D. Conservation programs within old Rusafa such as the study of all buildings, their architectural typologies and suggested various criteria for intervention, restoration, urban repair, infill or other substitutive moves
- E. Solutions proposed to minimise the damage by the removal of DABs, and the provision of development controls and incentives
- F. Passive protection of the existing historic centre via proposing incentives and policies
- G. The proposition of a plan for the use of the Municipality of Baghdad in order to control ongoing growth.

Revitalisation of Bukhara, Uzbekistan (1960s--present): Within the ancient city there are about five hundred standing monuments including madrasas, mosques, caravanserais, mausoleums, trading domes, the Ark Citadel, and many hammams, old houses and canals. The restoration program began in the late 1960s under the USSR and has been continued by Uzbekistan until today. The primary aim is to conserve significant monuments and landmarks in the centre of the old city and re-integrate them into the life of neighbouring districts (Elnokaly & Elseragy, 2011). The proposed methods included:

- A. Adaptive reuse of mosques, madrasas, mausoleums and other monumental structures. Some madrasas, for example, have been turned into craft centres, studios and galleries. One madrasa has become a restoration institute where future restorers will be trained
- B. Some historic structures have had their old functions restored
- C. A caravanserai was revitalised as a silk and cloth warehouse, while trading domes were renewed as active suqs
- D. Mediocre buildings of the 1950s were removed to open up the old centre and allow the monuments to be better seen
- E. Utilities were upgraded and streets were re-paved (Figure 2.2).

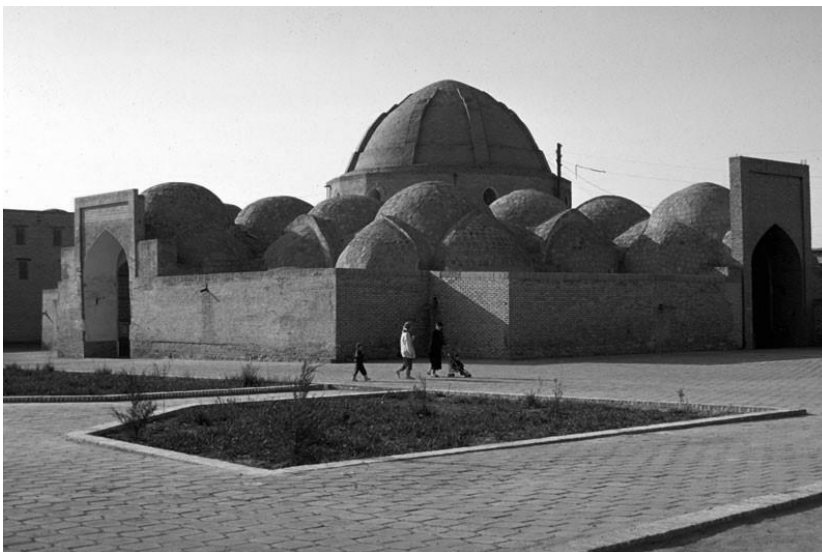


Figure 2.2: Revitalisation of historic Bukhara. Picture courtesy of Agha Khan Award For Architecture (1995)

Hafsia Quarter, Tunis (1986--present): The quarter is located in the eastern part of the old medina of Tunis. Once a wealthy district, by the early 1960s it had severely deteriorated and was filled with disadvantaged communities. In 1967, a multicultural association was established to study and protect the urban fabric of the old city of Tunis, and to improve the living conditions of its inhabitants. The first phase of the reconstruction of Hafsia, completed in 1977, received the Aga Khan Award for Architecture in 1983 (Agha Khan Award for Architecture,

2018). The current phase is the continuation of previous work and builds upon earlier experiences (Elnokaly & Elseragy, 2011). The design moves include:

- A. Upgrading of the existing water services and infrastructures, and rebuilding of roads and access routes
- B. Reconstruction of housings, shops, offices, and public facilities
- C. Rehabilitation of existing dwellings and reconstruction of new housing units which adopt the traditional model of two-storey blocks arranged around an internal courtyard
- D. The architectural vocabulary employs traditional elements such as partially covered thoroughfares, accentuated corner details which reflect the historic context, adding unity to the development while responding to financial constraints
- E. Implementation of legislative change to provide appropriate institutional development and practical financial incentives
- F. Collaboration and inter-disciplinary coordination among interested agencies.

2.4.6. Revitalisation of historic Iranian cities

In Iranian historic cities, three major government agencies are in charge of regulating/managing heritage districts. Firstly, the Iranian Cultural Heritage, Handicrafts and Tourism Organization (ICHHTO), which aims to provide and implement programs for the protection, preservation, restoration and revitalisation of cultural--historic sites and urban contexts in Iran (Aksan, 2014). ICHHTO is also playing a local and central role for generating regulations and managing historic urban areas. The organisation is also responsible for providing feedback about strategic plans and detailed development/master plans, occasionally proposed by two other government agencies (Habibi, 2010).

Secondly, the Office for Urban Renewals and Improvements (as the executive arm of the local city council) acting under the auspices of the Ministry of State, is in charge of developing innovative policies and decision making on management of historic sites and old cities. The office's tasks include the preparation and support of NGOs, identity generation and development inside the city, by rehabilitating, reconstructing and renovating urban fabrics including historic zones (Office for Urban Renewals and Improvements, 2017).

The office focuses on generating financial opportunities for owners, builders and investors, seeking support from internal and external resources, and intends to offer state-of-the-art urban patterns, project management models, and technical and administrative suites/tools to best regenerate the city. The office also aims to provide policies and executive decision making regarding revitalisation of deteriorated historic urban contexts. Current projects consist of

micro-macro scale local regeneration programs, connecting both historic and deteriorated urban fabrics (Sazman-i-Newsazi-va-Behsazi-Shahri, 2017).

Thirdly, the Urban Development and Improvement Company established under the auspices of the Ministry for Roads and Urban Development is a specialised holding corporation. The company aims to directly improve knowledge of urban management, renewal, development and the promotion of intellectual properties (Habibi, 2010). It also aims to provide an assembly of passive policies/programs and community empowerment schemes, while at the same time following a series of active executive projects and providing a stimulating approach towards urban regeneration in historic areas. Accordingly, in the historic urban fabrics, the main objectives of the programs are presented in three sections including upgrading the public realm, neighbourhood regeneration and the promotion of local working groups (Sherkat-i-Madar-Takhasosi-i-Omran-va-Behsazi-Shahri-I-Iran, 2017).

Not unlike ICHHTO, the other two government agencies can implement regulations and projects inside historic urban areas. Therefore, proposals can be highly influenced by organisational perspectives and hardly correspond with each other (Masoud and Beigzadeh, 2012). In practice, it seems that traditional urban fabrics as defined by ICHHTO noticeably characterise deteriorated urban fabrics as defined by other two urban agencies. Consequently, both definitions are critically entangled and barely operable. As a result, a need for representing new methods and facilitating innovative regeneration projects/programs has become necessary (Habibi, 2010).

Additionally, urban revitalisation projects inside historic cores principally remain locational-topical and are bound within physical structures and organisational--political perspectives. Hence, despite great efforts, such inharmonious states of affairs have further segregated historic Islamic revolution in 1979, revitalisation programs in Iranian historic cities have implemented one or a combination of the following approaches (Hanachi & Fadaei Nezhad, 2019):

- A. Surveying historic contexts and sites, provision of building regulations, and the definition of heritage buffer zones
- B. Pedestrianisation through historic neighbourhoods, the definition of neighbourhood centres, placemaking, façade restoration, repaving and regeneration of historic axes (Figure 2.3)
- C. Facilitation of adaptive reuse of historic buildings, provision of infill residential-mixed use buildings, identity generation and promotion of tourism activities

D. Provision of local infrastructure, vehicular access, neighbourhood car parks and change of land-use where applicable.



Figure 2.3: Revitalisation of historic Yazd, Iran 2018 (Source: author)

2.4.7. From single restoration to a holistic approach in revitalisation of historic cities

As elaborated earlier in sections 2.3 and 2.4, from the early 19th century to the Amsterdam Charter took about five decades for regeneration programs to evolve from a single-building restoration to indicate a need for providing holistic and sustainable agendas for revitalising historic cities (Behzadfar, 2012). The progressive development of this concept created awareness of the impossibility of separating historic centres (either in analytical or in planning terms) from their municipal, territorial and social contexts, which are linked by mutual, deep relationships (Table 2.5). Nonetheless, today identity generation and empowerment of local communities have become an indispensable part of any regeneration program, especially in the case of old city centres or other historic environments at risk of abandonment (Lazzarotti, 2011).

Table 2.5: Revolution of the concept of urban regeneration (1950s--2000s) based on Roberts and Sykes (2008, p.14)

Policies in each period	Strategic objectives	Stakeholders	Spatial levels of activity	Economic focus/ Social content	Physical focus/ Environmental approach
The 1950s urban reconstruction	Reconstruction and extension of older areas of towns and cities often based on a master plan; suburban growth	National and local governments, private sector developers and contractors	Emphasis on local and site levels	Public sector investment with some private sector involvement Improvement of housing and living standards	Peripheral developments and replacement of inner areas Landscaping and greening of urban areas

The 1960s revitalisation	Continuation of the 1950s theme; suburban , peripheral growth; some early attempts at rehabilitation	Moves toward a greater balance between public and private sectors	Regional levels of activity emerged	Continuing from the 1950s with the growing influence of private sector investment Social and welfare improvement	Continuation from the 1950s with parallel rehabilitation of existing areas Selective improvements
The 1970s renewal	Focus on in-situ and neighbourhood schemes; still a focus on development at the periphery of urban areas.	The growing role of the private sector and the decentralisation of local government.	Regional and local levels initially; later more local emphasis	Resource constraints in the public sector and further growth of private investment Community-based actions and the greater empowerment	More extensive renewal of older urban areas Environmental improvements with innovations
The 1980s neoliberal redevelopment	Many major schemes of development and redevelopment flagship projects out-of-town projects	Emphasis on the private sector and special agencies; growth in importance of partnerships	In the early 1980s a focus on site, later emphasis on a local level	Private sector dominant with selective public funds Community self-help with very selective state support	Major schemes or replacement and new development; flagship projects Growth of concern for wider approach to environment; sustainability begins to emerge on the agenda
The 1990s integrated urban regeneration	Towards a more comprehensive form of policy and practice more emphasis on integrated solutions to urban challenges	Partnerships as the dominant approach	Reintroduction of strategic perspective, growth of regional activity	Greater balance between public, private and voluntary funding Greater emphasis on the role of communities	More modest and sensitive scale than the 1980s; heritage and retention Introduction of the broader idea of environmental sustainability
The 2000s socio-spatial sustainable revitalisation	Provision of holistic master plans including, social, environmental and financial grassroots of local-national communities	Delegation of power to the local authority, community empowerment and involvement, reintroduction of strategic perspectives, growth of regional activities	Strategic planning in universal-national level while responding to the problems at the local scale.	Advanced levels of cooperation between public, private and sustainable economic growth and funding Community as the core area of urban regeneration.	Integrated process of regeneration, development, heritage preservation and placemaking Smart city

2.5. Search for a new theoretical framework for revitalising historic Iranian cities

Since 1920, modernisation strategies and urban development trends in Iran have justified spatial transformation, redevelopment, the demolition and destruction of traditional urban fabrics as a method to provide contemporary requirements for the residents (Arjomand Kermani & Luiten, 2012). Nevertheless, the disagreement over the value of Iranian urban cores and inevitable modification of urban areas creates a problematic condition for the protection of the historic environment, specifically when the issue of revitalization is equated with the European counterparts (Arjomand Kermani, 2016).

By looking at European cultural history, one can claim that urban transformation in historic cities of Europe started with the Renaissance in the 14th century and continued with Enlightenment, culminating with 19th and 20th century industrial movements (Voegelin, 1982). In this sense, the whole process of urban transformation, including the adoption of modernity by Western cities, materialised during almost five hundred years. This facilitated a reasonable duration of time for socio-spatial integration of historic cities with their surrounding modern built-environments. In contrast, the whole process of modernisation in Middle-Eastern cities, launched since the beginning of the 20th century, had transformed traditional structures during a few decades (Bianca, 2000). Accordingly, based on what was discussed earlier in sections 2.3 and 2.4, such spatial-historic differences can be seen as the very reason why Western models of urban regeneration cannot yield an acceptable level of outcome in Iranian or Middle Eastern historic cities.

As discussed earlier, Western intervention revolutionised architecture from single-building restoration models (in the early 19th century) to regeneration in the 2000s and beyond. This chapter has shown that contemporary models of Western intervention in historic areas are largely based on comprehensive planning, public-participation, mixed restoration-gentrification, the adaptive reuse of heritage buildings and change of land use, the provision of financial motivations and implementation of mixed-use buildings. These approaches could be a reasonable way of regenerating old cities in Western culture. In this case, Western methods of revitalisation see the old cities as large-scale urban museums, where the historic areas have already adapted the modern necessities of life over five centuries of consistent structural modification. In contrast, the rapid and unfiltered adaptation of Modernity in Iranian or Middle Eastern historic cities have devaluated land and properties in the heritage nucleus, generated massive socio-spatial degradation and assisted rural immigration towards old urban contexts.

Such socio-spatial transformation was consequently followed by superimposing the new city on old historic fabrics and via cutting out wide new roads for providing vehicular accessibility and infrastructure (Habibi, 2005). The latter entailed the progressive demolition of historic fabrics which has continued until the present day. These socio-spatial qualities have yet produced a dangerous rift between the new elite who live in newly emerging suburbs and ordinary people who inhabit the old city (Mahdy, 2017). By comparing experiences within the Middle Eastern nations and the Western world, this thesis identifies a gap in the knowledge whereby the argument, approach and methodology introduced by Western schools of thought must be enhanced and fine-tuned before it can be applied to revitalisation of historic cities in Iran and the Middle East.

2.5.1. The transitional nature of historic Iranian cities

During past centuries, old cities in Iran were often like islands of stability in the turbulent sea of events, such as foreign invasions or the rise and fall of new dynasties. In this case, cities managed to preserve the core architectural-cultural heritage and transferred unique socio-spatial qualities to the following generations (Werner, 2000). However, the industrial age put an end to this historic consistency, while the Iranian social, spatial and economic infrastructure was found increasingly inadequate to meet the rising expectations of Iranian people in conjunction with the rapid change generated by modernity (Hetherington, 1982).

The dynamic of socio-spatial change produced by the Industrial Age found physical expression in the radical transformation of historic urban fabrics in Iran, despite the fact that during previous centuries changes in the architectural fabric had always occurred as a part of a natural/organic evolutionary process (Faghih, 1976). Therefore, the result of such socio-spatial disruptions generated an ever-widening chasm between past and future, which pulled present historic cities apart and emptied it of many essential qualities. Accordingly, historic urban areas in Iranian cities can be assumed to be entities suspended in-between pre-modern and contemporary epochs (Bianca, 2000).

In this sense, the traditional urban fabric along with DABs, neither entirely lost their traditional properties (e.g. their unique structures/land grains/narrow roads), nor could they adapt themselves since to the modern surrounding built-environment (Mirmiran, 1996). Hence, such an uncertain situation represents a condition of transitionality akin to the concept that Szokolczai (2017) suggests: a permanent in-betweenness. Accordingly, it could be conceptualised that historic zones in heritage cities are in a transitional state because they accommodate uncertain conditions of life and settlement; hence, heritage fabric can be seen as

those areas out of the ordinary and organised routines of society, which reflect a situation where different occasions can take place (Mozaffari, 2016).

2.5.2. Influx of non-Iranian communities and socio-spatial in-between-ness

Nowadays the ever-growing immigration of refugees and non-local disadvantaged communities in the historic urban fabric of Iranian cities (as previously discussed in section 1.2) can be seen in close conjunction with the devaluation of properties in historic areas, formed as a result of unprecedented urban transformation (Faghih, 1976; Hanachi & Fadaei Nezhad, 2019). However, the challenging presence of refugees in such informal refugee camps is clearly in line with the concept of in-between-ness (Manjikian, 2010).

Such in-between-ness can become a condition of vulnerability where societies everywhere acknowledge a transition in the social status of people: by symbolically noting their separation from a previous state in the social structure, and their subsequent incorporation into a new social state (Van Gennep, 1960). Thus, for those in refugee camps, these two phases of transitional activities are separated by a dangerous intervening period of in-between-ness, involving an ambiguous stateless period, in which humans are no longer able to continue as social beings as they were previously, nor are yet qualified to become new social beings (Mortland, 1987). In this case, liminality could be undoubtedly perceived as a state of vulnerability in historic Iranian cities.

2.5.3. The proposition of new epistemological tools for understanding vulnerability

Principally in line with what has been discussed above in section 2.5.1, today the current methods of urban regeneration following Lynchian epistemology seem to be mostly ineffective (Sankalia, 2014), especially for understanding vulnerability and in conjunction with the revitalisation of historic cities. In this sense, new epistemological tools need to be instigated (Mirmiran, 1996).

The discussion in this chapter has clarified how social and spatial transitory aspects of historic Iranian cities can be seen to be totally in line with that of in-between-ness of liminality as initially discussed by Van Gennep (1960), and as a dangerously frozen condition, in-between is neither despoiled of its previous qualities nor transformed into a new stable condition.

In a historic city, transitionality may be theorised under the condition of liminal, which at its core anticipates transformation, structure-agency associations that affect the human experience. Inspecting historic urban fabrics in light of liminality can pertain to cross-examine ideas of transition, frontiers and border zones, and their renditions and constructions as well as the life of actors who construct them. Thus, liminality can draw new insights about understanding

spatial and temporal transitions between heritage fabric and spaces of everyday life or the structure of experiencing a historic core (Mozaffari, 2016).

Correspondingly, as it will be elaborated in this thesis, several transitional qualities of heritage sites can single out the state of liminality (in-betweenness) as an appropriate theoretical tool for scrutinising Iranian historic cities. In anthropology, liminality in and of itself is used as a measure for understanding vulnerability among human beings (Szokolczai, 2015). Thus, for the first time, this research suggests liminality as a tool for understanding socio-spatial vulnerability in the context of urban regeneration, and within historic contexts in Iranian cities.

2.6. Summary

In order to evaluate current revitalisation movements in Iranian historic cities, a critical literature review was conducted in this chapter. Informed by the definition of regeneration, the chapter scrutinised significant movements for regenerating urban heritage cores worldwide, with an emphasis on contemporary projects and processes.

Consequently, a number of gaps in the knowledge are identified, highlighting a need for appropriating new epistemological tools for regenerating historic Iranian cities, regarding their distinctive differences with their European equivalents. Correspondingly, several transitory aspects of historic Iranian cities were elaborated by which liminality, as an anthropological concept, can be considered as a reliable theoretical framework for understanding and regenerating heritage cores.

Therefore, a research project is suggested which firstly aims to apply the category of liminality (as a method of measuring vulnerability in Anthropology) in urban studies and secondly, tries to open discussions on how liminality as an analytical tool could inform revitalisation projects and policies in historic cities.

Given the criticality of DABs in Iranian historic cities (as previously discussed in Chapter 1) within the proposed research project, the correlation between liminality and the extent of DABs become central for understanding socio-spatial vulnerability. The next chapter will conduct a critical analysis on the concept of liminality. Thus, Chapter 3 will focus on defining and identifying frameworks for understanding several types of liminality as they apply to Iranian historic cities.

Chapter 3: Spatial Liminality as a Theoretical Framework



Dilapidated-abandoned building (DABs) in historic Kerman, 2018 (Source: author)

3.1. Introduction

As deliberated in section 2.5 in the previous chapter, today several levels of liminality can be perceived in historic cities of Iran, which can genuinely reflect a condition of socio-spatial vulnerability among residents. It seems that chronic urban decay has built up to a great extent with regards to inexpensive and low-quality housing opportunities, which in turn has attracted non-Iranian disadvantaged communities to settle in historic areas (see sections 1.3 (Chapter 1) and 2.5.2 (Chapter 2)). Since the presence of refugees in historic urban fabrics is in line with the liminality of asylum seekers in refugee camps, the current chapter has accentuated the importance of understanding liminal-vulnerable situations in historic cities.

The chapter conducts a critical interrogation of the concept of liminality. To do so, the discourse investigates liminality and its anthropological roots from the early 20th century. The concept of 'spatial liminality', as originally coined by Thomassen (2015, p.39), will also be further developed. Throughout the chapter, it is demonstrated how historic Iranian and Middle Eastern cities simultaneously generate at least two types of spatial liminality, indicating real-life transition. Hence, the chapter conducts a comparative study amongst previously acknowledged examples of liminality in real-life situations and in the context of historic cities.

The comparison finally establishes a twofold theoretical framework for conceiving spatial liminality as an analytical tool for understanding socio-spatial vulnerability in historic cities. The chapter ultimately suggests an analytical model based on spatial liminality that re-informs urban revitalisation methods in historic cities.

3.2. Definition of Liminality

Liminality is principally associated with the English word 'limit'. The etymology of some authors has traced this concept to the Latin word 'Limen', referring to threshold. Others have traced it to another Latin word 'Limes', referring to boundaries, frontiers and limits (Balduk, 2008, p.vi). Liminal, associated with the meaning of Limen or Limes, is partially elaborated in contemporary literature. However, as can be seen later in this chapter, liminality as a voluntary-adventurous act and as proposed by Victor Turner (1974) has largely affected anthropology and neighbouring disciplines (Thomassen, 2014).

3.2.1. Liminality as an anthropological concept

Arnold Van Gennep first coined liminality in his 1909 book *Les Rites de Passage*, translated into English as 'The Rites of Passage' (Van Gennep, 1960). The importance of Gennep's book is not only prophesying the confutation of collective structuralism but the obviosity and

intactness of the concept (Thomassen, 2014). Van Gennep distinguished rites that mark the passage of an individual or social group from one status to another (e.g. childhood to manhood), from those rites which mark transitions in the passage of time, for instance, harvesting time and New Year (Thomassen, 2012).

Emphasising the importance of transitions in any society, Van Gennep (1960) singled out 'rites of passage' as a special category, consisting of three sub-categories, namely 'rites of separation', 'transition rites' and 'rites of incorporation' (Szakolczai, 2015, p.141). Van Gennep called the middle stage in a rite of passage a liminal period (Figure 3.1). He referred to transition rites as 'liminal rites', and the rite of incorporation 'post-liminal rites' (Thomassen, 2012, p.23). Thus by analysing rites of passage, Arnold Van Gennep introduced a new approach. Instead of utilising priori categories as units of taxonomy, he abstracted these units from the ceremonies themselves (Darity, 2008).

Van Gennep was impressed with the prominence of transitional or liminal phases within a ceremony. He noticed in tribal rituals, that when individuals or groups are in a state of suspension (separated from their previous conditions and not yet incorporated into a new one), they constitute a threat to themselves and the entire group. In this ceremonial state, they are outside the sphere of normal control and must be reintegrated to avoid becoming disruptive. The liminal period also has its internal structure, and it is possible to observe stages of entry into the period, the period itself, and departure from the period of transition (Thomson-Gale, 2008).

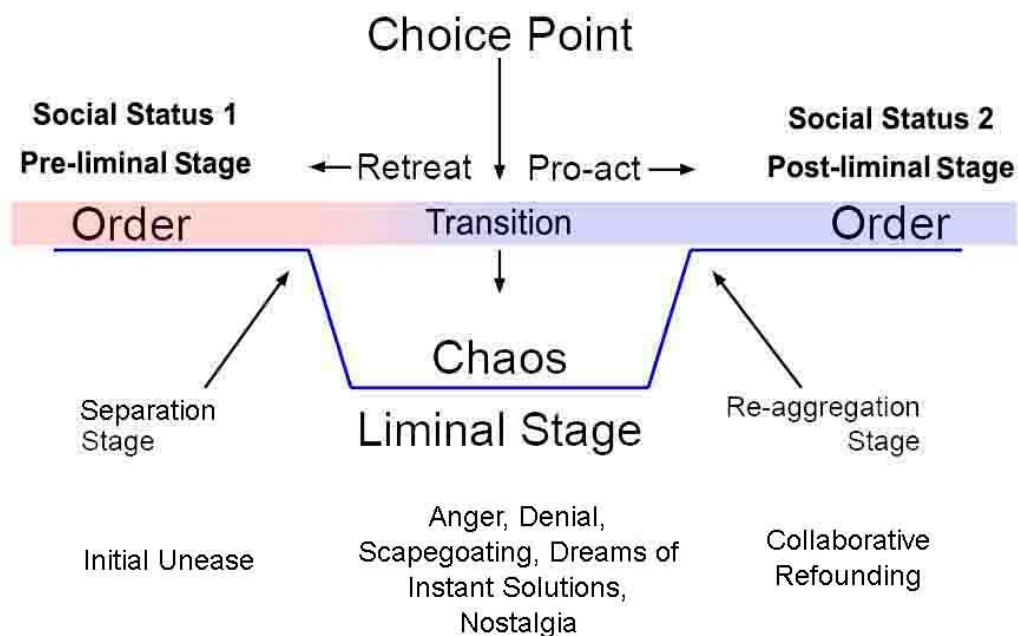


Figure 3.1: The three phases of rites of passage for individuals, groups or societies (Van Gennep, 1960)

3.2.2. From liminal to Liminoid

Although the notion of liminality presented as early as 1909, it took a long time before receiving any attention in the 1960s when the English translation of *Les Rites de Passage* was published. Victor Turner first rediscovered the importance of liminality (Balduk, 2008, p.2). Turner stumbled upon Van Gennep's book in 1963 when he himself was in a liminal state; having resigned from his academic job in Manchester University and waiting for his delayed visa to the US. Turner experientially recognised the importance of the tripartite (i.e. rites of passage) suggested by Van Gennep, while 'the reading inspired him on the spot' (Thomassen, 2009, p.79).

Turner (1967, p.51) showed how ritual passage (for instance, in the African tribe of Ndembu) served as 'moments of creativity that freshened up the social make-up, within tribal communities'. Eight years later, Turner (1974, p. 71) applied the concept of liminality to modern life, suggesting that liminal experiences in modern industrial societies had largely been replaced by 'Liminoid' moments, where creativity and uncertainty unfold in art and leisure activities.

In his late-life writings, Turner (1982, p.44) coins the term 'anti-structure', to describe both 'liminality' and 'communitas'. Turner describes that by anti-structure he 'meant not a structural

reversal but the liberation of human capacities of cognition, affect, volition, creativity, etc., from the normative constraints incumbent upon occupying a sequence of social statuses'. In this respect, *communitas* is an acute point of the community, which takes communal acts to the next level and allows the whole of public to share a common experience, usually through a rite of passage, which brings everyone to an equal level (Turner, 1982). Offering examples of 'communitas' in modern Western society, Turner (1969, p.112) coins: 'beat generations, hippies, and teeny-boppers'.

Nonetheless, there are some serious shortcomings with such interpretations of liminal as 'Liminoid'. For instance, 'Liminoid' in conjunction with modern societies almost exclusively considered as positive, celebratory/creative, is mainly seen as the dismantling of presumably ossified structures. Such interpretations could seriously disregard some of the precarious and problematic aspects of liminality (Szakolczai, 2017; Thomassen, 2009).

The discourse of 'Liminoid' oversimplifies the dichotomy between symbolic systems of modern and traditional cultures. However, even today many residents, asylum seekers and migrants in modern societies (see section 3.3.2) are essentially living through their rites of passage when an actual change of social status occurs in their life (Andrews and Roberts, 2012).

In this case, voluntary experiences do not include resolution of a personal crisis or a change of social status. In other words, according to Van Gennep's classification, liminality includes a real-life transition, which could affect both individuals and communities. Therefore, in discussing liminality, it can be claimed that 'if it is not about the transition, it simply is not about liminality' (Thomassen, 2014, p.15). Thus, liminality, as a voluntary action, is delimiting the concept of liminality and allows for indiscriminate applications, to the extent that it is pretending that liminal moments and experiences may be equally present outside the culture, and in political and social transformations (Thomassen, 2009).

Thus, liminality cannot be considered as playful, exploratory, or even extremely adventurous, because it does not contain a real-life transition (the rite of passage) for individuals and communities. Therefore, according to Van Gennep's original conception (1960), such interpretations should not be deliberated as if they are genuinely investigating liminality (Thomassen, 2014). The discourse proves that some serious deficiencies might arise by using an alternative understanding of liminality (such as Liminoid), while unexpectedly the

contemporary literature on liminality became filled with the notion of adventure, freedom, extreme playfulness.¹

3.2.3. Place as the third dimension of liminality

Thomassen (2014, p.181) indicates the third dimension of liminality as 'Place'. In this case, he moves beyond Van Gennep's dichotomy of 'Time' and 'Event' as the two foundations of liminality. In introducing 'dimensions of spatial liminality', he specifies that 'liminality is very essentially a spatial concept': Van Gennep even showed that perhaps the physical passage of a threshold somehow preceded the rites that demarcate a symbolic or spiritual passage.

He refers to the original book '*Les Rites de Passage*', where Van Gennep starts his analysis of ritual transition with a full chapter in the territorial passage, and by describing that 'a rite of spatial passage has become a rite of spiritual passage'. In this sense, the study of 'spatial liminality' could represent an opening point for 'theorising space' (Thomassen, 2014, p.91).

As discussed earlier (see section 2.5.3, Chapter 2), today liminality as a real-life socio-spatial condition has rarely been subject to investigation, specifically within contemporary urban design literature. Respectively, in a search for developing the idea of 'spatial liminality' as originally proposed by Thomassen (2014, p.91), the rest of this chapter investigates links between place (in the sense of urban spaces in historic cities) and 'temporal fixations of liminality'.

3.3.Spatial liminality type-A and formation of refugee settlements in historic cities

This section focuses on spatial liminality, which could be identified in refugee camps, where a place might solely generate the rites of passage for marginal individuals or displaced-disadvantaged communities, such as refugees. The section scrutinises the influx of refugees and/or non-local disadvantaged communities in historic cities, through a different perspective (compared to current discourses), and by utilising the analytical lens of liminality. In this sense, a refugee settlement in a historic city has become closely similar to a refugee camp, via several evaluating factors as will be discussed in section 3.3.3. For ease of understanding, the following section refers to this specific type of liminal condition as spatial liminality type-A.

¹ Liminal as adventurous or playful is a dominant topic in the contemporary literature which is outside the scope of this chapter. Some examples of such applications of liminality are observable in the works of Stevens (2004), Levesque (2014), De Sola-Morales (2014), Campoli (2014) and Sankalia (2014).

3.3.1. Spatial liminality type-A in refugee camps

In *Transforming Refugees in Refugee Camps*, Mortland deliberates on the notion of 'refugee camps and liminality'. She argues that the characteristics of liminality are applicable to asylum seekers confined to refugee camps. The loss and confusion experienced by refugees after separation from their homeland, the unfamiliarity and strangeness of refugee camps and uncertainty of the future create an aura of enigma, anxiety and timelessness for refugees which cannot be overcome as long as they remain in the camps (1987, p.379).

...Until [he/she] is determined eligible to join a new system of social relations (i.e. to be moved to a country of resettlement), a refugee will exist in a state of in-betweenness, in which previous status or position he possessed no longer obtains (1987, p. 380).

That is to say, such refugees exist in a state of suspension where they have lost their former status as members of a community, but have not been able to join the surrounding society in their new location. Mortland notes that the forms of refugee camps in which these processes are occurring may vary from 'border' to 'holding centre' or 'transit centre'. In this respect, 'one form of the refugee camp prototype takes the conditions of transition existing in refugee camps and attempts the transformation of refugees into new beings' (Mortland, 1987, p. 380). This suspension is externally policed. Thus, Sandra H. Dudley (2010, p.65) in her studies among 'Karenni' refugees in Thailand suggests that a globally dominant system of nation-states works as a 'hegemonic topography' that controls such 'transitional spaces'.

3.3.2. Socio-spatial planning context and the formation of spatial liminality type-A

In 'remapping liminality', Andrews and Roberts (2012, p.3) describe 'Margate' as a former coastal resort in the UK, as having been legislated by the central government to house asylum seekers as a part of the *Immigration and Asylum Act of 1999*, according to which areas with an abundance of ready accommodation were identified to deal with concentrations of migrants at their points of entry.

During refugee accommodations, Andrews and Roberts (2012, p.4), using Turner's terminology, describe Margate as a marginal place both with respect to its geographic positioning and also with regard to its role in playing host to marginalised groups, describing refugees as 'those on the edge, betwixt and between structures of place and identity'.

This deliberation could signify the importance of broader socio-spatial planning contexts (e.g. *the Immigration and Asylum Act*) on the formation of spatial liminality in a Western city, similar to other timeless-universal situations engendered in typical refugee camps.

3.3.3. The parallel qualities of spatial liminality type-A in historic cities and refugee camps

While today an accumulation of refugees and disadvantaged non-local residents is a widespread phenomenon experienced in historic cities worldwide (see sections 1.2.2 (Chapter 1) and 2.4 (Chapter 2)), spatial liminality (type-A) in both historic areas and refugee camps could be appropriately acknowledged as sharing several similarities.

Firstly, people who have been involved in both types of spatial liminality have inevitably turned out to be refugees and/or non-local migrants.

Secondly, both types of refugees are living inside a sort of segregated zone, generated by physical boundaries. For instance, today core historic areas of Iranian cities could be considered to be semi-restricted, as a result of lack of vehicular accessibility (Tavassoli, 1987), which is indeed comparable to physical barriers in refugee camps.

Thirdly, in terms of physical qualities, both types of refugees are exposed to poor housing, marginality and segregation.

Fourthly, people in both types of liminality could participate in a real-life event, including a compulsory and timeless transition. In this sense, refugees in both cases will remain between their previous social status and the potential status of becoming a citizen of the new land.

Fifthly, the two types of spatial liminality more or less occur on a similar scale; whether in the case of a real-life refugee encampment or several interconnected refugee settlements (e.g. a cluster of houses) in historic urban blocks.

Finally, within real-life liminality, previous achievements of exogenous communities, either in a refugee camp or inside historic fabrics, no longer apply, while both are suspended between two social statuses. Thus, the formation of spatial liminality type-A can fittingly become evident inside many historic cities (Table 3.1).

Table 3.1: Analogous dimensions of spatial liminality type-A for asylum seekers in refugee camps and refugee settlements in historic Iranian cities

Parallel conditions of spatial liminality among asylum seekers		
Criteria	Refugees in historic urban fabrics	Refugees in a refugee camp
Subject communities	Refugees and rural economic migrants	Refugees
Breaking boundaries	Semi-restricted areas (e.g. having a low level of vehicular accessibility)	Restricted areas
Physical aspects	Poor housing, Deteriorated and dilapidated urban areas-segregation from the city	Marginality, living in the segregation of refugee camps
Event	Real-life event and passage for all neophytes (refugees, Low income-disadvantaged communities) to become a citizen of the new city	The real-life event of becoming a citizen of the new land
Modes of Participation	Compulsory segregation (e.g. Afghan refugees in Iran segregated from their spatial-temporal backgrounds)	Compulsory segregation (refugee camps)
Time	Timeless situations (permanent liminality)	Timeless situations
Scale of occurrence	Urban blocks/several interconnected allotments	Refugee camps
Previous achievements	As a neophyte refugee no longer obtains	As a refugee no longer obtains
Creativity or danger	Rites of transition and its suspension may be dangerous	Rites of transition and its suspension may be dangerous
Type of transition	Spatial liminality observable generates rites of passage for minorities to be assimilated to a new community-country	Spatial liminality observable and generates transition and liminality between two social statuses

3.4. Spatial liminality type-B and territorial interdependences in historic cities

Contrary to spatial liminality type-A which might happen in refugee settlements, spatial liminality type-B could occur on a larger scale, such as societies and geographical territories; as well as a smaller scale, such as identity-neighbourhoods in medieval Middle Eastern cities. Therefore, this section sheds light on spatial-liminal circumstance, wherein identity-groups or diverse societies established territorial interdependence, based on reciprocal exchange. This type of spatial liminality illuminates how cross-community interactions facilitate the rite of passage for larger societies, as well as for communities residing in heterogeneous neighbourhoods of a historic Middle Eastern city. For ease of understanding, this state of liminal affairs is identified as spatial liminality type-B in this chapter.

3.4.1. Spatial liminality type-B and the formation of interdependent societies

‘Spatial liminality’ on a grander scale (as defined in this section) was first verified by Thomassen (2010, p.92), who advanced Karl Jaspers’ theory of axial ages. For Thomassen, Karl Jaspers (1953, p.51) was obsessed by the fact that during a critical period, between the 8th and 2nd centuries B.C., a series of ‘sociological, political and religious mutations’ simultaneously affected several civilisations from Greece to China. Jaspers (1948, p.430) argued that ‘from these mutations, what we consider religion, as we know it today, appeared’.

Thomassen (2012, p.26) demonstrates that there are substantial grounds to believe that Jaspers’ Axial Age theory could be profoundly comprehended via liminality. He suggests that, based on this theory, “the in-between spatial positioning” could be the primary cause for simultaneous generation of ‘rites of transition’ amongst in-between societies (Figure 3.2).

The explanation of Axial Age in relation to place by Jaspers used a vocabulary almost identical to the one originally proposed by Van Gennep. It is indeed depicting the liminal stages in large-scale social transformations, as if whole societies located in-between confronted their rites of passage. In this sense, by ‘referring to the spatial coordinates the Axial leaps all happened inside in-between areas between larger civilizations in liminal places’. It is crucial to understand that such spatial qualities ‘happened not at the centres, nor beyond the reach of the main civilizational centres, but exactly at the thresholds’ (Thomassen, 2014, p.92).

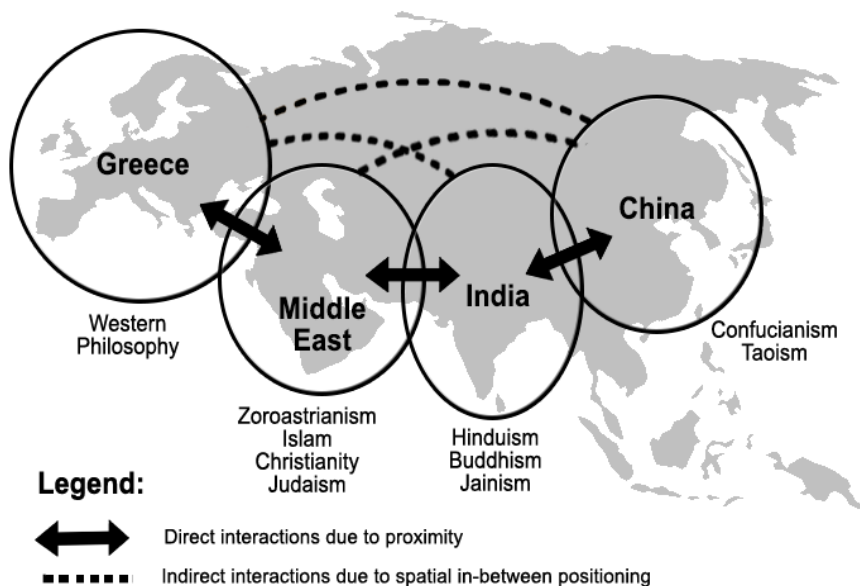


Figure 3.2: Spatial liminality type-B among societies as occurred during and after the Axial Age (800--200 B.C.), (Source: author generated)

3.4.2. Spatial liminality type-B and the formation of medieval Middle-Eastern states

In contrast to the condition of modern territorial states, territorialities of medieval states in the Middle East can be clearly described by spatial liminality type-B, characterised by osmotic borders and territorial interdependence that together facilitate rites of passage amongst neighbouring states. Similar to liminality during Jaspers' Axial Age, rites of passage are here opposed to physical crossing of borders (e.g. liminoid, see section 3.2.2), including real-life transition. It seems that liminality here operates at different scales: civic/communal (e.g. Shias, Kurds, religious groups and sub-groups), national and transnational.

In this case, the state of socio-spatial affairs can be described by the sovereignty-field model, where the intensity of sovereignty is conceived as being uppermost over an expanse centred in the capital, while beyond this district the intensity of control is conceived as radiating in all directions, diminishing with increased distance from the capital. Frontiers in such a system would correspond to regions where the intensity of sovereignty of one political unit had decreased sufficiently, to be overlaid by the field of power of a neighbouring unit (Brauer, 1995).

In the hypothetical map comprising a number of political units in the medieval Middle East (Figure 3.3), such a model yields a miscellany of power fields, encircled by osmotic border zones between each pair of adjoining powers. This emphasises that a fraction of the total area and the importance of a given entity that falls into a boundary is substantially greater than what

might have been inferred from consideration of the ratio of linear dimensions of boundary and core zones (Hanaoka, 2016).

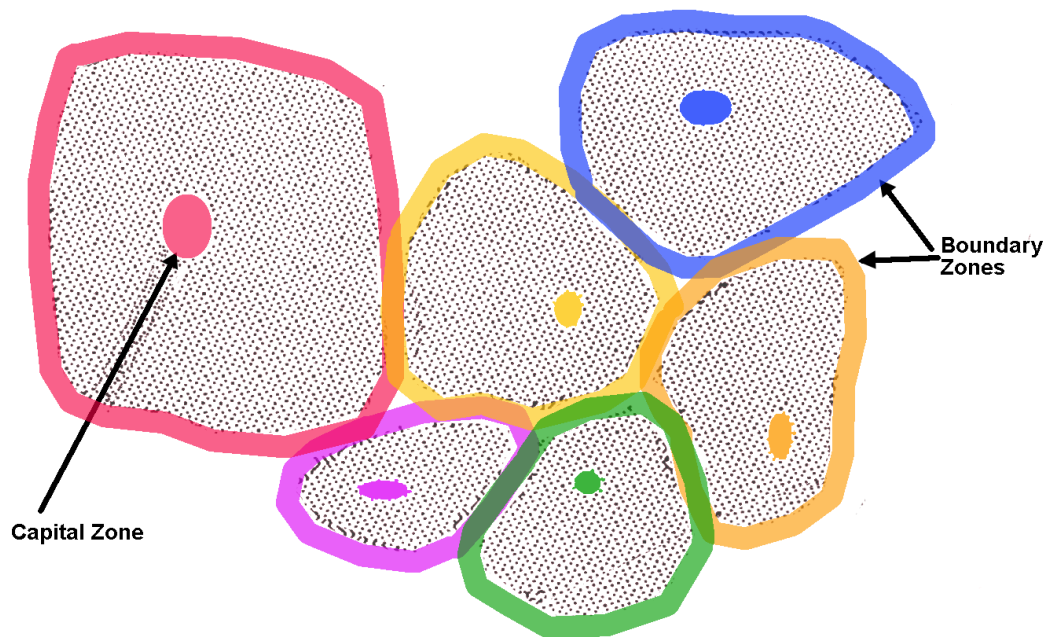


Figure 3.3: Map illustrating hypothetical spatial-liminal relationships between Middle-Eastern states during the medieval era, based on Brauer (1995, p.29)

3.4.3. Four essential elements of spatial liminality type-B

Based on the above discussion, it could be assumed that the rites of passage as described by Thomassen (2012) had occurred as a consequence of socio-spatial and inter-group relationships. Thomassen's discussion regarding in-between spatial positioning and the formation of interacting/liminal societies as signifying a territorial interdependence, is not dissimilar to what Stavrides (2007, p.4) has described as 'Heterotopia', by which he refers to places that maintain osmotic boundaries, and generate porous urban spaces, suitable for 'acts of encounter' between communities.

In deliberating such a liminal-spatial quality, Stavrides (2007, p.4) refers to Foucault's (1993, p. 422) assertion that 'Heterotopias always presuppose a system of opening and closing that isolates them and makes them penetrable at one and the same time'. Those 'other places', therefore, are being simultaneously connected to and separated from the places from which they differ. Stavrides (2007, p.178) claims this characteristic of 'Heterotopias' to be an indication of their relational status. He perceives thresholds (i.e. territorial boundaries) as those arrangements that regulate the relationship of 'Heterotopias' with their surrounding spaces of normality.

Such expressive similarities between descriptions of the two thinkers of liminality (Stavrides, 2007, Thomassen, 2014) clearly verify that the rites of passage in both cases could represent spatial liminality type-B as defined in this chapter, which must have at least four intrinsic qualities: firstly, within both ‘Heterotopia’ and ‘Centers of Axial Ages’, several identity societies need to exist as unique social groups (Stavrides, 2014, Thomassen, 2015); secondly, such heterogeneous communities should be bounded by specific territorialities, that make places different from other places (Stavrides, 2007); thirdly, for the survival of such identity groups, different socio-spatial interactions need to be established (Thomassen, 2014); and fourthly, the existence of threshold in-between spaces becomes necessary for the improvisation of such socio-spatial interactions (Jaspers, 1948; Stavrides, 2007; Thomassen, 2014). The elaboration clearly shows the relational status of spatial liminality type-B, in both Heterotopia and identity-societies of Axial Age (Table 3.2).

Table 3.2: Four essential elements of spatial liminality type-B, as developed in this chapter, based on Thomassen (2014) and Stavrides (2007)

Components of spatial liminality type-B	Heterotopia	Axial Ages
Interdependent social/identity groups	Social groups in neighbourhoods	Larger societies, nationalities
Territoriality	Physical areas of neighbourhoods	Continents, countries or larger geographic-ethnic regions
Socio-spatial interactions	Inter-neighbourhood relationships (e.g. trades, negotiations, games, etc.)	International discourses, large scale wars, trades and religious debates
In-between/threshold spaces as places of negotiation/interactions	In-between public spaces among neighbourhoods (e.g. roads and courtyards)	Thresholds in-between countries (e.g. Mesopotamia)

3.4.4. The role of threshold spaces² in the formation of spatial liminality type-B

So far, it has been discussed how spatial liminality type-B might occur on the scale of societies, or within a ‘Heterotopia’, where populations-communities could go through their rites of passage, due to osmotic boundaries, and their territorial-identities; which necessitate socio-spatial interactions. In this sense, Stavrides (2007, p.179) describes the role of osmotic boundaries in the formation of liminality during the 1920s, where large groups of refugees were

² This notion will be further developed in Chapter 10, in conjunction with Iranian and Middle Eastern historic cities.

displaced from Asia-Minor, to be settled on the fringes of Athens.³ He notes that the state's policy in Greece was to keep almost half of the refugee population around major cities, to control them and to 'integrate' them into the local economy. As a result of this policy, the Alexandras Avenue refugee building complex was designed to accommodate such refugees in eight blocks totalling 228 small apartments on a site near the army headquarters that was isolated from adjacent districts (p.179):

Socially, the buildings were a place where the refugees were to be secluded. No care was taken for the remaining open space; no initiatives were established for the complexes to be incorporated into the city. These complexes were both physically and symbolically set apart from the city, surrounded as they were by amorphous public space easily read as a separating zone....

Stavrides (2007, p.180) shows how non-local residents of the Alexandras building complex have established their penetrable 'territorial-identity', and have consequently initiated strong social-spatial interactions with surrounding local communities via in-between empty and loose spaces. He anticipates that such interactions might happen in empty in-between spaces as a consequence of 'osmotic public culture': 'What can transform loose spaces into generators of urban porosity is the common will to inhabit public space and transform it through everyday negotiations of meaning that characterise a rich and multifarious public culture...'. Thus, the discourse reiterates the role of in-between spaces as catalysts of spatial liminality type-B as discussed in this chapter.

3.4.5. Territoriality in historic Iranian cities

So far, as described earlier (see section 3.4), spatial liminality type-B can occur as a result of the existence of several identity-groups that possess their specific territoriality while establishing unique socio-spatial interactions within the separating/threshold spaces. Fascinatingly, such socio-spatial arrangement generated by spatial liminality type-B is a familiar theme in many historic Middle-Eastern cities. In this case, throughout the past centuries, alongside the development of urban life in Iran, the urban quarters were separated along ethnic and religious demarcations, while the inhabitants of these quarters regularly interacted peacefully with each other across socio-economic barriers (Atabaki, 2005).

Amos Rapoport (1981), from a structuralist perspective, describes Middle-Eastern cities as a set of diverse neighbourhoods in which residents with specific languages, religions, occupations, families or marital life live together. Here, The Ottoman cities like Istanbul and

³ The Greco-Turkish War (1919–1922) was fought between Greece and the Turkish National Movement during the collapse of the Ottoman Empire after World War I (Kinley, 2019).

Thessalonika are the best example of what Rapoport describes as multi-ethnic, multi-religious complexities; where Greek, Jewish, Turkish, Armenian and Northern communities cohabited, but always preserving their boundaries, both spatial and intangible/cultural. Here language, ethnic affiliations, religion and dialect were as influential as anything else to generate spatial territoriality as well as territorial interdependence. Many other Islamic scholars (Grabar et al., 1978; Rabbat, 2012) also identify neighbourhoods in Middle-Eastern cities as micro-cities within the city, with all the services including mosques, bathrooms, bakeries, markets and other relevant communal spaces. In this sense, neighbourhoods became homogenous, because the same patterns and functional elements can be found in every single neighbourhood, and throughout the city (Rapoport, 1981).

In a similar discourse, Von-Grunebaum (1953, p.143) in his study of the urban structure of Middle-Eastern towns, relates the substantial similarity of the urban pattern of such historic cities to 'Prophetic zoning'. He foresees such zonings to be incorporated into the later design of historic Middle-Eastern cities, following the Prophet's attempt to divide the city of Medina ethnically rather than economically, and for maintaining social unity and relationships among members of each tribe, and between tribes themselves. Thus 'Prophetic zoning' has formed the urban organisation of each of these historic cities into quarters.

The substantiation of such a planning method dates back to the original zoning of Medina as well as the new towns founded by Muslim armies, where each tribe had its own quarter. In the medieval cities of the Middle East 'quarters were not divided by social statuses'; 'each was a microcosm with rich and poor living alongside one another and sharing mosques, fountains, hammams [public baths], ovens, markets...' (von-Grunebaum, 1971, p.251).

3.4.6. Social grouping in historic Iranian cities

Talking about social grouping in medieval Middle-Eastern cities, it appears that non-Islamic cities like Constantinople also possessed a very similar structure to their Muslim neighbours, with neighbourhoods formed and structured by language, ethnicity, religious affiliation etc., rather than class or level of prosperity. In cities where Islam was the dominant religion, the prophetic zoning further advocated and/or strengthened such preexisting social structures. In historic Middle-Eastern cities, the social organisation of the urban society was based on social groupings, sharing the same blood, ethnic origin and/or cultural-racial perspectives. Hence, in the design of these cities, Muslims included quarters or blocks allocated to cohorts according to their ethnic origin (i.e. Africans, Armenians, Berbers, Greeks, Kurds, Turks and so forth).

Developments were therefore directed toward meeting these social needs, especially in terms of kinship solidarity, defence, social order and religious practice (Saoud, 2001).

In this sense, such urban neighbourhood zoning was socially ideal, as each tribe was accustomed to maintaining strong ties between its members, preferring to live in a territory close to each other. Therefore, people of a particular quarter inhabited by a tribe or a group had a strong feeling of communal solidarity with reciprocal duties and obligations (Mortada, 2003). Such qualities respectively assisted the social solidarity of the entire society, not only in Medina but also in most traditional cities where it was possible for wealthy and poor families to live next to each other without any distinction, based on their religious beliefs, racial origins and/or regarding their mutual professions (Soltanzadeh, 2011).

The prophetic zoning as originally implemented in early Middle-Eastern cities was drastically changed in other Muslim regions throughout the centuries (e.g. in Iranian cities). Nevertheless, the design of public--private realms from Islamic points of view (Anderun and Birun, Male-Female zones, as will be discussed in section 10.3, Chapter 10) along with the inevitability of courtyard structures in Middle Eastern regions maintained immaculate morphological similarities between Shia and Sunni cities (Shabani et al., 2011). In this sense, again, social grouping was also formed based on religious beliefs as well as professional interests or racial similarities among cohorts (Ashraf, 1987).

Alternatively, even in the premodern period, there were significant disruptions to ethnic makeup, such as the Turkic influx (McNeill, 2015), and more recently (the 16th century) the forced rehousing of Armenian artisans in quarters of Isfahan (Gregorian, 1974). Thus, the natural social grouping as a result of the formation of spatial liminality type-B (as discussed in this section) must not be confused with enforced social groupings, as in pre-modern urban areas within many Middle-Eastern territories. Nevertheless, historic social groupings as a result of spatial liminality (partially or fully) were eradicated in the 20th century, specifically due to the introduction of contemporary lifestyles, that led to large scale internal immigration of low skilled illiterate migrants and foreign refugees to cities in search of work (see sections 1.2 (Chapter 1) and 2.4 (Chapter 2)).

3.4.7. Territorial-interdependence in historic Iranian cities

Many historic Middle-Eastern cities such as Aleppo and Damascus contained a large number of ethnic and religious communities, where Turks, Christians and Alawites had their own neighbourhoods (Lapidus, 1973). In many instances, social groups had no common point with

each other, lived separately, and each had their own customs and rules. Nonetheless, socio-spatial exchanges, competition, rivalry and conflict dominated the relationship between them (Ashraf, 1987). In historic cities such as the walled city of Lahore (1946 AD), Muslims, Hindus and Sikh communities lived for a long time as one integrated society and within their lands. This socio-ethnic solidarity was also exhibited in cities such as Fès, Tunis, Medina, Isfahan where Muslims, Christians, Jews, and other religious groups lived as a socially interdependent community (Noe, 1980).

While being loyal to their sects or communities, such heterogeneous communities were allowed to trade, negotiate and interact with other communities under communal rules. This quality had made such small communities/neighbourhoods interdependent (Holt, 2011). Such discourses can further highlight social grouping, interactions and territorialities generated as a result of spatial liminality type-B in Middle Eastern historic cities as proposed in this chapter (Figure 3.4).

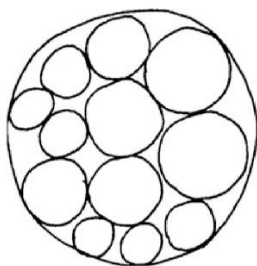


Figure 3.4: Urban structure in historic Middle-Eastern cities as presented by Rapoport (1981, p.252)

3.4.8. Spatial liminality type-B and a sense of belonging to place in historic cities

In a historic city, a strong sense of belonging to place has been present between individuals and their corresponding groups/communities and pertinent territorialities (Mortada, 2003). It has been deliberated that the concept of community is strongly linked to a perception of territoriality in historic cities of the Middle East (Lambton, 1981). Therefore, the boundaries that restrain a given community mirrors essential aspects of the perception of occupants in that community (Brauer, 1995).

Such a strong sense of belonging to neighbourhoods can be totally relevant to spatial liminality type-B, as discussed in this chapter. Respectively, current theories regarding sense of place can be organised into an overlapping three-dimensional model involving the physical environment, psychology of self, and sociocultural interactions, all of which vary over time (Pretty et al., 2003).

The early sense of place theories focused on the concept of self, which is a part of one's 'foundations of identity as individuals and as members of a community' and its significance is most obviously expressed as 'homesickness' (Relph, 1976, p.39) and/or 'nostalgia' (Lasch, 1990, Boym, 2001). In this case, the process of social grouping in historic cities must have generated a strong sense of self and identity among heterogeneous communities (Mortada 2005), enhanced social life and improved individual needs through collective life (Hakim, 1986). The integration of analogous selves then had generated public participation, the creation of public institutions (NGOs) among traditional communities (Bianca 2000) that together equate to spatial liminality type-B as discussed in this chapter.

Primary interpretive literature has placed emphasis upon the perceived influence of physical settings on concepts of sense of place (Casey, 2013). Accordingly, sense of place is principally an 'esthetic' association between a locus on the earth and the residents who inhabit or perceive that locus, while yielding 'shared experiences' (Lewis, 1979, p.28). In this case, sense of place can be connected to the establishment of territorialities and the formulation of spatial liminality type-B in historic cities, as suggested in this chapter. Thus, in a historic city spatial territoriality could secure life for minority religious groups (e.g. in the Jewish quarter) and strengthen their independence among other neighbourhoods (Lambton, 1980), while only members of neighbourhoods had full access to them (Grabar et al., 1978).

In contrast to previous theories, alternative models have focused on the influence of sociocultural experiences and time in the development of sense of place (Beidler and Morrison, 2016, Malpas, 2018). From this perspective, the construction of place relies heavily on the meaning unknown space acquires through daily routines of its inhabitants: 'The meaning of place to those who live in them has more to do with everyday living and doing rather than thinking' (Buttimer 1980, p.172).

In a similar context, the generation of socio-spatial interactions can also be considered an indispensable quality of historic Middle-Eastern cities which should have generated a strong sense of place among residents (Ramezani and Hamidi, 2010). In this sense, spatial liminality type-B again had been deeply relevant to the formation of a sense of belonging to place, generated by socio-spatial exchange. Therefore, based on the theories of sense of place, it can be claimed that cultural diversity was sustained by maintaining gradients of spatial liminality type-B between neighbouring quarters, or 'mahalle' (quarter) in historic cities, whereby only members of a neighbourhood were privileged to have a distinct identity.

However, such historic qualities in many circumstances have led to deleterious consequences. For instance, today, in many historic cities, a minority neighbourhood (e.g. Muslim, Jewish, Armenian, Zoroastrian, etc.) has become depopulated through modern political friction. In many circumstances, such depopulation is the result of contemporary geopolitical equations such as the Israel-Arab conflict (Flapan, 1987). On such occasions, the migration of minorities (e.g. Jews, Zoroastrians) from historic Middle-Eastern cities (e.g. Fez, Yazd) must have created abandoned neighbourhoods that were then taken over by outsiders with no traditional community membership (Green, 2000, Gottreich, 2006).

3.5. Application of spatial liminality type-B in urban design of historic cities

So far, section 3.4 has demonstrated how several identity groups used to generate social-spatial interaction in historic Iranian cities, by establishing interdependent territorialities during the medieval period. In this regard, the “four essential elements of spatial liminality type-B”⁴ are seen as a dominant regime necessary for generating rites of passage among social groups (see section 3.4.3). Therefore, spatial liminality type-B could be considered as a positive concept, which generated a sense of place identity and belonging during the abovementioned medieval period.

Section 3.4.6 suggested spatial liminality type-B generated social inclusion among individuals who understood themselves as members of a community/neighbourhood in medieval Iranian cities. In this case, spatial liminality type-B enhanced social life in historic Iranian cities, while enabling residents to meet their personal needs through collective life.

The formation of social groups and/or identity societies (as an example of spatial liminality type-B) encouraged public participation and facilitated public institutions/NGOs in medieval Iranian cities. Thus, spatial liminality type-B can be seen as effective for understating socio-spatial vulnerability (as a result of lack of sense of place identity) among residents. In this sense, spatial liminality as a guideline can facilitate sense of place amongst local communities.

3.5.1. In-between spaces as a concept beyond Lynchian perspectives

Along with the definition of in-between/threshold spaces in this thesis (section 3.4.4), Lynch also similarly described “grey or semi-private spaces”, and “urban gradients” (Lynch, 1960). The difference is that Lynch did not deal with sociological or anthropological issues, a common deficiency in the Iranian urban planning context, as discussed in section 2.5 (Chapter 2).

⁴ Those four essential elements are recognized to be, (1) identity-groups, (2) territorialities, (3) inter-groups socio-spatial interactions and (4) threshold spaces where those activities might take place.

This thesis thus suggests that in understanding urban spaces, socio-spatial or anthropological issues can be more significant than legibility of urban elements alone. In this case, Lynch's theory emphasises legibility as the most important aspect in evaluating and designing appropriate urban spaces.

Accordingly, in historic cities when social conditions are in contrast with their surrounds (e.g. the case of identity crisis in Iranian cities), socio-spatial observation is more beneficial than legibility observation; particularly for the purpose of proposing planning and design strategies (Damayanti & Kossak, 2016).

In this sense, a liminality-based study can best augment the physical, cultural, spatial and aesthetic study of historic urban fabrics. Hence, spatial liminality, as a guideline, proves that the "image of the city" as a theoretical tool, can hardly understand and react to current socio-spatial layers in historic cities in Iran.

3.5.2. Threshold spaces and formation of spatial liminality type-B

In section 3.4.4, an interpretation of in-between spaces has been proposed by Stavrides (2010, p.57), who suggests that in-between-ness can indeed become activated, by the 'unblocking of the paralysed potentialities of a threshold space'. He foresees that such thresholds then could equate with liminality, in the sense used by Thomassen and others, following anthropologists Turner (1977) and Van Gennep (1960).

Stavrides (2010) describes how a "threshold space" can generate socio-spatial conditions in which people undergo transition from one social identity to another. He suggests that societies explicitly control these transitional periods by regulating rites of passage, to ensure that liminal people pass to a different social role without threatening social reproduction.

For Stavrides, 'such threshold spaces could be marked by experiences of social liminality' in which in-between spaces do not merely circumscribe a defined area of use, but instead, offer a passage from one social status to another. Thus, in-between places are spaces with the power to institute comparisons, and to encourage new relations/communications between different people (Stavrides, 2014, p.57).

In this instance, a threshold or in-between space is not a boundary that simply divides people and keeps them apart. A threshold space thus connects and separates at the same time: 'connecting while separating, and separating while connecting' (Simmel, 1997, p.69).

Rites of passage in this sense accompany the passing of liminal groups from one social identity to another, and most of the time connect with an actual, ritually executed, crossing of spatial thresholds (Van Gennep, 1960)

Nonetheless, if ‘this act of venturing towards otherness is performed in and through thresholds, couldn’t we assume that thresholds are the place of negotiation with otherness?’ In this regard, thresholds can be seen as pre-arranged structures through which societies symbolically construct their experience of negotiation and, simultaneously, ‘material artifacts’ which allow such negotiation and generational change to take place (Stavrides, 2010, p.17). Threshold spaces can thus offer areas for negotiation and encounters, which can be created between permeable and evolving identities (Foucault & Miskowiec, 1986).

Accordingly, this chapter has suggested that such porous in-between spaces can be seen to be specifically relevant to the formation of spatial liminality type-B, by generating socio-spatial interdependence, that in the past brought meaning to space in medieval cities in Iran, and thus productive of place formation.

3.5.3. Dynamics of spatial liminality type-B and the role of threshold spaces

During pre-modern and postmodern eras, a network of social, political, cultural and historical factors could have contributed to levels of spatial liminality. While the discussion in this chapter focuses on traditional factors of territorial interdependence amongst neighbourhoods, several socio-spatial dynamics have fundamentally affected intensities of spatial liminality type-B in historic Iranian cities since the 20th century. In this case, from the last decades of the Qajar Dynasty (1789--1925) to the Islamic revolution (1979) and in the postwar period (1988--Present), dominant socio-spatial dynamics generated a cultural divide between better-off/educated populations and disadvantaged communities (Curtis & Hooglund, 2008). This quality was demonstrated in this research (section 3.3.3) by generating spatial liminality type-A in historic cities: poor, uneducated peasant immigrants were the catalyst for the degradation of historic neighbourhoods through overcrowding, and the cultural clash between traditional and modern populations (Mirmiran, 2011; Tavassoli, 1987).

A specific reason that has arguably facilitated spatial liminality type-B in historic Iranian cities is gender segregation. The issue of privacy, particularly for women, is a major concern regarding Muslim traditions, although such cultural factors belonged to Middle Eastern tribal, patriarchal structures that pre-existed Islam (Keddie, 1990). In this sense, later Islamic traditions and branches in areas outside the Middle East (e.g. Sunni Indonesians/Malaysians)

do not have the same restricted traditions, while female cohorts can live close to the society (Zuhdi, 2018).

Correspondingly, in medieval Iranian cities, it was a right and duty of families to live enclosed in houses. Thus, a clear distinction between private and public life is the most significant social-spatial characteristic of historic cities (Wahid & Khozaei, 2008). Since it is a religious principle, the privacy of the individual and the family alike should be maintained in both houses and neighbourhoods, by providing thresholds and spaces of transition (Abu-Lughod, 1987). Such hierarchical liminal qualities were successfully achieved in traditional built environments, where outdoor spaces and streets had been implemented with integrated form and order (Figure 3.5).

In contemporary eras, the Pahlavi Kingdom (1925--1979) referred to gender segregation as a human rights problem, while the historic unveiling of women (Kashf-i hijab) and its relevant agenda was part of the White Revolution (Ansari, 2001; Shahbaz, 1963). After the Islamic revolution, gender segregation as a traditional way of life was encouraged, and yet it is arguable that such contradictory political-spatial paradigms generated a cultural divide between modern and traditional lifestyles (Paidar, 1995). Therefore, along with current insights relating to gender segregation in Iranian historic cities, the discourse of spatial liminality here can draw on complicated factors such as government policy, cultural wars in Iran, the presence of disadvantaged immigrants⁵ and so on, that arguably single out an “out-of-ordinary” way of life in Iranian historic cities.

Other spatial-cultural factors pertaining to historic Middle-Eastern cities, outside Islamic traditions, can be seen in line with liminality type-B in historic cities in Iran. For instance, looking back on the expanse of Islamic history, with few exceptions across the centuries, Muslims, Christians, Jews and Zoroastrians were able to persist, coexist, and flourish, while many historic studies indicate that similar behaviours were maintained by these minority groups in medieval Middle Eastern cities (Sharkey, 2017). This again indicates a similar cultural pattern, responding to rites of passage amongst heterogeneous communities in historic Iranian cities.

This coexistence of such heterogeneous social groups not only established appropriate differentiation between individual components of the city (e.g. neighbourhoods), but acted as a

⁵ Spatial liminality type-A, as it pertains to immigrants in historic areas, can probably retain patriarchal attitudes and gender segregation as derived from village life, although this is outside the scope of this research.

cohesive factor, which integrates single elements into a comprehensive and meaningful urban fabric. Thus, the density of traditional Iranian-Islamic fabrics are not just a matter of spatial compression, but an expression of tightly woven social-spatial linkages and negotiations (Bianca, 2000).

Inside historic cities in Iran, the social interconnection between such heterogeneous communities had been previously established by private, blind alleys, or semi-private spaces, such as lanes. As citizens moved from blind alleys to lanes, social relations increased from extended families (or several related families) in blind alleys to more diverse families in lanes. As they bypassed these lanes and passages, they became concentrated in small squares. This density caused even more collision and formed subsequent social relations amongst neighbourhoods and their residents (Habib et al., 2013).

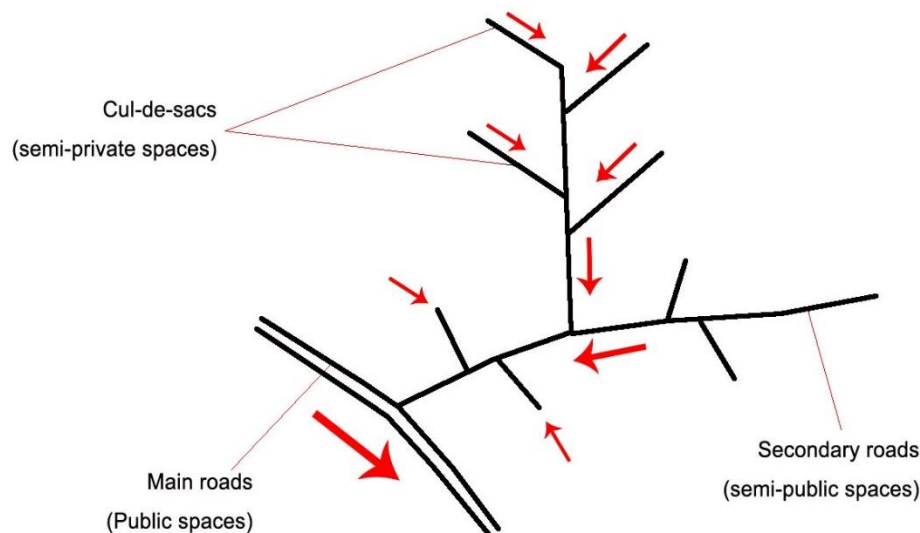


Figure 3.5: Hierarchy of roads in historic Iranian cities based on Hakim (1986, p.53)

3.5.4. Socio-spatial dimensions of in-between spaces

Territorialities and spatial distinction in historic cities were enhanced by gates and arches separating roads as well as land use, for instance, by providing residential and commercial zones. The outdoor spatial order of historic Iranian cities thus prevented any urban space from being ambiguous in terms of function, use and ownership (Kanbar, 1984). Complex movement patterns in distinctive neighbourhoods of Iranian and Middle Eastern cities were designed to avoid crossing enclosed spaces, and by establishing legible transition zones between public, semi-public and semi-private domains. The articulation of gateways stressed successive levels of public or private life; while these features together formed three-dimensional signs and

symbols, intimately related to the Iranian and Middle-Eastern way of life in medieval cities (Jasim, 2015a).

By maintaining spatial liminality type-B, historic Middle-Eastern and Iranian neighbourhoods showed a complex gradation from public to private. In this sense, residences were only accessible by semi-private lanes, presenting a different dimension of urban fabric. Therefore, most urban traffic used major thoroughfares, roads and in-between spaces to link important areas for commercial or religious purposes, for example, markets and mosques. On the other hand, neighbourhoods were accessible only by immediate adjacent neighbours in a distinct community (Petruccioli, 1990). Socio-spatial dimensions worked as osmotic filters, at different levels of the urban structure or building composition. In-between spaces thus represented a wide range of places from private (e.g. a house and its domestic haram), to semi-public squares (such as schools) and public osmotic spaces such as squares (Petruccioli, 1990). Thus, in-between spaces formed the basic spatial unit in the historic Iranian and Middle-Eastern city, which could have generated territoriality and interdependence amongst heterogeneous quarters or neighbourhoods (Lambton, 1981). Here, in-between spaces tend to generate complex borders among neighborhoods, while in most cases these boundaries are not accurate (Figure 3.6).

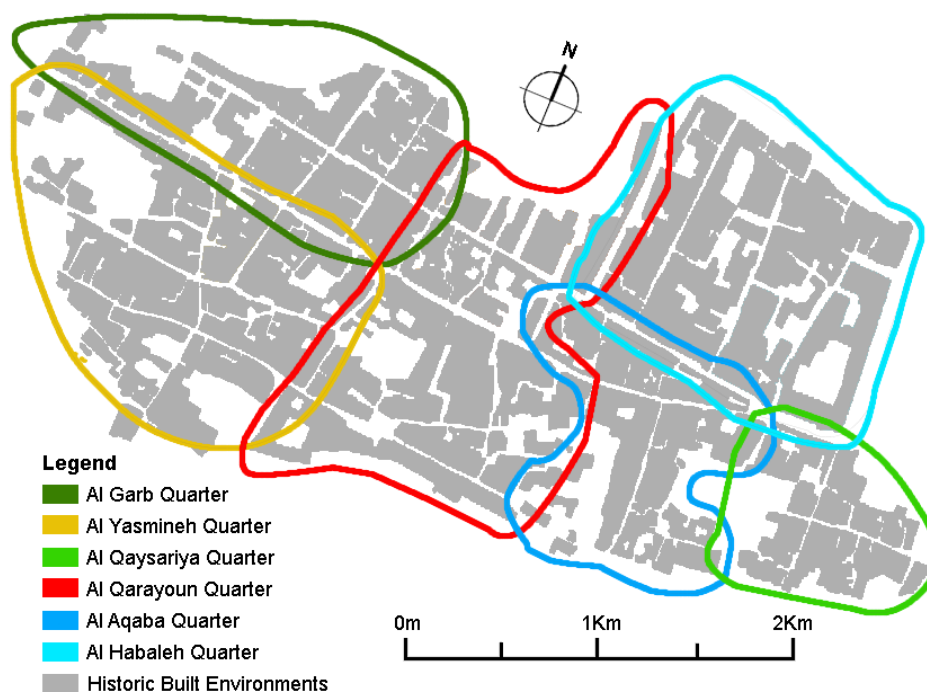


Figure 3.6. The formation of interdependent heterogeneous neighbourhoods in the medieval city of Nablus, Palestine. The map shows how in-between spaces worked as vague-penetrable borders and/or spaces of interaction, which formed complex patterns of spatial liminality type-B in historic Iranian cities and the Middle East. Base map adopted from Correia and Taher (2015)

3.6. Hierarchical in-between spaces as liminal elements in historic built environments

In an effort to facilitate spatial liminality type-B, a question arises as to how traditional/physical urban elements produce spatial liminality type-B in the first place. Accordingly, when we deduct built-up areas from the rest of a historic city, what remains are roads and public, semi-public and semi-private in-between spaces (Tavassoli, 2016). Those hierarchical divisions then could reflect that in-between spaces somehow facilitated spatial liminality type-B inside neighbourhoods within historic cities during the medieval era (e.g. the Safavid dynasty, 1501 to 1736 AD).

In the case of spatial liminality in the city, the boundaries of in-between threshold spaces became a porous membrane while functioning through several socio-spatial dynamics such as power, gender, tradition, ownership, ideology and so forth (see section 3.5). Thus, threshold spaces allow distinctive cultures to be infused/diffused across borders, and among adjacent interdependent entities (Foucault & Miskowiec, 1986).

In a relevant context, sections 3.5.3 and 3.5.4 show how hierarchically porous (in-between) spaces in traditional neighbourhoods facilitated the rites of passage among identity groups in historic Iranian and Middle-Eastern cities during the Middle Ages, leading to the formation of public, semi-public and semi-private urban spaces (Osra & Jones, 2018), specifically in medieval cities such as Old Isfahan, Yazd and Kashan. These types of hierarchical space-making models were a practice that connected public spaces (e.g. a mosque) to form semi-public spaces (e.g. a market), semi-private areas (e.g. a neighbourhood) and private houses (Mortada, 2003).

3.6.1. Inter-neighbourhood relations via liminal roads

The first tangible factor relevant to the fashioning of spatial liminality type-B, as discussed in this chapter, could be considered as roads and thoroughfares. In this sense, diverse communities could have access to communal spaces, namely public squares, neighbourhood centres, bazaars, mosques, schools and so forth (Osra & Jones, 2018).

In many historic Iranian cities, main roads mostly started at the centre of a quarter where the highest levels of public life took place. These roads gradually diminished in size and changed in character, form and function. Some spatial outcomes could evolve from public and semi-public roads to cul-de-sacs and eventually to a private patio for house access only. Respectively, cul-de-sacs were regarded strictly as an extension of the household's private space, for instance, the inner courtyard (Mortada, 2003).

In historic cities, the width of access roads is also seriously related to their function, which advocates additional social interaction. The hierarchy of in-between spaces then strictly reflects levels of road accessibility in the historic Iranian and Middle-Eastern cities (Akbar, 1989).

Consequently, at least three types of roads are identifiable in historic urban fabrics of Iran (Sultanzade, 1991): firstly, public roads which connected major neighbourhoods and could be extended as traditional bazaars and/or stretched to a city gate; secondly, semi-public roads which interconnected public roads and facilitated access to neighbourhoods. Semi-public roads could also include local shops (e.g. butchery, bakery), which also serve as a neighbourhood centre for social interaction, a playground for children, and/or a stage for jugglers or street vendors. And thirdly, dead-end alleyways, or semi-private roads branched out from semi-public roads, and provided access to a cluster of private houses (Figure 3.7).

Families living in sub-neighbourhoods considered themselves mutual owners of cul-de-sacs, where their houses were located. The dead-end roads then could be a place for social interaction between local women and children. In many cases, public roads could be part of traditional bazaars, which might accommodate inter-neighbourhood (social-spatial) interaction, thanks to adjacent shops, mosques, caravanserai, schools and other public open spaces (Pourjafar et al., 2014).

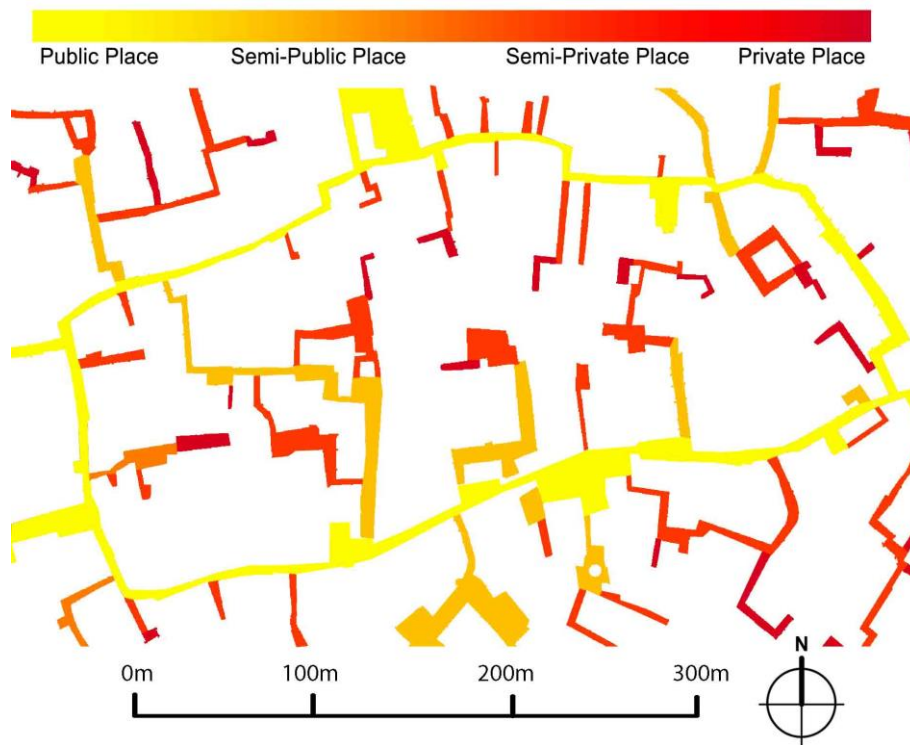


Figure 3.7: Hierarchical aspects of in-between spaces in a neighbourhood in historic Kashan (Source: author generated)

3.6.2. In-between open spaces and formation of spatial liminality type-B

The second tangible factor relevant to the formation of spatial liminality type-B could be seen as in-between open spaces, mostly perceived as courtyards, which practically generated social-spatial interaction (e.g. spaces for trade negotiations) and encouraged a spatial-cultural coexistence among diverse communities (Figures 3.8 and 3.9). A courtyard in this sense can be seen as one of the basic elements of Iranian and Middle-Eastern architecture (Jasim, 2015b).

Courtyards facilitated multi-purpose spaces for communal relations, group games, social entertainment, religious rituals, commercial activities and trades, ceremonial events, as well as inter-neighbourhood collaboration and negotiation. Therefore, formal/informal interaction and public negotiation took place in a courtyard across several scales; whether located within the boundaries of sub-neighbourhoods, a larger district or city centre (Sultanzade, 1991). In this sense, an in-between courtyard in Iranian historic cities may have worked as a penetrable-osmotic boundary that allowed inter-neighbourhood communication, which could generate rites of passage amongst several interdependent social groups.

- 1. Fes el Bali, Morocco
- 2. Isfahan, Iran
- 3. Bukhara, Uzbekistan

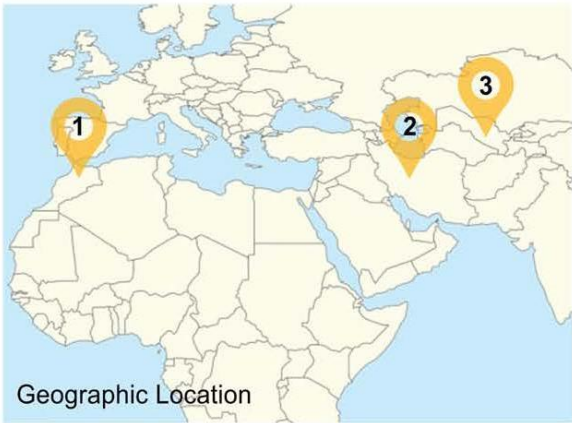


Figure 3.8: A comparison between the morphology of courtyard structures in three Middle-Eastern and North-African cities (images courtesy of Google Earth)

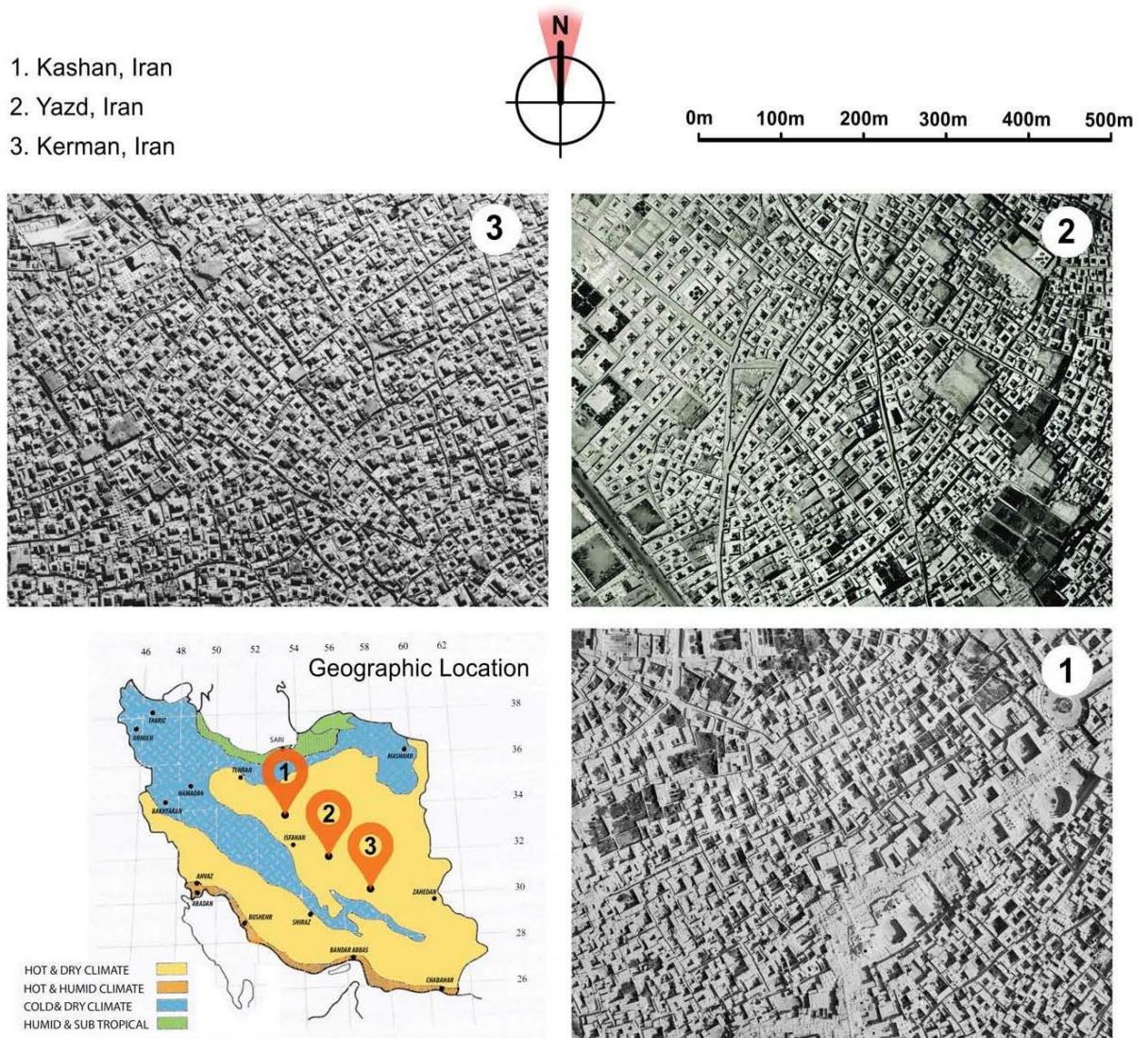


Figure 3.9: Comparing the morphology of courtyard structures in three historic Iranian cities (aerial images courtesy of the heritage authority of Iran, ICHHTO)

3.6.3. Semi-private in-between spaces and formation of territorialities

In historic Middle-Eastern quarters the street layout is in accordance with a hierarchical network. From the main streets to cul-de-sacs leading to each house, historic Middle-Eastern urban culture is significantly related to social aspects of private and/or semi-private life (Jayyusi et al., 2008). Thus, the existence of cul-de-sacs has a tendency to direct pedestrians toward less public and more private areas of circulation, which can generate territoriality as well as osmotivity (Petruccioli, 1990).

Thus the territorial implication of open spaces in historic cities is apparent in the functionality of in-between spaces and across scales, containing private, semi-private and public areas in

historic cities (Jasim, 2015b). Hence, factors such as extended family structures, privacy, gender separation, and strong community interactions were clearly evident in densely built forms such as courtyard houses (Saoud, 2001). Respectively, a courtyard could have facilitated socio-ethical arrangements for extended families (or smaller social groups) to live mutually, around a semi-private threshold space (Sobti, 2010; Yazdanpanah & Walker, 2010).

A private courtyard, for instance, could facilitate social interaction within a broad division of the house, divided into two distinct quarters, termed 'birun' (semi-private domestic space) and 'anderun' (private domestic space). 'Birun' literally means 'outside' and referred to those quarters situated close to the main entrance. 'Birun' was traditionally a male area, where 'na-mahram' (stranger) male visitors would be entertained by the men of the household (Mazumdar, 1994, p.68). In a traditional house, the reception rooms were to be found in 'birun'. 'Anderun', literally 'inside,' denoted the family quarters, which would be predominantly female. Female visitors might on occasion be entertained in the reception rooms within 'birun', while they were more likely to be taken to 'anderun' (Figure 3.10). In large houses, there might be separate retinues of servants for the two areas, female for 'anderun' and male for 'birun' (Memarian & Brown, 2003, p.189).

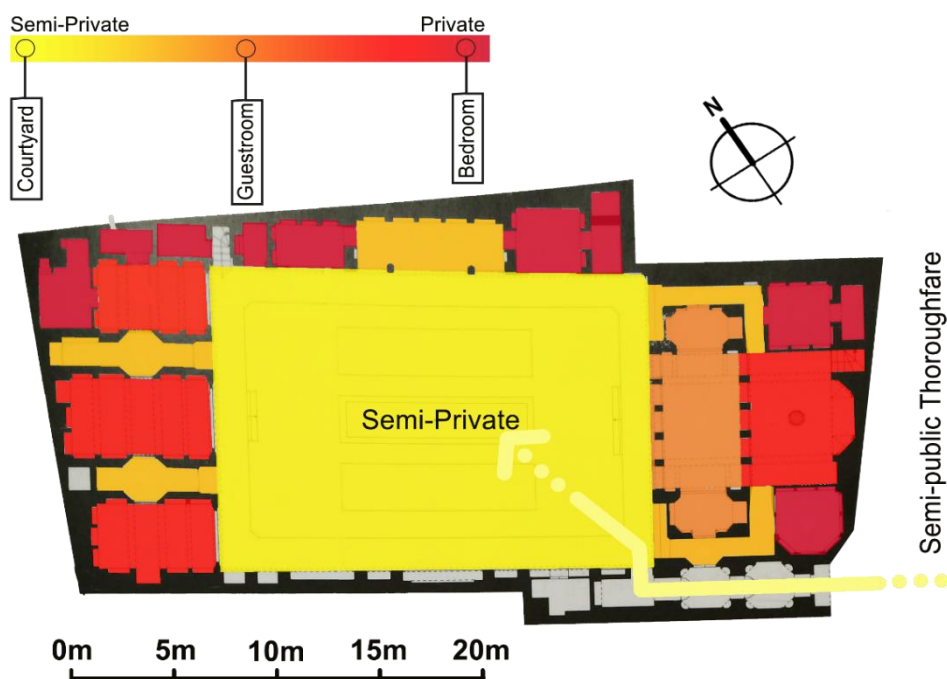


Figure 3.10: Hierarchical spaces and consequent territoriality, generated as a result of the implementation of a courtyard, in a private house in historic Kashan (basic drawing courtesy of Kashan ICHHTO)

3.6.4. Semi-public in-between spaces and formation of social groups

Structures of traditional courtyards within the scale of a neighbourhood (or an urban quarter) also served spatial hierarchies regarding levels of privacy and public--private interaction in medieval cities (AlSayyad, 1991). Within a traditional neighbourhood, small courtyards in cul-de-sacs functioned as a semi-private space, used by all the inhabitants of surrounding dwellings for social and recreational activities (Mortada, 2003). In this sense, the tiny squares surrounded by and providing access to dwellings/buildings in old cities in the Middle East generated social values by enhancing socio-spatial interaction amongst residents (Figures 3.11 to 3.14).

The organisational consequences of clustering courtyard houses in traditional Iranian and Middle-Eastern cities created a physical setting that necessitated a level of interdependence and social grouping between neighbours with regards to the use and rights of party walls, maintenance of cul-de-sacs, and problems with stormwater and wastewater, compatible with Muslim values (Hakim, 1986).

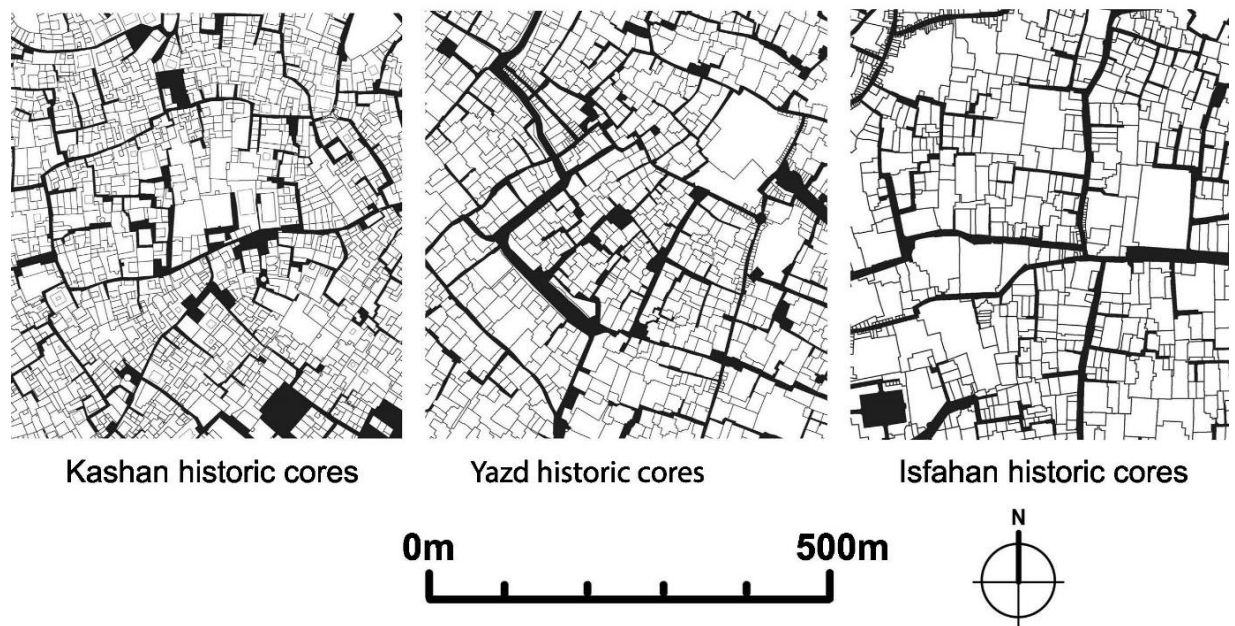


Figure 3.11: The cul-de-sac worked as a semi-private space in historic Iranian cities, while tiny squares provided access to dwellings and generated social groupings (Source: author generated)



Figure 3.12: In-between spaces in historic fabrics of Iran generated socio-spatial interaction among local communities, which in turn facilitated rites of passage for contributing social groups (Source: author)



Figure 3.13: In-between spaces whether inside a public building (bottom image, Grand Mosque of Yazd) or crossing a semi-public road (top image, a semi-public courtyard in front of the mosque on the northern side of the alleyway) could have facilitated spatial liminality type-B for social groups by facilitating social-spatial interaction (Source: author)



Figure 3.14: Hierarchical conditions as a result of the application of semi-public in-between spaces, in a historic city could have generated social grouping within neighbourhoods. Basic drawing (the Ibn Yusuf Madrasa) in Morocco, courtesy of Kamiya (2004)

3.6.5. Public in-between spaces and formation of socio-spatial interdependence

To a larger extent, in-between threshold spaces (e.g. courtyards) facilitated social hierarchical interaction between the head of government (e.g. the King) and all communities in a city (Figure 3.15). For instance, during the Safavid era (1501–1736 CE), Naghsh-i-Jahan square in Isfahan functioned as a window through which the Safavid regime exchanged ideas with the surrounding world as well as civic communities (Habibi, 2005).

The size of in-between public spaces altered based on spatial importance, locality and urban hierarchical orders (Ahari, 2014). Therefore, a public courtyard was naturally formed within a reciprocal relationship with its peripheral elements, and as a threshold membrane could be a part of larger, homogenous hierarchical systems of urban components (Mortada, 2003). In this case, the in-between space works as a centre-oriented spatial element, serving as an effective midpoint and force-field (Alexander, 2011).

A courtyard plays the same role as a public square, leading to gravitational interaction in-between neighbourhoods. In traditional Iranian structures, threshold spaces in the form of courtyards also fashioned internal borders, which always acted as a porous link, and essentially generated virtual boundaries (Amiriparyana & Kianib, 2016). These permeable borders have unique physical and semantic features that have no absolute and complete limit; they can be considered as the third area of flexible or soft thresholds. Such thresholds act between two identical and non-identical architectural spaces as a transition area, that leads to combination, continuity and separation of spaces by providing a flexible spatial model in-between public and semi-public realms (Balilan et al., 2011).

Along with determining and controlling territorial ownership, a public threshold receives and interprets information that acts as a separator, connector, and transitional area in the spatial organisation of urban spaces. Therefore, by generating indefinite thresholds, the spatial dimensions of in-between spaces enter other functional realms such as another heterotopia, and this is the mode in which several functional realms can partially occupy in-between threshold spaces (Foucault & Miskowiec, 1986; Stavrides, 2010).

In a public threshold space within a historic city, for instance, this transitional relationship could be extended and transferred to other spaces including adjacent enclosed spaces in a transitional and continuous way, and finally to other semi-public courtyards. Therefore, all spatial elements in a homogenous traditional built environment once worked systematically, and with the centrality of public in-between spaces (Amiriparyana & Kianib, 2016).

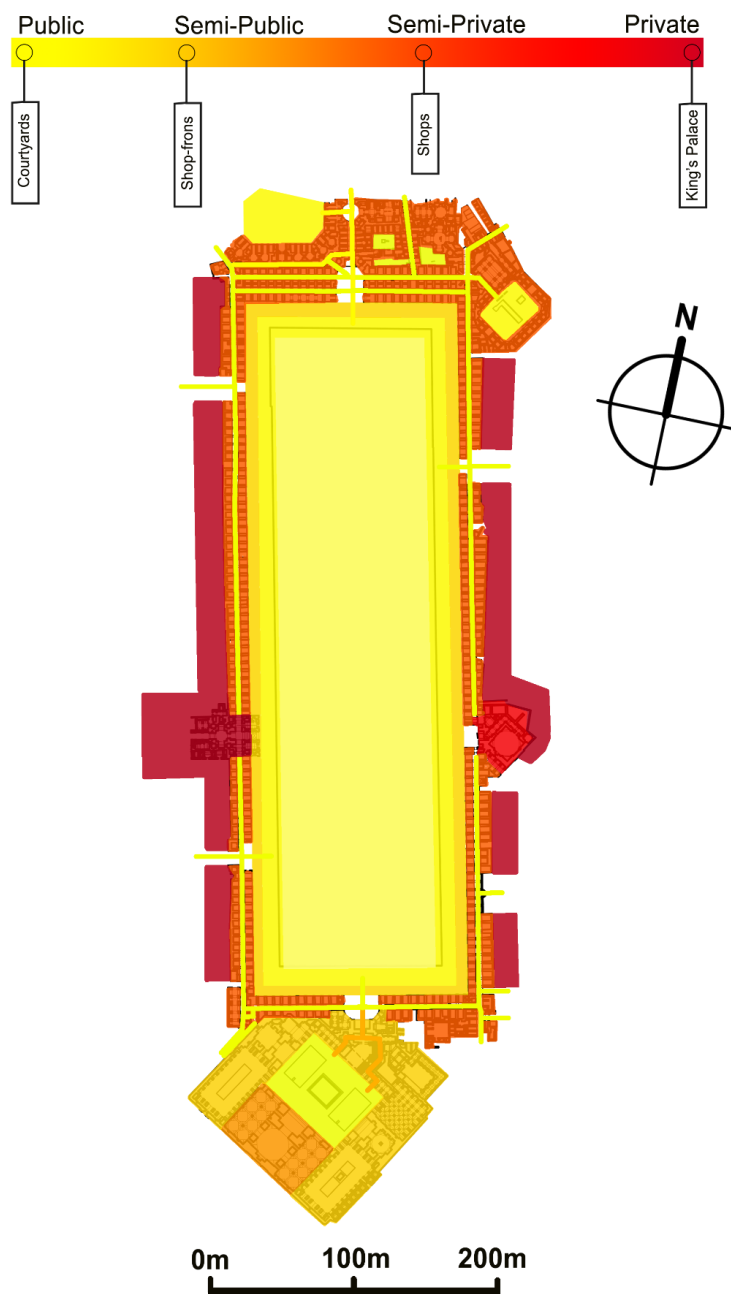


Figure 3.15: The spatial hierarchy of access and levels of social-spatial interaction, generated by a public courtyard in Naghsh-e Jahan square, fashioned the major city centre during the Safavid era in Isfahan (Source: author generated)

3.7. Assessing the two types of spatial liminality in historic Iranian cities

This chapter has further elaborated the role of 'Place' as the third dimension of liminality, along with 'Time' and 'Event' as originally suggested by Van Gennep (1960). The discussion triangulated the works of three anthropologists: Mortland (2017), a cultural anthropologist, Thomassen (2014), an urban anthropologist, and Szokolczai (2017a), a political anthropologist, who have shared the same utilisation of liminality as a tool for understanding vulnerability in

real-life. The chapter consists of a potential method for evaluating and analysing a condition (liminality) that is an ‘empirical, lived reality’ (Szokolczai, 1998, p.211).

The chapter has identified two types of spatial liminality regarding historic urban areas. Firstly; spatial liminality type-A was elaborated as a deleterious condition of socio-spatial vulnerability, where refugees and non-local disadvantaged communities tended to immigrate towards historic cities, to obtain affordable housing opportunities for their survival. This quality has been accompanied by massive urban deterioration and DABs, with already affected socio-spatial structures, and generated disorganisation, imbalance, a decline in socio-spatial characters, illegibility, a lack of vehicular accessibility and a shortage of socio-physical urban infrastructure (see sections 1.2 and 1.3 (Chapter 1)).

Secondly, spatial liminality type-B was explained as a positive socio-spatial phenomenon in historic cities. In this sense, spatial liminality should have enhanced social life among traditional communities, generated inter-neighbourhood associations, allowed individuals to meet personal needs through a collective life, built security in neighbourhoods, facilitated public participation and a strong sense of belonging to place among communities, while creating public institutions (Table 3.3).

Table 3.3: Types of liminal experiences concerning ‘Place’, ‘Time’ and ‘Event’ based on a model presented by Thomasson (2014, p.90)

Subjects of liminality		Individual refugees or minority groups (Type-A) formed as a result of socio-spatial vulnerability	Major identity groups or urban societies (Type-B) formed as a result of a mutual religion/profession, etc.
Three Foundations of liminality			
Place (as the primary reason for the formation of spatial liminality)		Smaller (semi) restricted places; e.g. a refugee camp; and adjacent/segregated buildings where foreign refugees or non-local disadvantaged communities have settled in historic cities of Iran	Larger geographical territories, societies, and neighbourhoods where territorial interdependence may take place (e.g. Christian and Muslim conflicts and interdependences)
Time/Event	Moment	Sudden event affecting one’s life (death, divorce, illness, poverty)	A whole society facing a sudden event such as revolutionary moments (e.g. Lisbon earthquake)

	Period	Critical life-stages	A whole society facing wars, revolutionary periods (e.g. WW1, WW2)
	Epoch (or lifespan duration)	Individual standing outside society by choice or designated monkhood Religious fraternities, ethnic minorities, immigrant groups, disadvantaged communities	Prolonged wars, enduring political instability, prolonged intellectual confusion, incorporation and reproduction of liminality within social and political structures (e.g. Renaissance, Modernity)

In this sense, subjects of liminality type-B in historic Middle-Eastern cities were smaller social groups or civic societies (e.g. Shias, Sunnis, Jews, Christians), who had established their unique neighbourhood territoriality, during a specific period of time, based on their communal professions, for example, the butchers' quarter, religious orientations and/or racial otherness, such as the Armenian quarter of Isfahan.

Spatial liminality type-B, in this sense, has had the effect of facilitating the conversion of a whole into infinite parts, and reformation of parts towards a whole; which has become fundamental in the formation of social groups since the Axial Ages (see Figure 3.2 above). Thus, when it comes to describing the layout of historic Middle-Eastern cities, spatial liminality becomes the meeting point of the ideological perspectives of [a neo-Sufi traditionalist] Ardalan (1973) and the pragmatic structuralism of Rapoport (1981), where diverse, interdependent socio-spatial elements together shape the city as a larger whole (Alexander, 1987).

Nevertheless, spatial liminality type-B, as defined in this chapter, generated social-spatial interactions via threshold urban spaces and/or non-built-up areas, such as thoroughfares, public/semi-public courtyards and buildings, bazaars and squares. As a result, in-between spaces were places in which identity-groups and societies could meet, fight, play, trade, parade, learn, teach, talk and negotiate with each other (Sultanzade, 1991). Thus, spatial liminality type-B and its consequent territorial interdependence should become a quality that has facilitated rites of passage among identity-neighbourhoods during pre-modern eras in historic Middle-Eastern cities (Table 3.4).

Table 3.4: Spatial liminality type-B as rites of passage for communities/societies via territorial interdependence. The model developed based on Jaspers (1948), Stavrides (2007) and Thomassen (2014)

Different scales of spatial liminality type-B		
Subjects of liminality (identity groups)	Larger identity-groups or societies (e.g. Islam, Hinduism, Christianity...), since Axial Age	Smaller identity-groups or civic societies (e.g. Shias, Shafi'I, Hanafi, Hanbali, Sunnis, Christians, Jews...) before the initiation of modern movements
Location/scale of territoriality	Continents, countries and larger independent regions	Neighbourhoods inside historic Iranian cities
Period	Continental-regional revolutionary periods, e.g. wars, diseases, prolonged intellectual confusion, philosophical uncertainty, religious conflicts, elongated territorial rivalries	A pre-modern period (e.g. the Safavid era) as a liminal occasion when prolonged religious conflicts-changes happened, i.e. Shia was introduced as the official religion in Iran (against the dominant Sunnis)
Outcomes of interactions/ interdependence	Formation/separation of fundamental ideologies as interdependent societies, countries or geographical regions (e.g. the Axial Age about 800 BC)	Formation of smaller ideological/ethnic communities as interdependent neighbourhoods (e.g. Jewish, Shia, Sunni, Christian neighbourhoods in Safavid Isfahan)
Attitudinal aspects	Patriotism, religious comradeships, societal alliances	Public participation and the creation of public institutions, build security in districts and neighbourhoods; Enhance social life and meet personal needs through collective life
Basic (spatial) ideology	Conversion of a whole to infinite parts and, reformation of parts towards a larger whole; it is a fundamental aspect in the four early ideologies in 'Axial ages', which brings about a sense of unity amongst humankind	Conversion of a whole to infinite parts and the reformation of parts towards a whole; fundamental aspects in the design of historic Iranian city and the Eastern philosophy
Physical components of spatial liminality (catalysts)	In-between threshold regions generated osmotic boundaries which facilitated social interactions between ideological nations, and this caused further break down of societies	In between threshold urban spaces, non-built environments where society could meet, trade, talk and negotiate (e.g. thoroughfares, public-semipublic courtyards, and squares)
Rites of passage	Generates rites of passage for societies form the previous social-status to the next social status (e.g. pre and post Axial Age)	Generates rites of passage of social groups in neighbourhoods, among the surrounding communities, from one social status to another social status (e.g. pre and post the Safavid era)

3.8. Spatial liminality as a theoretical framework in historic Iranian cities

Thus far, the argument in this chapter has suggested a theoretical basis for investigating vulnerability in historic Iranian cities, through the lens of spatial liminality. Since liminality is largely considered a social-spatial phenomenon, the system of inquiry, as proposed by this chapter, is required to conduct an independent public survey for the understanding of liminality in operation within urban contexts. Accordingly, survey items may be thought of as falling into three general content categories: factual, demographic and attitudinal (Edwards, 1997).

Factual items probe into spatial conditions. In this case, respondents are asked about facts pertaining to land use, extents of local and refugee settlement, and levels of vehicular (in)accessibility in historic urban areas. In this regard, factual inquiry could be seen as spatial inquiry, which in turn can measure both types of spatial liminality.

Demographic items provide descriptive information about respondents, commonly including inquiries regarding their ethnicity and economic vulnerability assessment (e.g. levels of poverty). The demographic inquiry in this sense can measure spatial liminality type-A as a condition of vulnerability in historic cities.

Attitudinal items ask for respondent's attitudes, opinions, perceptions or beliefs on the topic, that can present another perspective on supplemented spatial (factual) and demographic inquiries. Attitudinal inquiries thus contain socio-spatial vulnerability and safety assessment, while measuring community perception regarding historic cities and the existence of refugees. Attitudinal inquiry also measures the sense of belonging to place among residents that could best evaluate spatial liminality type-B in historic cities of Iran.

As previously discussed in section 3.3.2, broader socio-spatial planning contexts could generate conditions of spatial liminality type-A, not unlike refugee camps in historic Iranian cities (see sections 1.2.7, 1.2.8 (Chapter 1) and 3.3.3). This notion reveals the fourth type of inquiry that needs to be conducted, in order to interrogate the effects of the contemporary socio-spatial planning context on the formation of spatial liminality in historic cities. This final type of inquiry needs to be conducted by undertaking in-depth interviews with a reasonable number of scholars, planners, developers, practitioners, and policymakers from relevant government agencies in charge of historic cities (see section 2.4.6, Chapter 2).

The in-depth inquiries could disclose problems inside the current socio-spatial planning context regarding programs and procedures, that have devalued land, generated deterioration, and facilitated an influx of refugees in historic cities (spatial liminality type-A). Interviews can also

identify conditions that have generated emigration and a lack of sense of belonging to place among residents, due to lack of spatial liminality type-B.

The proposed theoretical foundation based on the four systems of inquiry (as discussed above), can create practical methods for measuring spatial liminality in historic cities of Iran, and will be fully elaborated in Chapter 4, based on Table 3.5.

Table 3.5: Proposing spatial liminality as a theoretical framework for understanding vulnerability in historic Iranian cities

Spatial liminality Types of inquiry	Type-B (Territorial interdependence of heterogeneous neighbourhoods)	Type-A (The influx of refugees, non-local disadvantaged communities in historic areas)	Proposed measuring criteria for evaluating liminality in historic urban fabrics
Factual inquiry	Physical inclusion as a member of a community/ neighbourhood	Community segregation because of lack of public services	Urban accessibility assessment
	No abnormal change in land use could be seen in the neighbourhood	An abnormal change in land use in a refugee camp. Formation of local/refugee settlements in historic cities	Analysing current land use
Demographic inquiry	Enhance social life and meet personal needs through collective life	Critical-life stages. Accumulation of low income-disadvantaged communities inside historic cities	Economic vulnerability assessment
	Formation of identity-groups/societies	Refugee camps in historic cities	Ethnicity or race assessment
Attitudinal inquiry	Public participation and the creation of public institutions NGOs	Permeant spatial liminality. A lack of a sense of place-satisfaction due to chronic socio-spatial problems	Social-spatial vulnerability assessment
	Secure life for minority religious groups (e.g. Jewish quarter) and their interdependence among Muslim neighbourhoods	A feeling of insecurity Lack of local safety	Physical and social safety assessment among the local communities
	A strong sense of identity – belonging to place	Lack of sense of belonging to place	Assessing a sense of belonging to place

		Lack of sense of belonging to neighbourhood/old house	
	Social-spatial inclusion as a member of a community	Social-spatial segregation Refugees living in isolation generally perceived as a threat for local communities	Assessing community perception regarding refugee settlements
		An influx of low-income (or displaced) disadvantaged communities	Assessing community perception regarding historic cities
An inquiry into the current socio-spatial planning context	Public institutions and NGOs are effectively involved in managing land use in the neighbourhood	A top-down planning context defines a refugee camp. Top-down controlling measures may form cheaper urban areas which generate disadvantaged refugee settlements in historic areas	Assessing current policies, strategic planning/development plans inside historic cities of Iran, by conducting in-depth interviews among relevant stakeholders

3.9. Summary

One of a growing number of studies to address space as a category of critical analysis, this chapter has theorised space via two concepts of spatial liminality that may occur in historic Middle-Eastern cities. Type-A deals with accumulation of refugees and/or non-local disadvantaged communities and the spaces they tend to settle in while going through their rites of passage, suspended in-between their previous social status and a potential new social status, becoming a citizen of the new land. Thus, spatial liminality type-A was considered a deleterious quality that can generate further social-spatial vulnerability and physical deterioration.

In describing type-B, it was argued that the four prerequisites of spatial liminality type-B (rites of passage among neighbourhoods) were formed around (a) territoriality, (b) social groupings, (c) inter-group social-spatial interaction, and (d) in-between threshold spaces. The latter was recognised as a significant physical factor to establish territorialities and social groups on three levels including public, semi-public and semi-private spaces. Territorial interdependence used to be enabled by implementing permeable threshold spaces in historic urban areas.

It was discussed how identity groups, across scales (whether societies or smaller communities), could go through their liminal rites of passage by establishing personalised in-between territorialities. It was argued that such identity-territorialities had inevitably been formulated as

a consequence of socio-spatial interactions attributed to osmotic borders (i.e. in-between spaces/thresholds), which in turn generated a strong sense of belonging to place among social groups, who had resided in historic neighbourhoods of Middle Eastern cities.

It was suggested that in-between spaces could be divided into two major categories: roads and courtyards. Roads were suggested as in-between spaces that facilitated spatial liminality type-B by connecting social groups. In explaining courtyards, it is assumed that in-between spaces on a semi-private scale can maintain territorialities amongst a smaller cluster of houses. Moreover, it was elaborated that in-between spaces in semi-public levels can fashion social groupings (i.e. neighbourhoods), while on a public level this can facilitate intergroup social-spatial interactions that together generate spatial liminality type-B and rites of passages amongst heterogeneous communities in historic cities.

The chapter has presented a novel perspective on how the physical in-between elements were traditionally used to form spatial liminality type-B in Iranian and other Middle Eastern cities. This notion is further elaborated in the current thesis (see Chapter 9), that today can arguably generate a sense of belonging to place, and restore territorial interdependence among social groups in historic Iranian cities.

Throughout the chapter, a theoretical framework was developed, in which spatial liminality became a measurable criterion for understanding vulnerability in historic cities of the Middle East such as in Iran. The proposed theoretical framework consists of four types of interdependent surveys, namely demographic, factual and attitudinal inquiries as well as inquiry relating to contemporary socio-spatial planning contexts in historic cities, to be further developed in the next chapter.

Chapter 4: Methodology and Methods



A non-local resident in historic Isfahan, 2018 (Source: author)

4.1. Introduction

Section 1.2 (Chapter 1) discussed the current conditions of DABs and their socio-spatial impacts on historic cities. Thus, DABs are highlighted as crucial sources of social and spatial issues in historic cities. As a result, a hypothesis is identified wherein there are possible correlations between the emigration of local residents, immigration of disadvantaged communities, socio-spatial vulnerability, and further emergence of DABs in historic urban areas (see section 1.3).

Due to current socio-spatial conditions in historic areas (see sections 1.2 and 2.5), finding new epistemological tools (beyond current perception-based Lynchian methods) is acknowledged to be an essential task in the realm of urbanism. Accordingly, the influx of refugees can be highlighted as a liminal condition (Andrews and Roberts, 2012; Manjikian, 2010; Mortland, 1987). Thus, this thesis suggests liminality as an innovative epistemological framework that can realistically disclose several aspects of social-spatial vulnerability in historic Iranian cities (see section 2.5.3, Chapter 2).

In response to socio-spatial needs, a theoretical framework has been suggested based on spatial liminality. Two types of spatial liminality were outlined (see section 3.5, Chapter 3). First, spatial liminality type-A equates to contemporary accumulation of non-Iranian vulnerable, disadvantaged communities (i.e. refugees) in historic cities. Second, spatial liminality type-B generates a strong sense of belonging to place among social groups in historic cities of Iran, during the time span of over 1100 years, from the Middle Ages up to Safavid dynasty in the early modern era (633-1736 AD), before modernist movements transformed cities. The proposed theoretical framework measures spatial liminality for understanding socio-spatial vulnerability in historic cities. Four types of inquiry for measuring spatial liminality in historic cities are emphasised: spatial, demographic, attitudinal and socio-spatial (see section 3.6, Chapter 3). Thus, Chapter 4 elaborates detailed methods of data collection and analysis as devised in this thesis.

The chapter proposes a mixed methods approach to conducting several case studies. It demonstrates the rationale by which cases are carefully chosen and explains several methods for collecting data, including pilot studies, street surveys, in-depth interviews and field studies. Research ethics are discussed along with several methods of data analysis and triangulation that form the mainstay of the current thesis.

4.2. Methods to investigate the correlation between DABs and spatial liminality

Today, the vast area of DABs in Iranian historic cities can further exacerbate urban issues such as a decline in socio-spatial characteristics, illegibility, lack of accessibility and urban infrastructure (Behzadfar, 2012b; Faghieh, 1976; Tavassoli, 1987b). Nonetheless, the emigration of local residents and influx of exogenous economic migrants might inevitably end with the production of further DABs (Mirmiran, 2011). In this sense, DABs can be assumed to be interconnected with spatial liminality type-A, as discussed in section 3.3.3 (Chapter 3).

The deteriorated nature of historic urban areas could also challenge contemporary needs and develop further social-spatial problems, including DABs and a devaluation of land and properties (Hanachi et al., 2007). The latter also could attract low-income households and refugees, to the extent that poverty becomes a prevalent social condition in Iranian historic cities (Tavassoli, 1987).

Accordingly, the majority of residents inside historic cores cannot financially afford to repair their homes, and this can create more DABs (Behzadfar, 2012a). In this sense, revitalisation methods must propose reasonable solutions for regenerating DABs inside historic areas (Mirmiran, 2011).

Respectively, the discourse in this chapter could directly yield an approach for studying vulnerability in historic Iranian cities, wherein DABs could meaningfully reflect liminal qualities of life inside historic zones.

Hereby, the gap in knowledge as discussed earlier (section 2.5.3) is that the relationship between the extent of DABs and the formation of socio-spatial vulnerability has never been subject to analysis. Moreover, such an examination can be undertaken specifically through the lenses of spatial liminality (Figure 4.1).

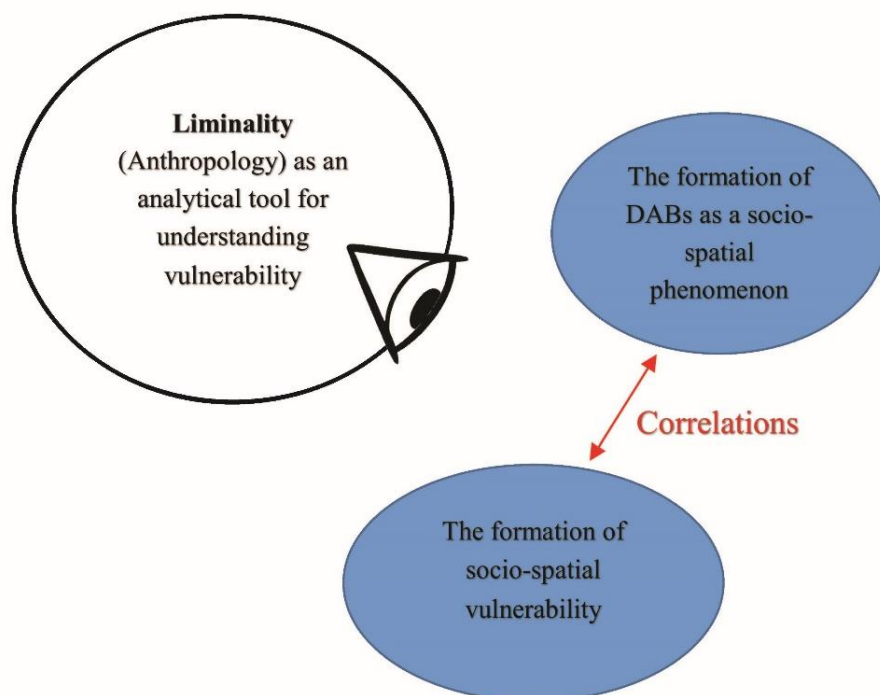


Figure 4.1: The research approach in this thesis aims to utilise liminality as a tool for studying the correlation between DABs and social-spatial vulnerability, and for revitalising historic Iranian cities

4.3. Research questions

In response to the proposed larger project (section 4.2) and the research hypothesis (section 1.3), this research proffers two major inquiries for investigating several aspects of socio-spatial vulnerability in historic cities. The first research question (RQ1) aims to identify measures that empirically define and monitor spatial liminality. The second research question (RQ2) focuses on liminality as a tool for regenerating traditional Iranian cities. In both cases, a separate chapter addresses each sub-question:

RQ1: To what extent could spatial liminality be identified and documented against the formation of physical deterioration in historic cities of Iran?

- a. How can spatial liminality be evaluated against the extent of DABs in historic Iranian cities? (Chapter 4)
- b. What possible correlations may exist between the extent of DABs and the spatial (Chapter 5), demographic (Chapter 6), attitudinal (Chapter 7) and socio-spatial planning (Chapter 8) aspects of spatial liminality in historic cities of Iran?

RQ2: To what extent can spatial liminality, as an analytical tool, facilitate the revitalisation of traditional urban fabrics in Iran?

- c. How can spatial liminality inform the revitalisation projects and processes in Iranian historic urban fabrics? (Chapters 9 and 10)

4.4. Case study research

Case study research is an empirical inquiry that inspects a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident (Yin, 1994). Thus, the case study could be seen as a reasonable research method in urban design and planning. In this sense, not unlike the current research, case studies are based on an in-depth investigation of groups [in this thesis, i.e. refugees] or events [in this thesis, i.e. liminality] to explore the causes of underlying principles (Groat and Wang, 2002). Therefore, by the previous definition, the current research could be seen as a case study, which aims to analyse specific issues, i.e. the correlation between spatial liminality and the extent of DABs within the boundaries of a specific environment, for instance, historic urban areas. In this regard, case studies allow the researcher to investigate the topic in far more detail, to deal with a large number of research participants, and with the aim of averaging (Willig, 2001).

The case study in and of itself is not a research method. The researcher selects methods of data collection and analysis that will generate material suitable for case studies, and by using qualitative/quantitative techniques (Williams, 2007). In this case, different data collection methods are presented in this research, namely semi-structured interviews, participant observation, street surveys and spatial surveys. In addition, the collected data is analysed by using different theories, namely thematic and content analysis, interpretative phenomenological analysis and quantitative interpretation. All these approaches use preconceived categories in the analysis, while they are nomothetic¹ in their nature.

According to its design, the case study research method can be divided into three categories: namely explanatory, descriptive and exploratory (Yin, 1994). Rather in line with what Mills et al. (2010) suggest, the current research innately contains an exploratory-interpretive case study, that investigates a distinct phenomenon characterised by a lack of detailed preliminary research, that has formulated a hypothesis, and can be tested by a specific research environment, which limits the choice of methodology. Therefore, the current research data collection method is supplemented by in-depth interviews, street surveys and field studies.

¹ They focus on generalising cases with reference to comparison groups.

Consequently, based on Yin's (1994) typology the current study clearly represents linear-analytic types of case study, which follows traditional research article outlines including problem identification (Chapter 1), literature review (Chapter 2), methodology and methods (Chapters 3 and 4), results (Chapters 5 to 8), and discussion, application and conclusion (Chapters 9 to 11).

4.4.1. A mixed methods approach for conducting case studies in historic Iranian cities

This chapter contains the research design and methodology used to conduct the present study. In general, mixed methods represent research that involves collecting, analysing, and interpreting quantitative and qualitative data in a single study, or in a series of studies that investigate the same underlying phenomenon (Leech and Onwuegbuzie, 2008).

By previous definitions (section 4.3), the current study is tending to identify and address the liminal qualities of historic contexts in several cities, and in conjunction with the extent of DABs. In this respect, the project's questions and approach in its nature could be best measured within a qualitative research design framework, while liminality in its essence could not be defined merely by numerical inquiry.

On the other hand, for measuring spatial liminality, several quantifiable tools are also proposed in this inquiry, which are compiled based on some quantitative social aspects, such as the number of refugees, the extent of refugee settlements and so on. Consequently, the systematic investigation in this research implemented a number of data collection strategies, including: (1) a critical literature review, which defined a framework for understanding the dichotomy of spatial liminality in historic cities of Iran (as discussed in Chapter 3); and (2) case studies containing three data collection methods namely (a) street surveys, (b) in-depth-interviews, and (c) focused field observations (section 4.6).

The data collection procedure then leads to multi-factorial analysis of results, where the correlation between spatial liminality and DABs is interrogated from four different perspectives, namely spatial (factual), demographic, attitudinal and social-spatial planning context (section 3.6). The latter consists of semi-structured interviews with public--private actors, who are a part of the planning process, design and decision making.

Such a multi-aspect analytical procedure investigates the percentage of DABs² against the three types of independent socio-spatial variables (of spatial liminality) in each urban block (i.e. spatial, demographic, attitudinal results); and compares them with qualitative concepts, generated as a result of in-depth interviews (see Appendix F). In this research, qualitative and quantitative methods in combination exemplify an innovative approach for measuring spatial liminality in selected urban areas. This will be exploited later to inform revitalization methods in historic urban fabrics in Chapters 9 and 10.

4.4.2. Case study typology

There are two types of case study: intrinsic and instrumental. In an intrinsic case study the subject is the primary interest. An instrumental case study uses a case to obtain insights into a phenomenon (Mills et al., 2010). Since the main subject in the current inquiry (i.e. liminality) can be perceived as a phenomenon, an intrinsic case study is not appropriate for this research.

Thus, an instrumental case study is conducted to gain a broader understanding of an issue or phenomenon (i.e. liminality), by using a number of particular cases. The cases chosen can be typical, although an unusual case may help illustrate matters overlooked in a typical case, because they are more subtle (Stake, 1995). Therefore, an excellent instrumental case does not depend on the researcher being able to defend its typicality, though the researcher needs to provide a rationale for using a particular case (see section 4.5).

Accordingly, for generating a broader understanding of the correlation between DABs and spatial liminality in this research, a comparative case study is conducted within several independent urban areas. To do so, the research utilises instrumental case studies that could occur simultaneously or sequentially on the same site, or come from multiple sites in several historic cities of Iran.

4.4.3. Generating an archetypal format for analysing multiple case studies

In case study research, when multiple cases are used, a typical format needs to provide a detailed description of each case, which then presents the themes within the case (i.e. case analysis) followed by thematic analysis across cases (Yin, 1994). This procedure is similar to what is represented in the current study, where cross-case analysis is conducted, based on the

² The percentage of DABs per urban block in this research is considered as a dependent variable.

correlation between the extent of DABs and several (socio-spatial) aspects of liminality, and within a typical format (i.e. urban blocks) across selected case study cities.

When using multiple cases, the question of how many arises. Too few and generalisation is impossible; too many and depth of understanding is difficult to achieve. Thus, the research needs to provide a rationale for cases used. The number of selected cases depends on the type of case that appears most promising and useful for the purpose of the research (Harling, 2002).

4.4.4. Qualitative aspects

Qualitative research explores objects in their natural settings, attempting to make sense of, or interpret, the phenomenon in terms of the meaning people bring to them; hence qualitative research involves collecting empirical material (Groat and Wang, 2002). Correspondingly, the qualitative aspect of the current research includes an interpretive, naturalistic approach for its subject matter, which is spatial liminality in historic cities.

Nevertheless, interrogating spatial liminality in historic cities could be seen as an immature concept because of a conspicuous lack of theory development and prior research. As a consequence, a need exists to explore and describe the phenomenon (liminality) and to develop a theory. However, the nature of spatial liminality may not be suited to merely quantitative measures.

Besides, generating a theoretical framework for identifying conditions similar to spatial liminality inside historic cities (as defined in Chapter 3) could be considered as a less discussed and urgent agenda, which may reveal associations that non-local disadvantaged communities could convey to the meaning of liminality in historic cities of Iran. In this sense, similar to what Creswell (2003, p.30) suggests, the current inquiry clearly includes characteristics of qualitative research.

4.4.5. Quantitative aspects, correlation between DABs and independent variables of liminality

As discussed earlier, measuring sets of variables or quantities and contemplating their relationship produce quantitative measures in this inquiry. Thus, quantitative aspects necessitate research to be formed around numbers, reasoning and objective data (Visocky-O'Grady and Visocky-O'Grady, 2009).

In line with Creswell (2003) and his definition of quantitative research, the current inquiry primarily uses post-positivist claims for developing knowledge (see sections 4.2 and 4.3) that include cause and effect thinking, formulation of a hypothesis, the reduction of specific variables as well as the use of measurements and observations, which culminates in testing theories.

The current research employs strategies which collect data on pre-determined instruments and yield statistical data. The research could be seen as quantitative, regarding its measurements and numerical outcomes produced as a result of street surveys and field studies (Appendices A, B, C and D). Hence, this inquiry manages to calculate and compare the quantity of DABs against numerical measurements of spatial liminality, as clarified in sections 4.6 and 4.7 (Figure 4.2).

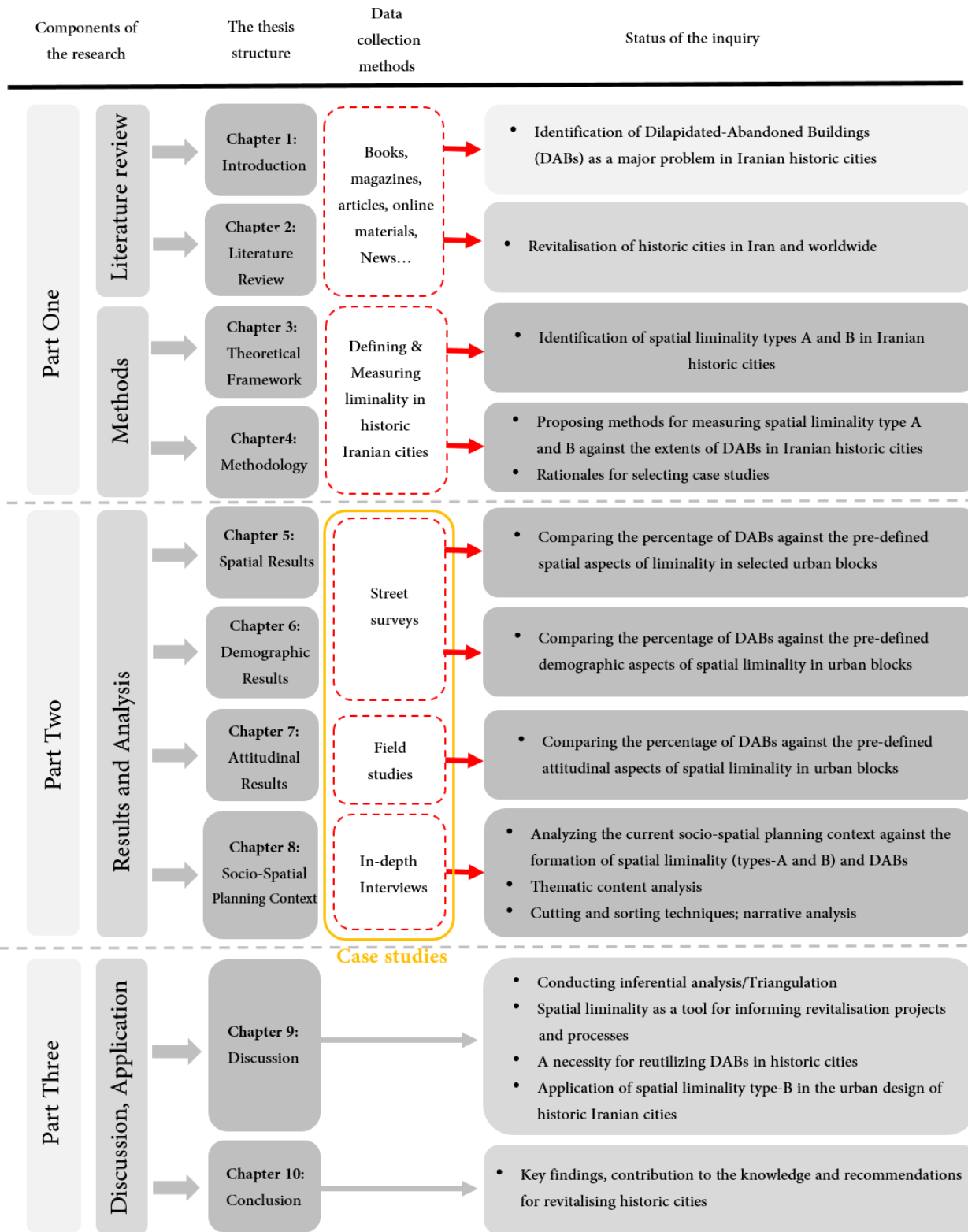


Figure 4.2: Visual representation of structure and methodologies used in the current research

4.4.6. Advantages and limitations of case study method

The most central advantage of case studies is that it simplifies complex concepts. Thus, case study method includes data collection and analysis within the context of the phenomenon, which could facilitate the integration of qualitative and quantitative data during the analysis phase, and the ability to capture the complexities of real-life situations, so that the phenomenon can be studied in-depth. Moreover, a single case study that shows a theory is not correct can be beneficial, and it can encourage researchers to change the theory to make it more accurate (Choy, 2014).

On the other hand, case studies have certain disadvantages that may include lack of rigour, challenges associated with data analysis and little basis for generalisation of findings and conclusions. Hence, the data collected can be very subjective. Therefore, the method which relies on individual attitudinal responses might not be accurate or reliable. Also, the researcher's interpretations can be biased, and therefore, the content of the case study deemed unreliable (Potter et al., 2010).

Nevertheless, information particular to a case study cannot be applied anywhere else because it is unique. Case studies also can provide detailed information about individuals/groups rather than merely a score; in this sense, the recorded data by case studies can be changed over time (Starman, 2013). In a case study, not unlike the current research, there might be ethical issues, especially of confidentiality, the right to withdraw and protection from harm (Banks et al., 2013). The latter is crucial in the current research because very often the person being studied can be someone who is liminal in his/her rites of passage, and this means that he/she is vulnerable (Section 4.8).

4.5. Case study selection method

Today, historic centres in 90 cities in Iran (a total area of about 16,000 hectares) have been identified and registered by ICHHTO (Moosavi, 2011). At the current time, the population of urban societies in Iranian cities is growing very fast (Figure 4.3). This prioritises discussion about how the recycling of DABs in multiple historic cities (with different populations) can be a crucial matter. In this case, studies inside DABs could also accentuate the need for providing future land resources in Iranian urban areas that may prevent further urban sprawl (section 8.2.2, Chapter 8).

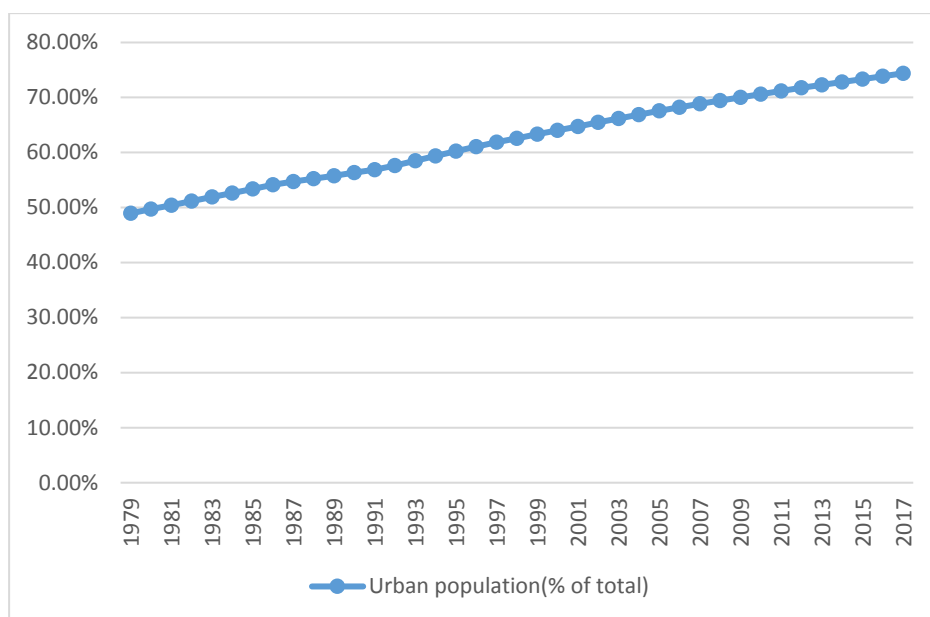


Figure 4.3: Urban population growth in Iran; between 1979 and 2017 (United Nations Population Division, 2018)

4.5.1. Selecting three historic cities in Iran

The case study selection procedure and objectives in this research generally aim to cover a wide range of urban population density among historic Iranian cities. In this respect, cities could be hypothetically classified based on three tiers of the population (Table 4.1), namely over one million (higher range), between 1-0.3 million (medium range) and under 0.3 million (lower range).

Respectively, in each of the three classifications, one outstanding city is to be selected as a larger case study, regarding its importance and size of its heritage cores. Amongst cities with a higher range of population, this study can logically exclude Mashhad with 1500 hectares (first ranked, with a population of over 2.3 million), only because it is a major religious tourist attraction among the Shia world. This quality could make land and properties close to the Holy Shrine a precious socio-political commodity in historic Mashhad. In cities with higher levels of population, the land areas inside historic cores could hardly remain underutilised, either due to higher public demands and/or as a consequence of their ever increasing financial value (Hanachi et al., 2007). (See also Table 4.4)

Table 4.1: Classification of historic Iranian cities based on overall population based on the World Population Review (2018) and Moosavi (2011)

City	Historic area (hectare)	Population of 2018	
Tehran	440	Over 9 million	Over 1 million (higher range)
Mashhad	1500	Over 2.5 million	
<u>Isfahan</u>	<u>1200</u>	<u>Over 1.8 million</u>	
Tabriz	421	Over 1.4 million	
Shiraz	375	Over 1.2 million	
Ahwaz	95	Over 1.0 million	
Urmieh	417	667,499	1- 0.3 million (medium range)
Kerman	200	577,000	
Arak	14	526,000	
<u>Yazd</u>	<u>730</u>	<u>477,905</u>	
Zanjan	83	386,000	
Ghazvin	100	381,598	
Sanandaj	90	373,987	0.3-0 million (lower range)
<u>Kashan</u>	<u>600</u>	<u>275,325</u>	
Dezful	500	248,340	
Borujerd	280	251,958	
Bushehr	350	195,000	
Rafsanjan	21	151,420	
Zavareh	6	15,000	

After Mashhad, Isfahan yields the largest heritage area, among others (1200 hectares) and has been recognised as a renowned World Heritage Site (WHS). In this regard, historic areas of Isfahan could be considered as the best case study within the higher range population tier. At medium range, historic Yazd stands out, because it possesses the largest heritage area (730 hectares), as well as being registered as a WHS. In the lower range, historic Kashan could be considered to be the best case, again because it has the largest heritage area (600 hectares), has currently been recognised as a WHS (Figures 4.4 to 4.6).

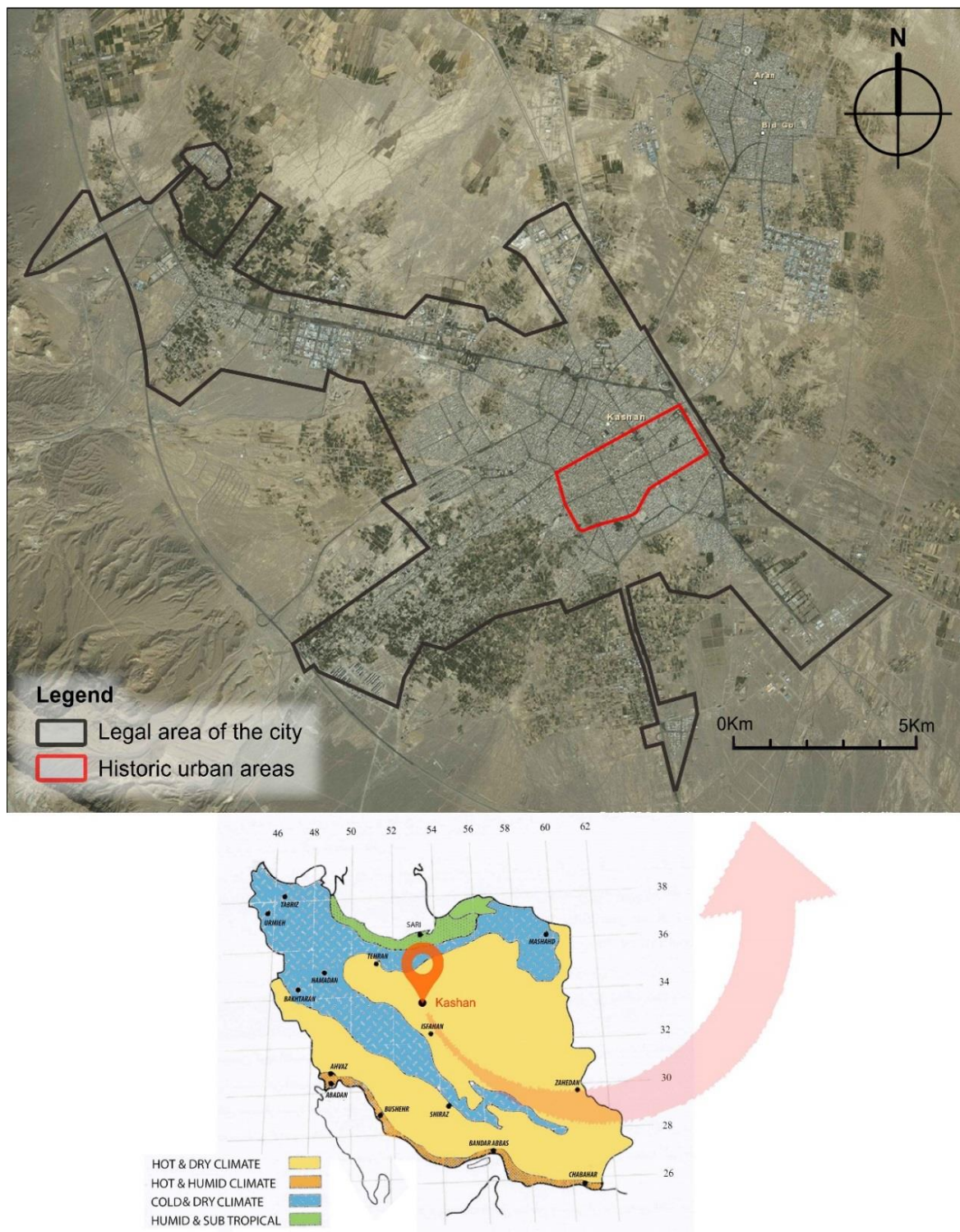


Figure 4.4: Historic urban areas within the contemporary city of Kashan (Source: author generated)

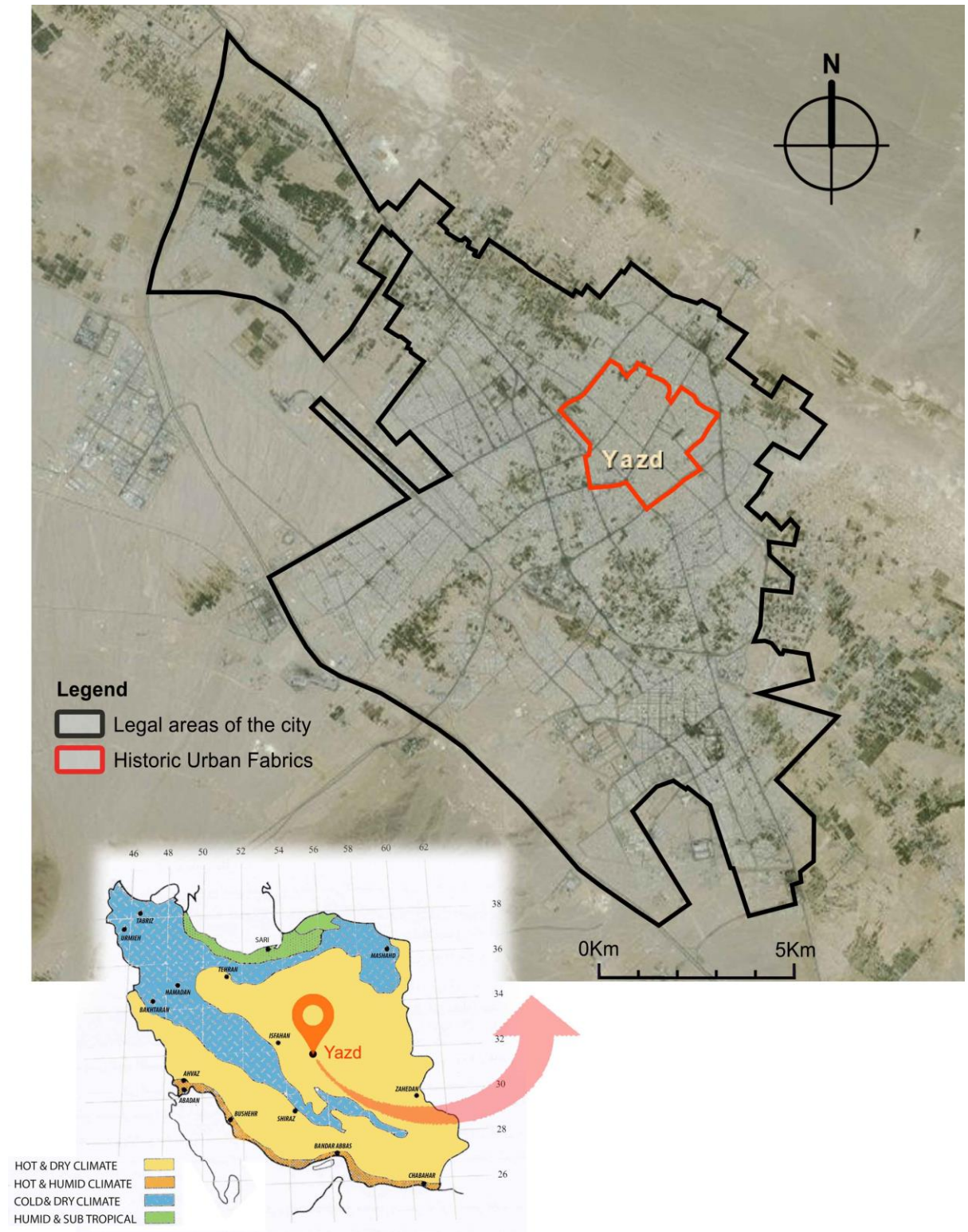


Figure 4.5: Historic urban areas within the contemporary city of Yazd (Source: author generated)

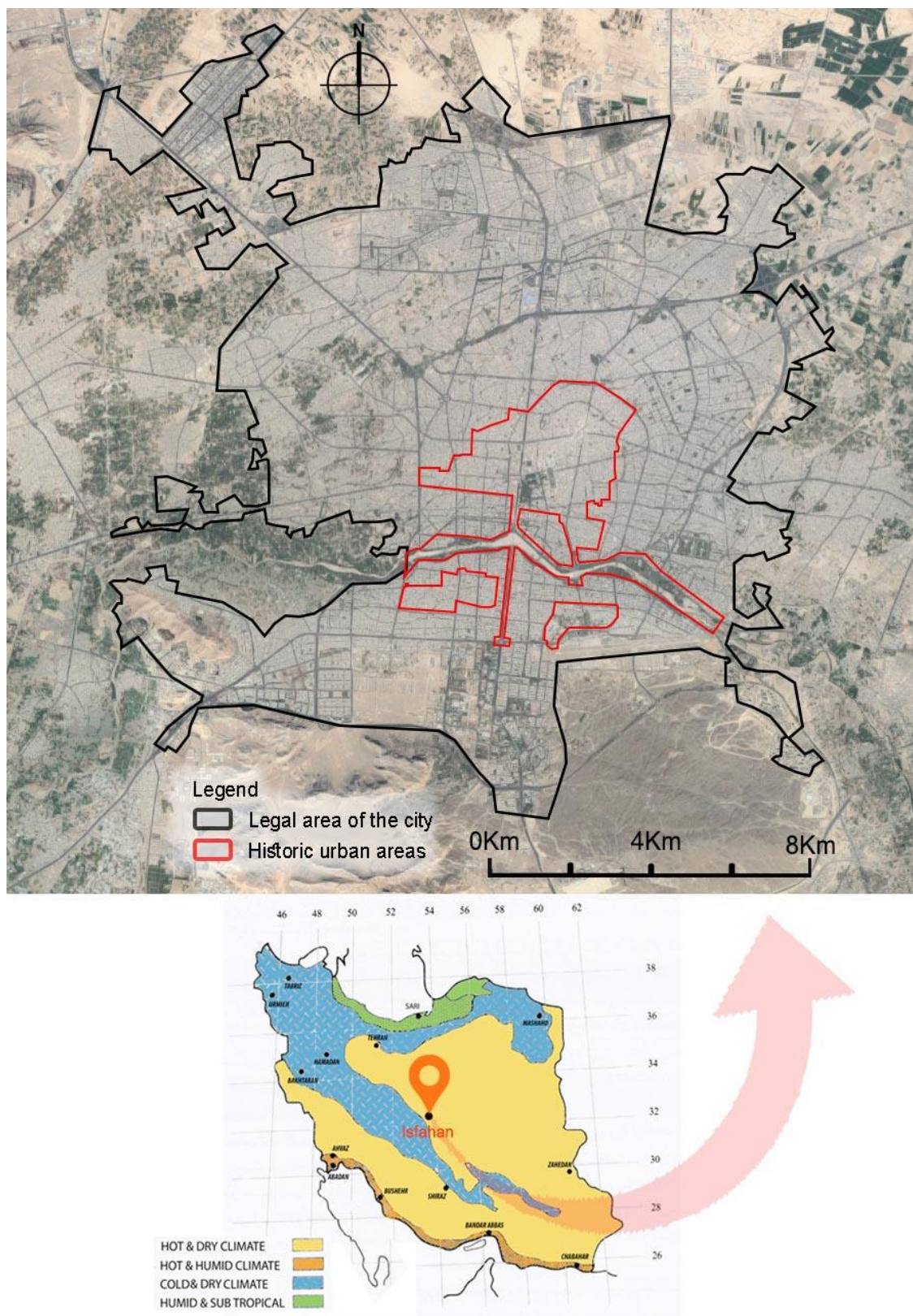


Figure 4.6: Historic urban areas within the contemporary city of Isfahan (Source: author generated)

4.5.2. Selecting sample urban tissues within the three cities

Iranian historic cores were developed during hundreds of years of organic growth (Alexander, 1978), while heterogeneous neighbourhoods formed a larger whole as the city (Rapoport, 1981). (Section 1.2 in Chapter 1 discussed how historic cities of Iran were carved by modern road developments, since the 1920s and 30s, and have lost their spatial consistency.)

On the other hand, 'to deal with the complexity of cities, urban morphology uses a hierarchical view of the city, structured according to a set of fundamental physical elements, in which at a general level the city is composed of urban tissues' (Oliveira, 2016, p.8). Correspondingly, today in historic Iranian cities modern spatial arrangements have generated several bisected urban tissues, so their internal socio-spatial consistencies can still be seen as operational (Figures 4.7 to 4.9).

Thus, this chapter utilises ArcGIS software for calculating the percentage of DABs per tissue sample based on previous surveys conducted in historic Yazd (Behzadfar, 2012b), Kashan (Mirmiran, 2011) and Isfahan (Khod Avand Consultants, 2008). Consequently, for understanding correlations between spatial liminality and the extent of DABs (as the phenomenon of interest) within a wider depth, several urban tissues were selected, which respectively yield the highest, lowest and medium proportion of DABs (per area of tissue) in historic Kashan and Yazd. In the case of Isfahan, however, a single urban tissue was selected based on a qualitative selection criterion, as explained in section 4.5.2.

Kashan: Historic areas comprise seven urban tissues, which are separated as a result of modern road developments (Figure 4.7). Hence, Darb-i-Isfahan (with about 27% of DABs per urban tissue) is identified as the most demolished case, which could be posited as a sample for further studies (Table 4.2). On the other hand, Posht-i-Mashhad-i-paeen could be a stimulating case study, as it has developed the lowest proportion of DABs (about 4%) among other urban tissues in historic Kashan.

Accordingly, in a medium range, both Mohtasham and Bazaar urban tissues could be selected (both developed between 14% and 15% of DABs). Nonetheless, large areas of Bazaar urban tissue are made up of heritage sites and because of their archaeological values they are outside the scope of this research (section 2.3.1, Chapter 2). Therefore, Mohtasham urban tissue could be considered as the most reliable sample for conducting further studies, while it has developed a medium percentage of DABs (about 15%), among all urban tissues.

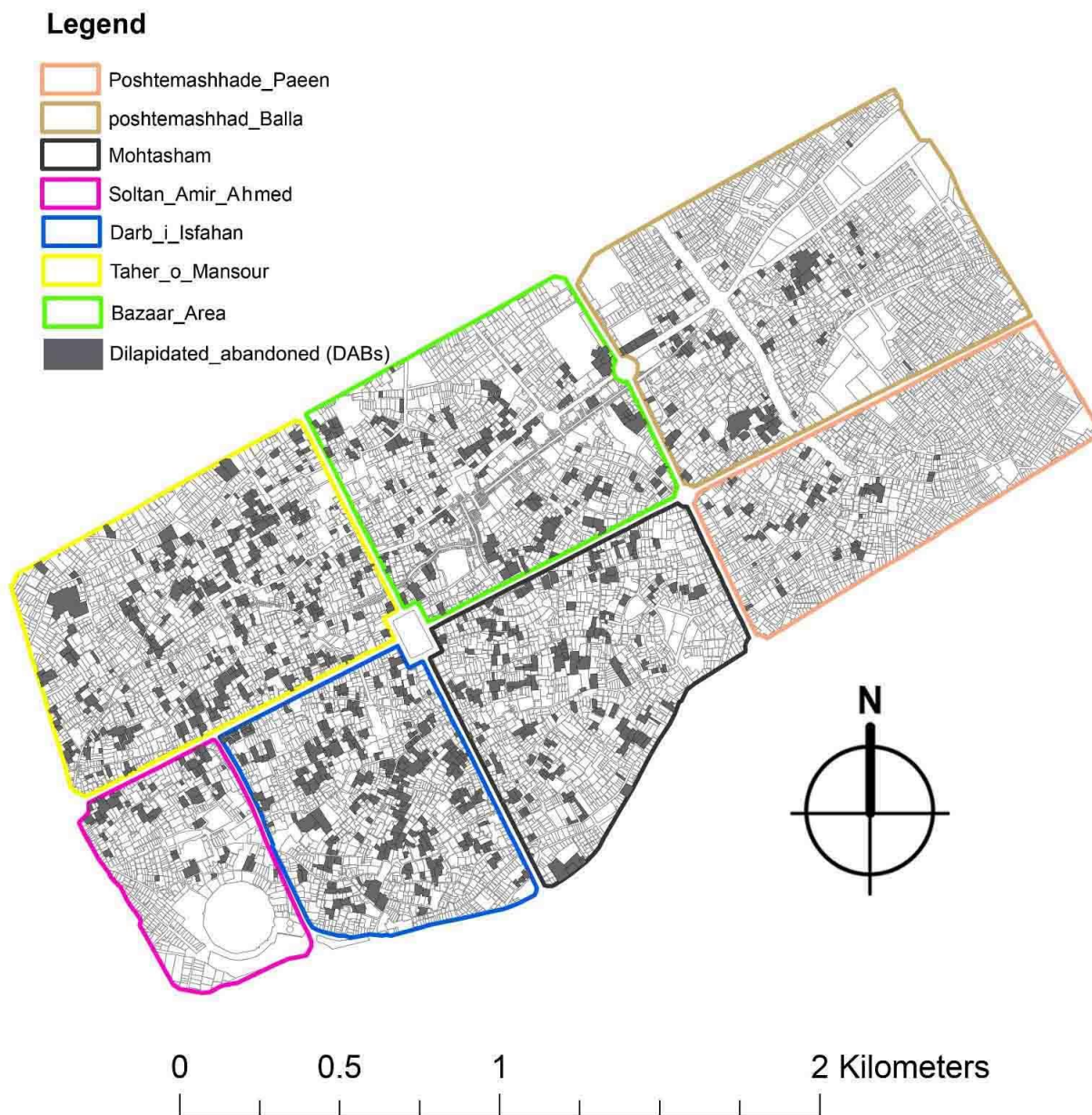


Figure 4.7: The seven urban tissues of historic Kashan as surveyed by Mirmiran (2011), (Source: author generated)

Table 4.2: Calculating the overall percentage of DABs in seven urban tissues of historic Kashan based on Mirmiran (2011)

Urban tissues of historic Kashan	Areas of the whole urban tissue (m ²)	Areas of DABs (m ²)	Percentage of DABs	Sample selection
<u>Darb-i-Isfahan</u>	<u>550531</u>	<u>148197</u>	<u>26.92%</u>	Higher range
Taher-o-Mansour	805,960	159591	19.80%	
<u>Mohtasham</u>	<u>631863.9</u>	<u>94277</u>	<u>14.92%</u>	Medium range
Bazaar	714866	102271	14.31%	
Soltan-Amir-Ahmed	333781	31702	9.50%	
Posht-i-Mashhad-i-Balla	948489	57040	6.01%	Lower range
<u>Posht-i-Mashhad-i-Paeen</u>	<u>561155</u>	<u>20938</u>	<u>3.73%</u>	
All areas (including streets)	4714205	614016	13.02%	

Yazd: In historic areas, eight urban tissues are recognisable, formed as a result of modern road developments which have bisected historic urban fabrics (Figure 4.8). Godal-i-Mosalla urban tissue has yielded the highest percentage of DABs (about 25%) and could be considered as an important sample for further studies (Table 4.3). Gonbad-i-Sabz also could be seen as an interesting case study, as it has developed the lowest proportion of DABs (10%) among other urban tissues in historic Yazd. In a medium range Dolat-Abad urban tissue could be seen as a reliable case for conducting further studies, as it yielded a medium level of DABs (17%) amongst other cases.



Figure 4.8: The eight urban tissues of historic Yazd based on Behzadfar (2012b), (Source: author generated)

Table 4.3: Calculating the overall percentage of DABs per seven urban tissues of historic Yazd based on Behzadfar (2012c)

Urban tissues of historic Yazd	Areas of DABs (m ²)	Areas of the whole urban tissue (m ²)	Percentage of DABs (2012)	Sample selection
Godal-i-Mosalla	164390	663479	25%	Higher range
Sish-Badgir	176869	731000	24%	
Posht-i-Bagh	90799	405788	22%	
Dolat-Abad	123197	706300	17%	Medium range
Gazorgah	86005	654438	13%	Lower range
Sheikhdad	125348	1020529	12%	
Fahadan	133413	1091895	12%	
Gonbad-i-Sabz	96631	1002244	10%	
All historic Areas (including streets)	996651	6275673	16%	

Isfahan: Among the three selected larger case studies, Isfahan can be seen as an exceptional case (Figures 4.9 to 4.11). Today, metropolitan Isfahan accommodates a population of about 1.8 million, establishing it as the third-largest city in Iran, after Tehran and Mashhad (Table 4.1).

Isfahan historic cores are considered to be outstanding, because of the exclusive traditional architecture, largely recognised by ICOMOS and UNESCO, and as an exceptional WHS in the Middle East, that has generated a high level of tourism and socio-spatial interaction among public and private entities (UNESCO, 1979). Correspondingly, such qualities could make Isfahan DABs a precious commodity, far ahead of Yazd and Mashhad, and just behind Tehran (Table 4.4).

Table 4.4: Average price of land per square meter for dilapidated residential buildings transacted in real estate agencies in selected cities, 1996–2005 (Statistical Centre of Iran, 2012)

Cities	1996	2001	2002	2003	2004	2005
Arak	207	819	1,359	1,914	2,098	1,909
Ardebil	212	452	672	1,245	1,487	791
Orumiyeh	239	630	805	1,399	1,489	1,166
Isfahan	592	1,370	2,215	2,889	3,560	4,039
Ahvaz	296	875	1,479	1,873	1,552	1,327
Ilam	-	465	627	0	0	757
Bandar Abbas	-	680	1,098	1,354	1,118	1,538

Bushehr	-	562	1,030	1,471	1,699	1,351
Tabriz	378	932	1,369	1,625	1,521	2,087
Tehran	<u>1,233</u>	<u>3,152</u>	<u>4,717</u>	<u>5,954</u>	<u>6,043</u>	<u>6,477</u>
Khorramabad	-	589	731	1,332	2,018	1,754
Dezful	220	575	1,078	1,539	1,865	1,245
Rasht	290	727	1,150	1,757	1,811	2,665
Zahedan	199	587	857	1,049	1,163	873
Zanjan	222	643	986	1,443	1,458	1,162
Sari	-	771	847	1,151	1,689	1,262
Semnan	-	588	954	1,576	2,241	1,612
Sanandaj	-	540	880	1,396	1,635	1,560
Shahr-i-Kord	-	499	739	1,078	1,422	1,265
Shiraz	427	1,057	1,473	1,989	2,222	1,485
Qazvin	359	933	1,514	2,084	1,632	1,664
Qom	319	667	912	1,871	2,003	1,711
Karaj	461	999	1,823	2,684	2,780	2,468
Kerman	163	463	788	1,135	940	960
Kermanshah	282	552	912	1,367	1,781	1,027
Gorgan	275	717	998	1,516	1,910	1,629
Mashhad	<u>426</u>	<u>1,035</u>	<u>1,698</u>	<u>2,131</u>	<u>2,456</u>	<u>2,260</u>
Hamedan	286	667	1,161	1,509	1,895	1,853
Yasuj	-	490	848	1,131	1,217	888
Yazd	<u>211</u>	<u>485</u>	<u>741</u>	<u>942</u>	<u>700</u>	<u>778</u>

A qualitative approach for selecting case studies in Isfahan: In the light of the above discussion, unlike Yazd and Kashan, a calculation of DABs in all urban tissues of Isfahan could be time-consuming (partially due to lack of data), and somehow misleading in this study.³ Thus, the chapter aims to select a sample tissue in Isfahan by conducting a qualitative historic approach.

Correspondingly, as discussed earlier (see section 1.2, Chapter 1) the process of demolishing historic areas for the purpose of creating vehicular accessibility (e.g. widening roads) was accelerated in the 1960s to 1970s decade, in historic Iranian cities. The negative impact of mass demolition policies in Isfahan highlighted historic cores that surrounded the Friday Mosque, where traditional urban fabrics were ruined by the implementation of two roads bisecting socio-spatial axes of the bazaar (Figure 4.9).

³ The higher value of land in metropolitan Isfahan can affect studies which aim to measure the overall percentage of DABs in all urban tissues.

Accordingly, Nassrin Faghih (1976, p.316) has described the social consequences of destructing traditional urban fabrics, and specifically regarding developments of new streets around the Friday Mosque in Isfahan, triggered since the 1920s to '30s:

Facing a process of westernization in their use of space, both in a practical and in a formal sense, Iranians began gutting their historic city centres back in the '30s... First, a straight road is imposed on the city in an arbitrary direction, cutting the main bazaar axis in two and passing usually near the Friday Mosque. Second, another straight road is cut at right angles to the first, also passing through the old centre and forming a square at the point of intersection. Finally, a series of similar parallel roads are plotted and impose a gridiron layout over the whole city...

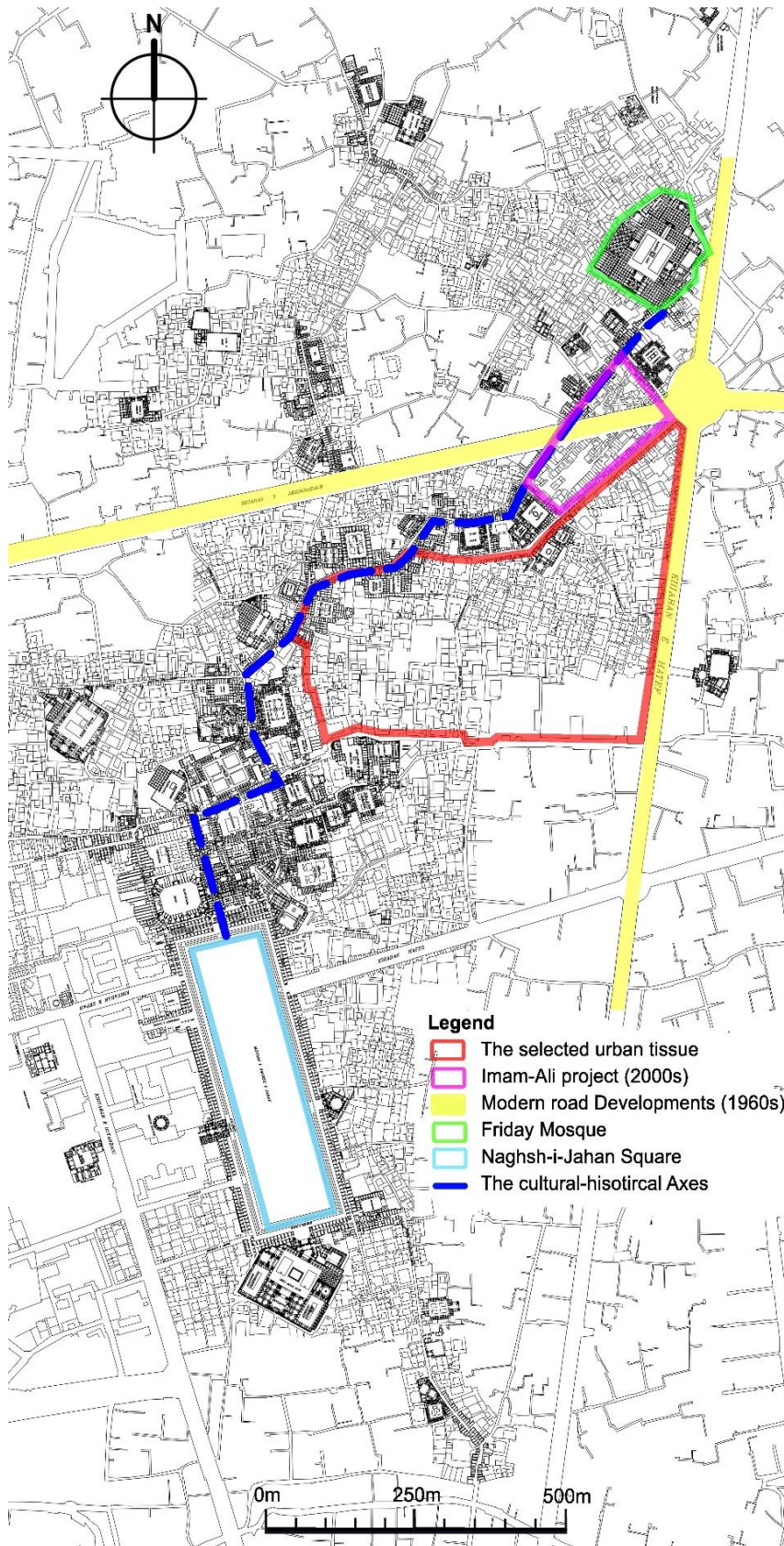


Figure 4.9: The strategic positioning of selected urban tissue in historic Isfahan in relation to the 1920--1970s road developments, proposed socio-cultural axes, Naghsh-i-Jahan square, the Friday Mosque and Imam-Ali project initiated in the early 2000s (Source: author generated)

The proposal for the revitalisation of Meidan-I-Kohne (currently Imam Ali Plaza): About thirty years later the NJP consultants paid particular attention to historic cores inside metropolitan Isfahan, and for the first time defined a strategic project for restoring the continuity of the cultural--historic pedestrian axes, and revitalising damaged historic areas close to the Friday Mosque (Figure 4.10).

The NJP proposal recognises the necessities formally stated by Nasrine Faghieh three decades earlier during the 1970s. In response to such long-term critical issues, the NJP proposal cuts both streets at the intersection and move them to the underground level (NJP-Consultants, 2017).

The NJP consultants claimed that this regenerative approach could guarantee the spatial connectivity of the previously defined cultural--historic pedestrian axes at ground level, with no further vehicular interruptions. In describing their proposition, NJP states that the project returns the socio-cultural identity to historic areas, and in a way fulfils historic continuity, and facilitates contemporary needs within broader contexts. NJP indicated that the project saves heritage cores that once (deprived of their essential dynamism) were carved up by modern roads, and helps to delay the process of rapid deterioration and abandonment (NJP Consultants, 2017).

Subsequently, Emam-Ali project demolished old structures in Meidan-i-Kohne, and instead introduced a large-scale pedestrian plaza at ground level, and in conjunction with the historic-spatial arrangements corresponding to Naghsh-i-Jahan square. The proposal also made provision for underground vehicular accessibility, public transport stations, green spaces and water features (see section 8.4.6, Chapter 8).

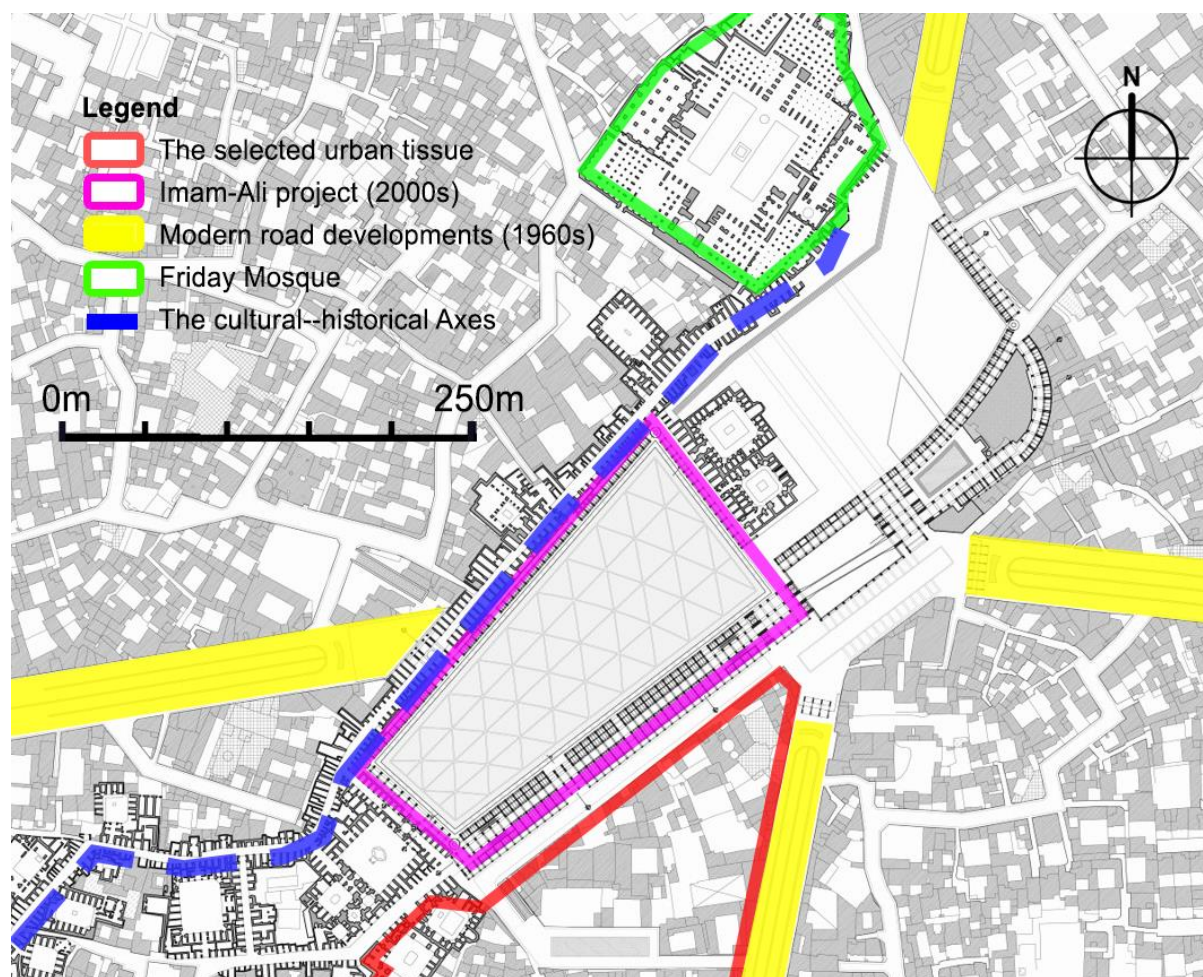


Figure 4.10: The ground level plan of the regeneration project by NJP in Imam-Ali Plaza (initiated in the 2000s), in conjunction with selected urban tissue (displayed by red lines) in this research project (Source: author generated based on NJP proposal)

As a consequence, in this chapter, urban tissue is selected for further studies, which has closely experienced both the road developments in the 1920s--1970s and large-scale vehicular regeneration programs of the 2000s, as implemented by NJP consultants (Figure 4.11). This qualitative case study can be seen as a post-mortem evaluation of large-scale revitalisation projects and programs in the contemporary Iranian planning context. The area of DABs in this urban tissue is previously surveyed by Khod Avand Consultants (2008), which is used for further investigation in this research (Table 4.5).

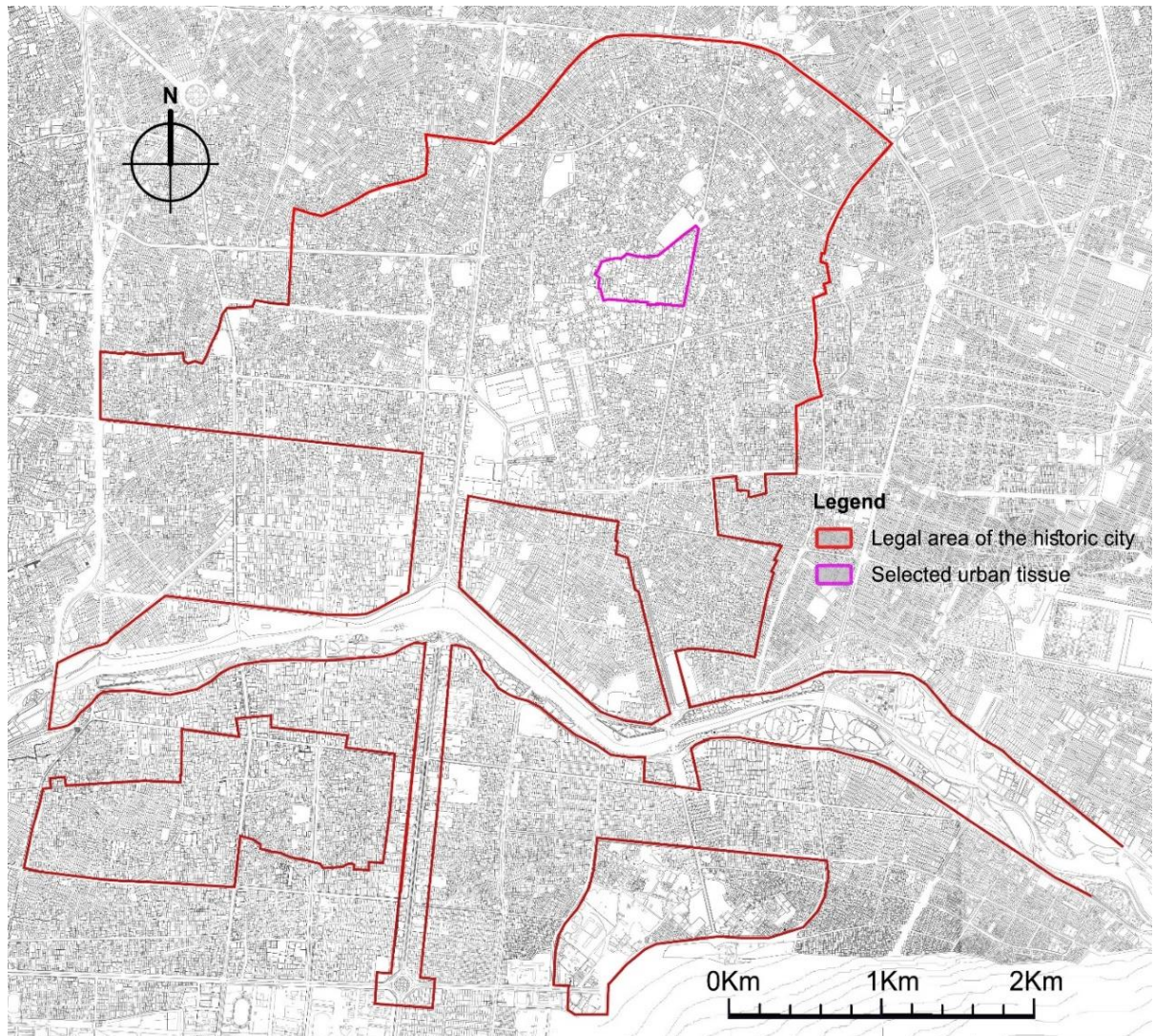


Figure 4.11: Historic context of Isfahan in conjunction with selected urban tissue (Source: author generated)

Table 4.5: Calculating the overall percentage of DABs inside the selected urban tissue of historic Isfahan based on a survey conducted by Khod Avand Consultants (2008)

Selected urban tissue	All dilapidated areas	All block areas (m ²)	Percentage of dilapidation per block (2008)
Urban tissue in the south of Masjid-Ali	22629	197361	12%

4.5.3. Selecting building blocks as the central urban element in historic cities

After selecting a variety of urban tissues that characterise broader effects of DABs, smaller urban elements were selected, that could be systematically investigated (as case studies) inside each urban tissue.

Accordingly, Moudon (1997, p.3) highlights four levels of resolution commonly recognised in relation to urban forms, corresponding to the 'building lot, the street-block, the city, and the region'. In a parallel interpretation, the city could be made up of three essential elements, consisting of streets, plots and block plans of buildings (Whitehand, 1981).

Unlike Western cities in Iranian historic cores, urban blocks are widely formed by an asymmetric network of narrow winding thoroughfares. Therefore, many orientalist such as Planhol (1959, p.3) see historic Iranian cities as 'a tangle of blocks badly ventilated by a labyrinth of twisted alleys and dark courts'; while (English, 1966, p.48) marked irregularity of the street patterns, as a 'maze of dark, twisting passageways, alleys, and cul-de-sacs'; '...the residential quarters are chaotic; there is no pattern to the lanes'.

Bonine (1979, P.208) believes that the grid system in Iranian cities did not develop from streets constructed around rectangular religious buildings or from the orientation of houses to maximise seasonal usage, but rather as a consequence of the positioning of underground water resources and irrigation systems. He suggests that in historic Iranian cities most blind alleys develop as houses, which fill in fields between major streets: 'such an accumulation of houses denotes a sensible solution to the practical problem of providing access to a compact assemblage of houses in Iranian old cities'.

In this sense, the hierarchical nature of roads in historic Iranian cities could weaken the importance of major thoroughfares in the formation of social-spatial public entities (Hakim, 1986). Nonetheless, private and semi-private roads could shape smaller elements, such as clusters of dwellings that could generate sub-neighbourhoods (Figure 4.12). Consequently, an urban block (not a major road) could be conceived as a group of several dwellings including semi-private and in-between spaces. Such clusters thus could represent the smallest identifiable urban component, which formed traditional neighbourhoods in Iranian and Middle-Eastern historic cities, known as urban blocks (Hakim, 1986).

By its definition, an urban block is the smallest area surrounded by a multitude of planned and unplanned roads and streets, and usually containing several buildings (Krier, 1984, Kouwenberg, 2013). Hence, an urban block could be seen as a fundamental component of the physical structure in historic urban areas (Siksna, 1997). Nonetheless, an urban block in a historic city either forms streets and squares, or results from a pattern of streets and squares;

therefore, it must be identified as the most important typological element in the composition of urban spaces (Krier, 1984). Based on the above discussed logic, this chapter identifies 15 urban blocks as actual case studies, inside selected tissues of Yazd, Kashan and Isfahan, and for evaluating liminal effects of DABs in historic cities of Iran.

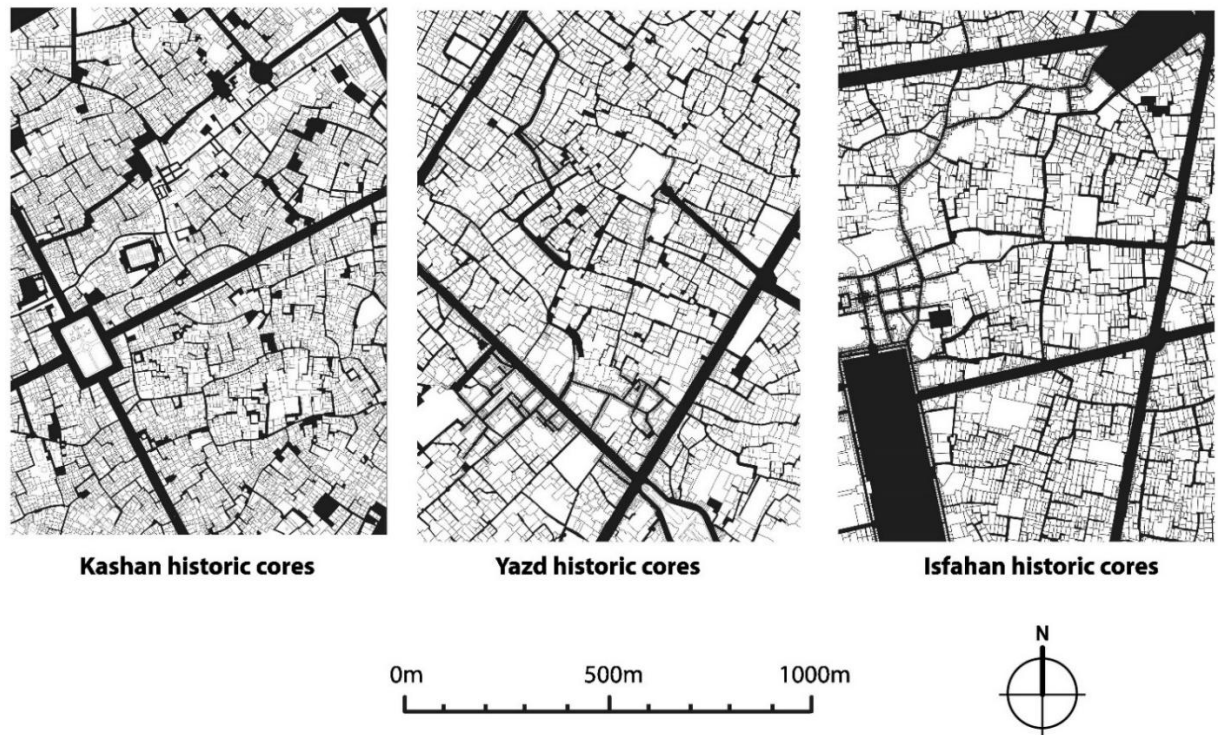


Figure 4.12: Comparing morphogenesis of urban blocks in conjunction with surrounding roads and open spaces (shown in black), inside three historic Iranian cities (Source: author generated)

4.5.4. The proposed selection procedures and logic

This section proposes a criterion for selecting proper urban blocks, upon which this study could realistically scrutinise the correlation between DABs and spatial liminality in historic urban fabrics. Previously, section 4.5.3 discussed how urban blocks could be considered as basic elements of urban form. This quality leads this chapter to identify proper urban blocks, inside pre-selected urban tissues (as discussed in section 4.5.2) for future studies.

By earlier definitions, this procedure needs to monitor spatial-liminal conditions of residents, regarding maximum variance in the proportion of DABs. Thus, in each urban tissue, two to three⁴ urban blocks were selected, which have developed a larger, medium⁵ and lower

⁴ Three types of urban blocks were selected in Isfahan.

⁵ An urban block with a medium percentage of DABs was selected in Isfahan.

percentage of DABs per block, among all other urban blocks. In this research, selection criteria were based on three logical phases:

- A. The suitable size of urban blocks: During pilot studies in three historic cities, it was noticed by the researcher that a considerable proportion of urban blocks should have yielded areas between 15,000 to 60,000 square meters. Consequently, it was observed that a small urban block (i.e. approximately less than 15000 m²) in historic areas could not possibly demonstrate a real-life condition of liminality. For instance, on some occasions, clusters of DABs could shape areas as large as 5000 m². In such circumstances, the percentage of DABs (per block) could be misleading in small cases (e.g. see B-25 in Appendix A-1).

Therefore, for facilitating legitimate cross-case comparisons amongst larger case studies, urban blocks with areas more than 60,000 m² or less than 15,000 m² respectively were considered as very large (i.e. super-blocks), or very small, and in this sense, may show unrealistic results. Thus, very large and very small urban blocks are unable to project real-life cycles of spatial liminality, and consequently are excluded, as part of the rationale for this chapter.

- B. The originality of land under grain and access roads: During pilot studies in March-May 2018, it was observed (by the researcher) that until today widening of roads have affected a critical proportion of the traditional cities of Iran, which could not be considered as historic fabrics anymore. In this sense, many urban areas inside historic cities may have lost their original condition (land grains) and/or traditional thoroughfares. Thus, during pilot studies, the sample blocks were selected based on the originality of land grains, as well as the intact quality of roads and physical structures (see section 3.6 and Table 3.7).
- C. Implementing a deductive procedure among shortlisted blocks: So far, the case study selection procedure was to be implemented in three phases. In the first phase, the researcher shortlisted suitable urban blocks (i.e. blocks with an overall area between 15,000 and 60,000 m²). In the second phase, the originality of land under grain and thoroughfares were visually inspected by the researcher, amongst shortlisted urban blocks. Respectively, it was observed that urban blocks which are located deep inside urban tissues (which have made minimum contact with the surrounding modern streets) could have remained in their original condition, and because of their lack of vehicular accessibility could be suitable for this study.

In this respect, blocks which have lost their original condition (for example as a result of road widening or the implementation of new developments) would be removed from shortlisted blocks. Consequently, a logical procedure was reiterated to find the next eligible urban block, up until a couple of sample blocks (one with a higher and one with a lower percentage of DABs per block) could take precedence among others in 15 pre-selected urban tissues (see section 4.5.2).

Based on such case study selection procedure (as discussed above), this chapter has chosen 15 sample blocks for further investigation. Among all selected cases, six blocks are positioned in historic Kashan, another six located in Yazd and three blocks situated in Isfahan. Accordingly, the following discussion illuminates the selection procedure in more detail.

Kashan; Darb-i-Isfahan urban tissue (B-1 and B-2): Following the three proposed selection phases (section 4.5.4), in Darb-i-Isfahan two urban blocks need to be selected for further studies, which have yielded a higher and a lower percentage of DABs (per block) among all shortlisted blocks. At first glance, B-1 and B-9 could be considered as blocks with the proper size that have respectively accommodated the largest and smallest proportion of DABs (Figure 4.13).

By conducting visual inspections, it was clarified that B-9 has largely lost its original condition due to proximity to modern road developments (Figure 4.14). Consequently, B-9 has been replaced by B-2, as the next eligible sample block which has yielded a lower proportion of DABs. Having a proper size, B-2 has mostly retained its original land grains and physical structure (e.g. roads), and respectively could be considered as the second case for further studies.

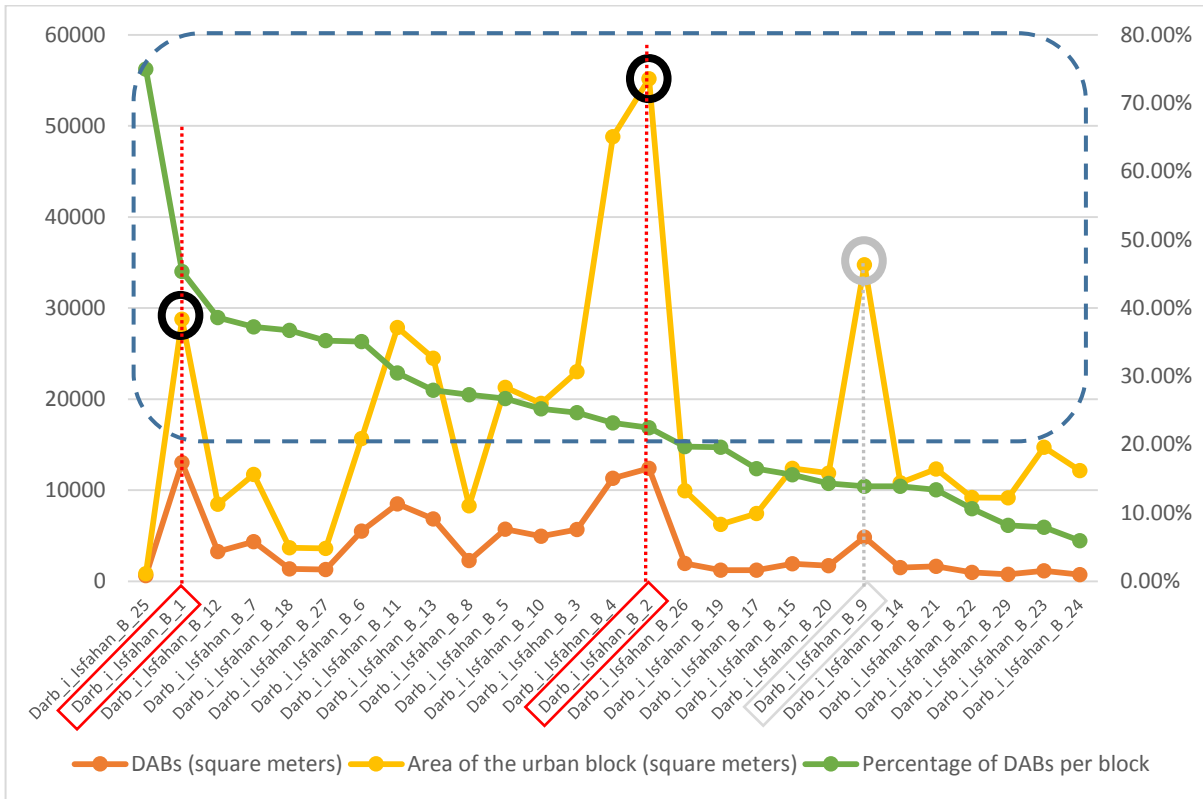


Figure 4.13: The applied method for selecting two case studies (one with a higher and one with a lower proportion of DABs per block) inside Darb-i-Isfahan urban tissue in Kashan (see Appendix A-1)

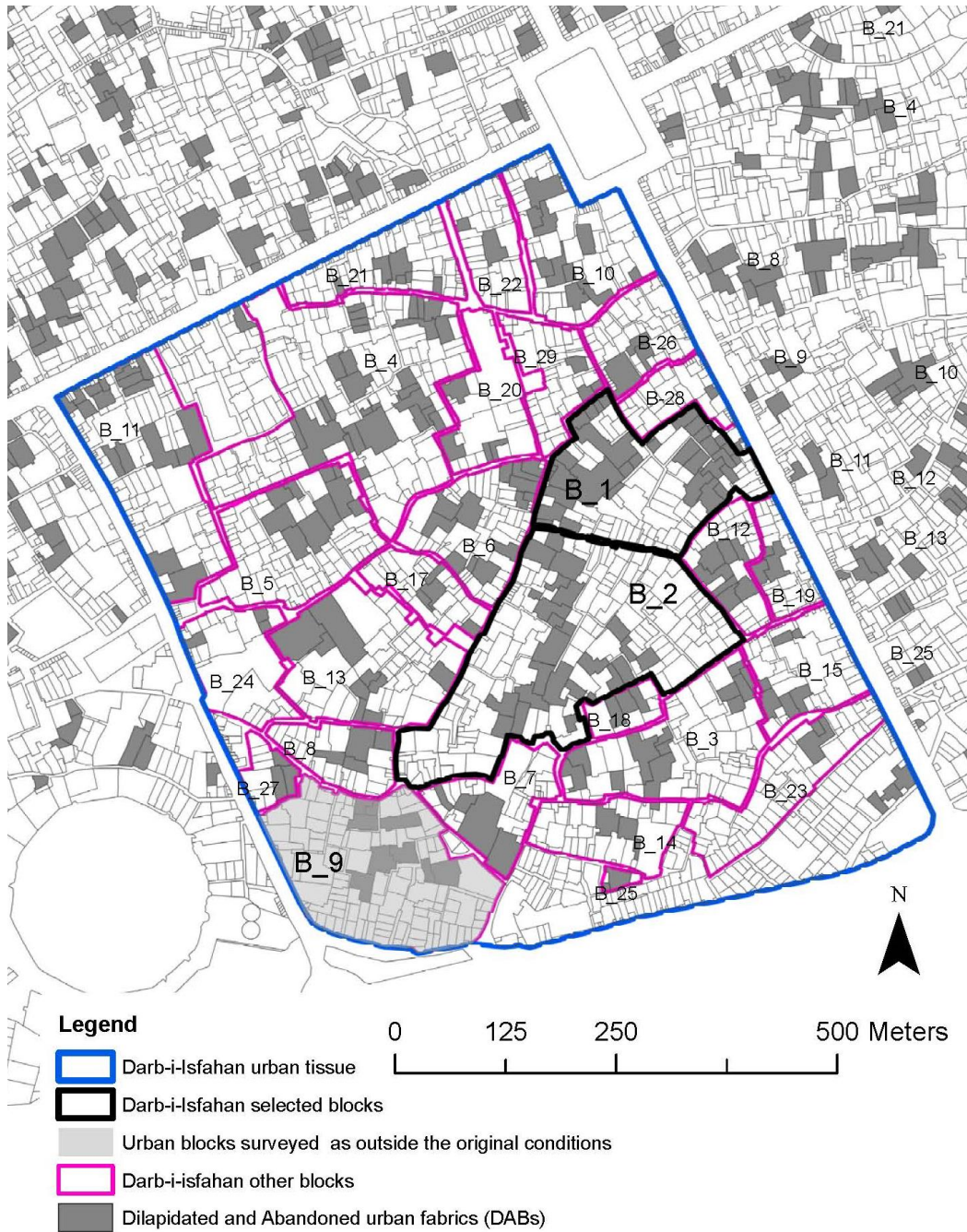


Figure 4.14: The map depicts a procedure for selecting two case studies inside Darb-i-Isfahan urban tissue in Kashan (Source: author generated)

Kashan; Mohtasham urban tissue (B-15 and B-16): Based on the suggested procedure (see section 4.5.4). In this urban tissue B-15, B-5 and B-8 can be considered as proper samples which have yielded a larger proportion of DABs per urban block. On the other hand, B-16, B-23 and B-14 can be seen as appropriate samples which have yielded a smaller proportion of DABs per urban block (Figure 4.15). Moreover, after conducting visual inspections, it is observed that B-15 and B-16 have largely retained their original condition (regarding land grains and

surrounding roads) and could be considered as reliable cases for studying spatial liminality inside Mohtasham urban tissue (Figure 4.16).

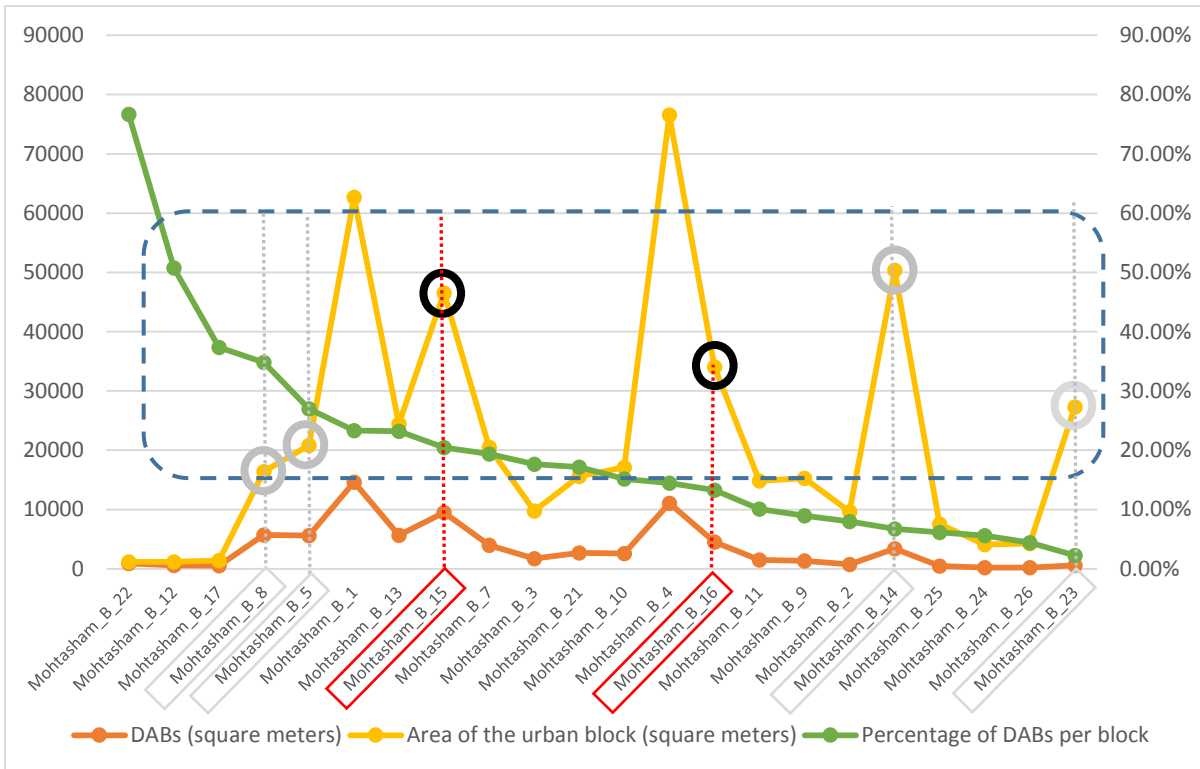


Figure 4.15: The diagram elaborates methods for selecting two case studies (one with a higher and one with a lower proportion of DABs per block) inside Mohtasham urban tissue in Kashan (see Appendix A-2)

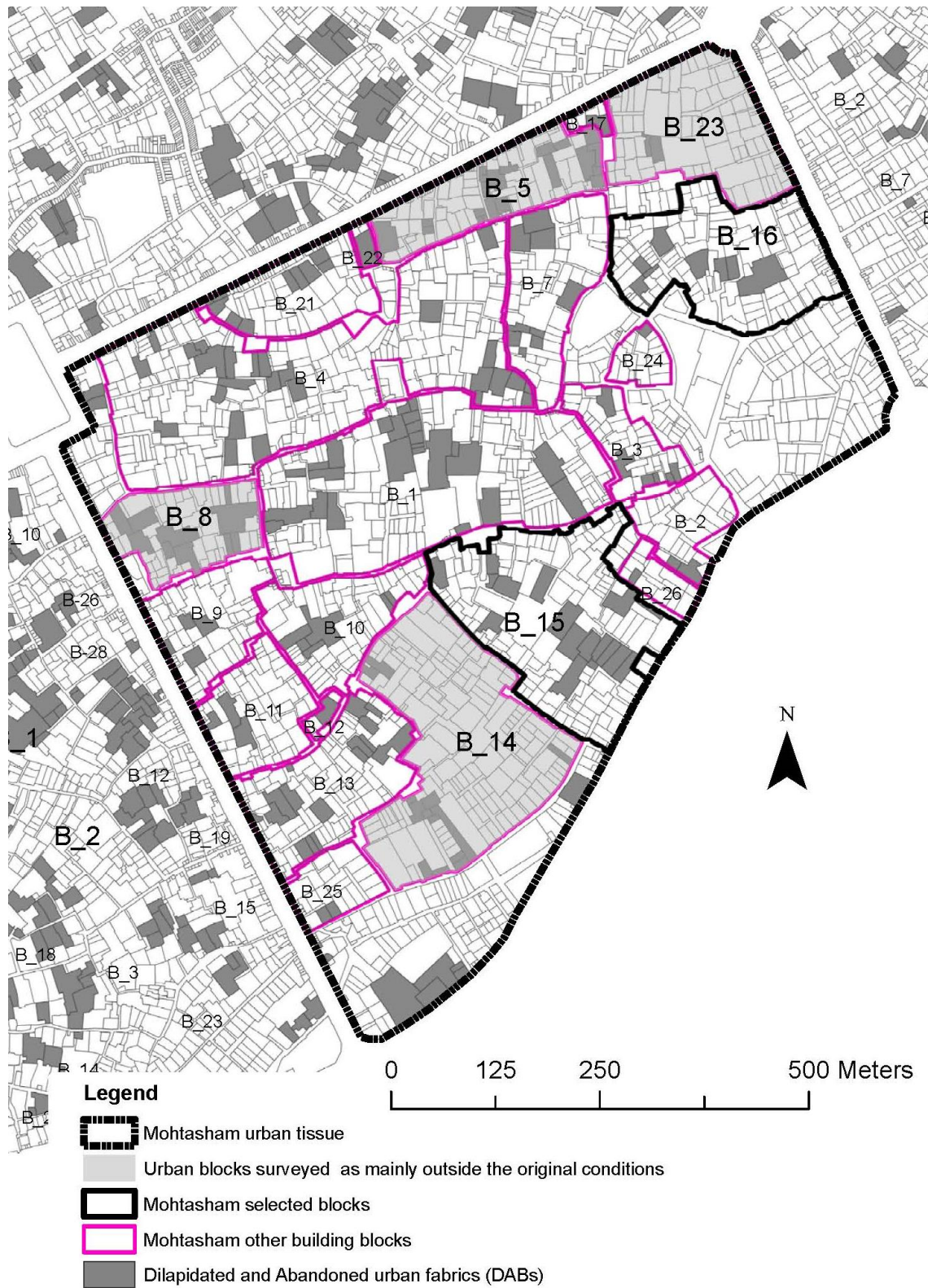


Figure 4.16: The map depicts a procedure for selecting two case studies inside Mohtasham urban tissue in Kashan (Source: author generated)

Kashan; Posht-i-Mashhad-i-paean urban tissue (B-3 and B-5): Based on a suggested procedure (section 4.5.4) in this urban tissue, B-3 has developed the largest proportion of DABs, while having areas large enough to be shortlisted for the current study (Figure 4.17).

Furthermore, by conducting pilot studies, it is observed that B-3 has largely preserved its original condition and could be considered as a reliable case (with the highest proportion of DABs), for further studies. On the other hand, among B-4, B-9 and B-5 (which have developed a lower proportion of DABs), B-5 was investigated as the only urban block which has remained in its original condition, and as a consequence could be selected as the second case (with a lower proportion of DABs per block) for further studies (Figure 4.18).

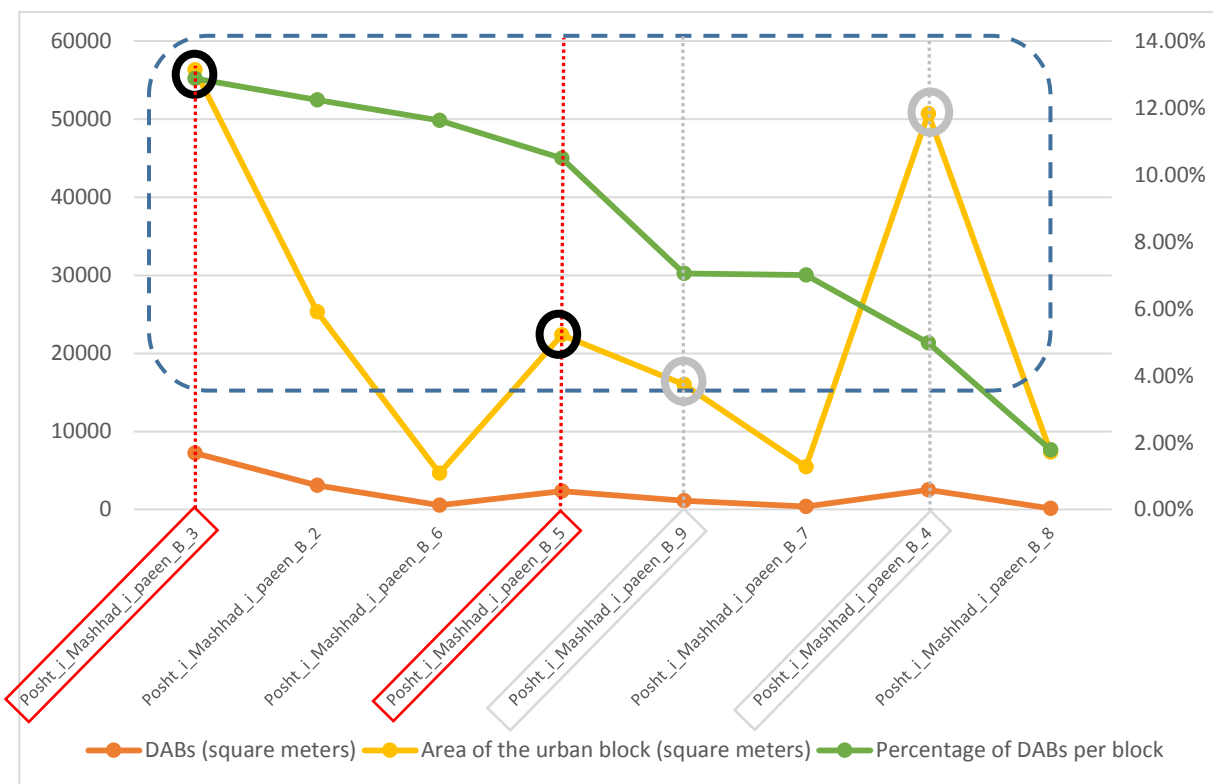


Figure 4.17: The diagram demonstrates methods for selecting two case studies (one with a higher and one with a lower proportion of DABs per block) inside Posht-i-Mashhad-i-paean urban tissue in Kashan (see Appendix A-3)

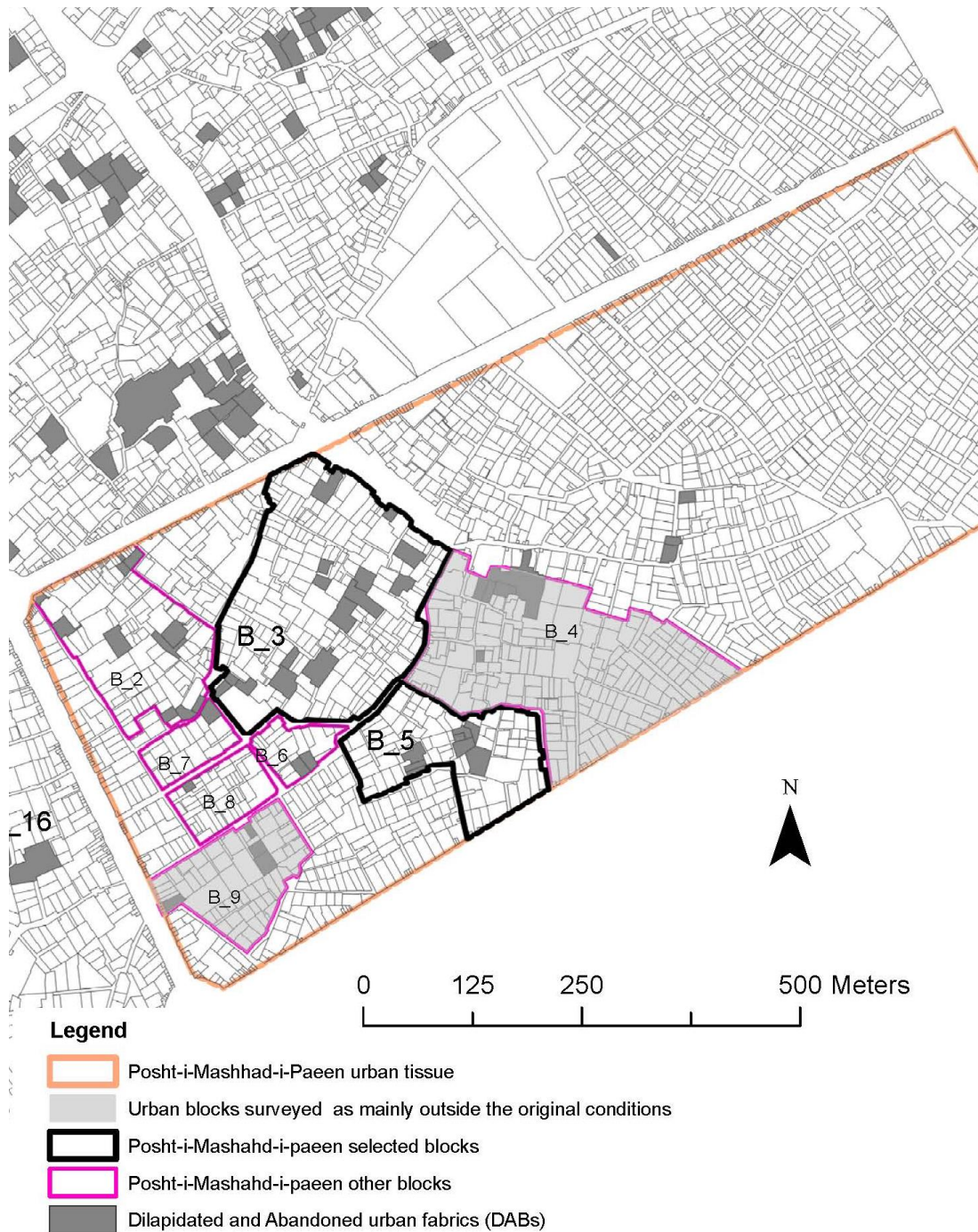


Figure 4.18: The map depicts a procedure for selecting two case studies inside Posht-i-Mashhad-i-paeen urban tissue in Kashan (Source: author generated)

Yazd; Godal-i-Mosalla (B-30 and B-43): Through the previously discussed procedure, in this urban tissue B-38, B-5, B-32 and B-30 have developed a larger proportion of DABs, and covered a proper area of land (between 15,000 and 60,000 m²). Nevertheless, B-33 and B-43 have developed a lower percentage of DABs, which can be considered an appropriate size for further inspections (Figure 4.19).

Consequently, after conducting visual inspections, it was revealed that B-30 (i.e. the case with a higher percentage of DABs) and B-43 (i.e. the case with a lower percentage of DABs) could be considered as the most reliable cases among others, which have largely preserved their original condition (Figure 4.20).

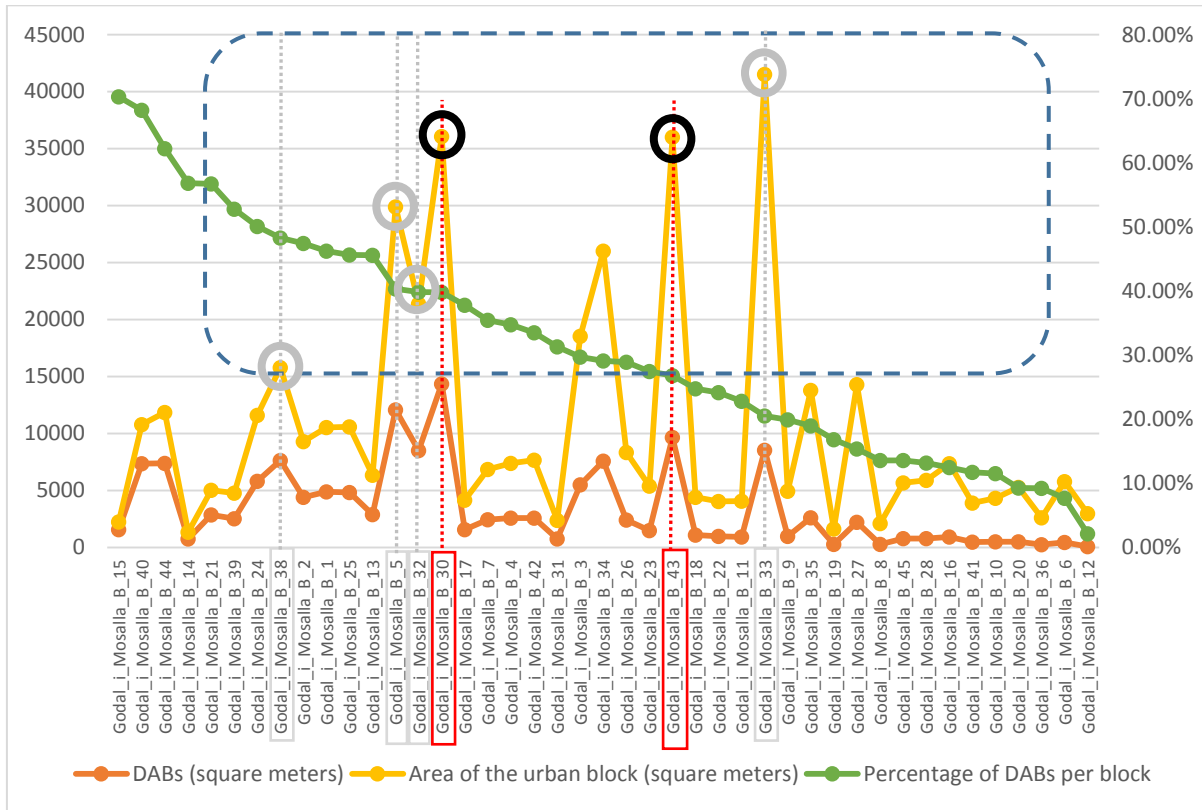


Figure 4.19: A diagram elaborates the procedure for selecting two case studies (one with a higher and one with a lower proportion of DABs per block) inside Godal-i-Mosalla urban tissue in Yazd (see Appendix A-4)

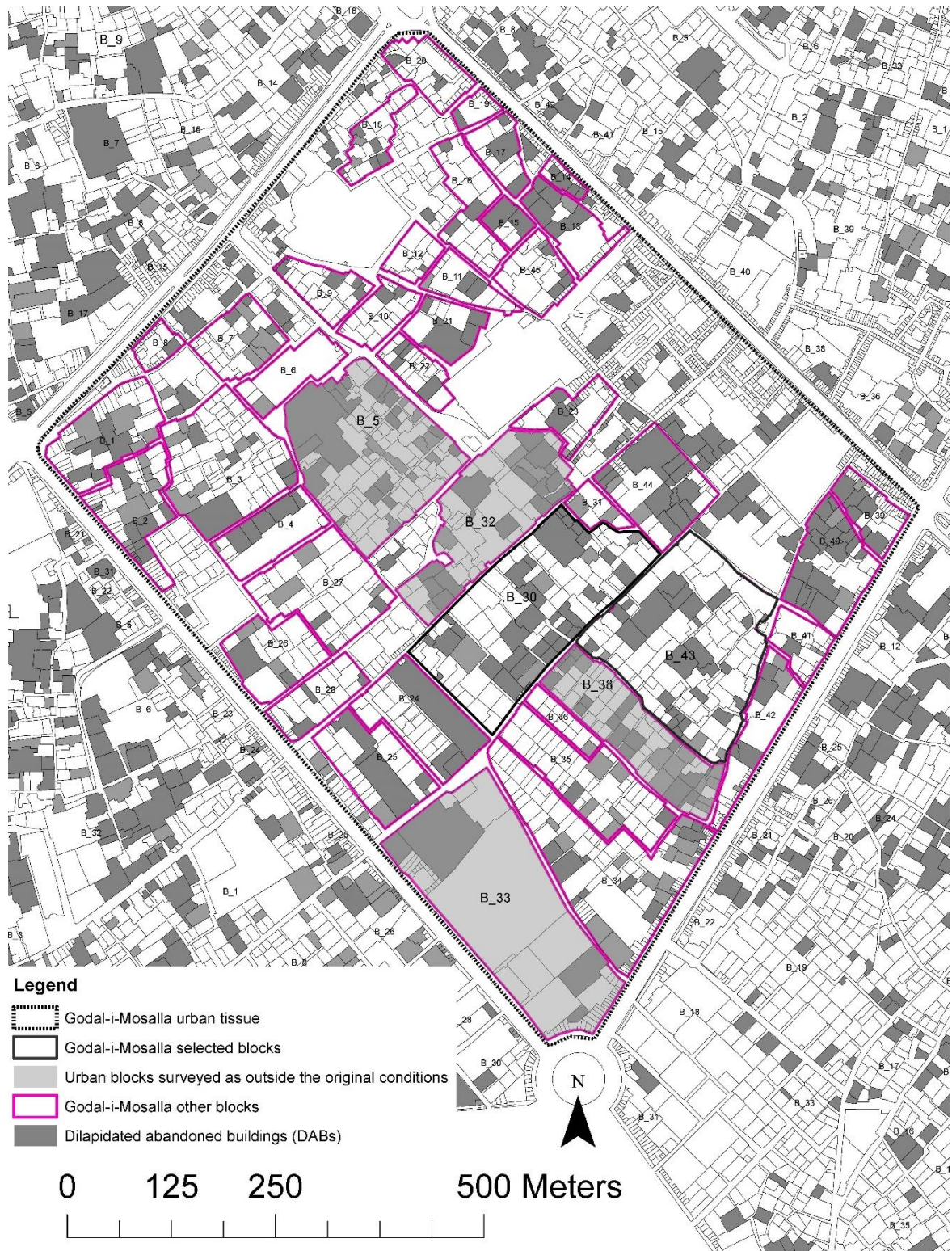


Figure 4.20: The map depicts a procedure for selecting two case studies inside Godal-i-Mosalla urban tissue in Yazd (Source: author generated)

Yazd; Dolat-Abad (B-9 and B-28): Within a similar repetitive process, in Dolat-Abad B-4, B-10 and B-9 could be shortlisted as suitable urban blocks, which have developed a larger proportion of DABs, while containing a suitable size for the purpose of this study. On the other

hand, B-32 and B-21 and B-28 have developed a lower percentage of DABs, while indicating an appropriate size for cross-case comparisons (Figure 4.21).

Therefore, after conducting visual inspections it was revealed that B-9 (i.e. the case with a higher percentage of DABs) and B-28 (i.e. the case with a lower percentage of DABs) could be considered as the most reliable cases among others, that have largely preserved their original condition (Figure 4.22).

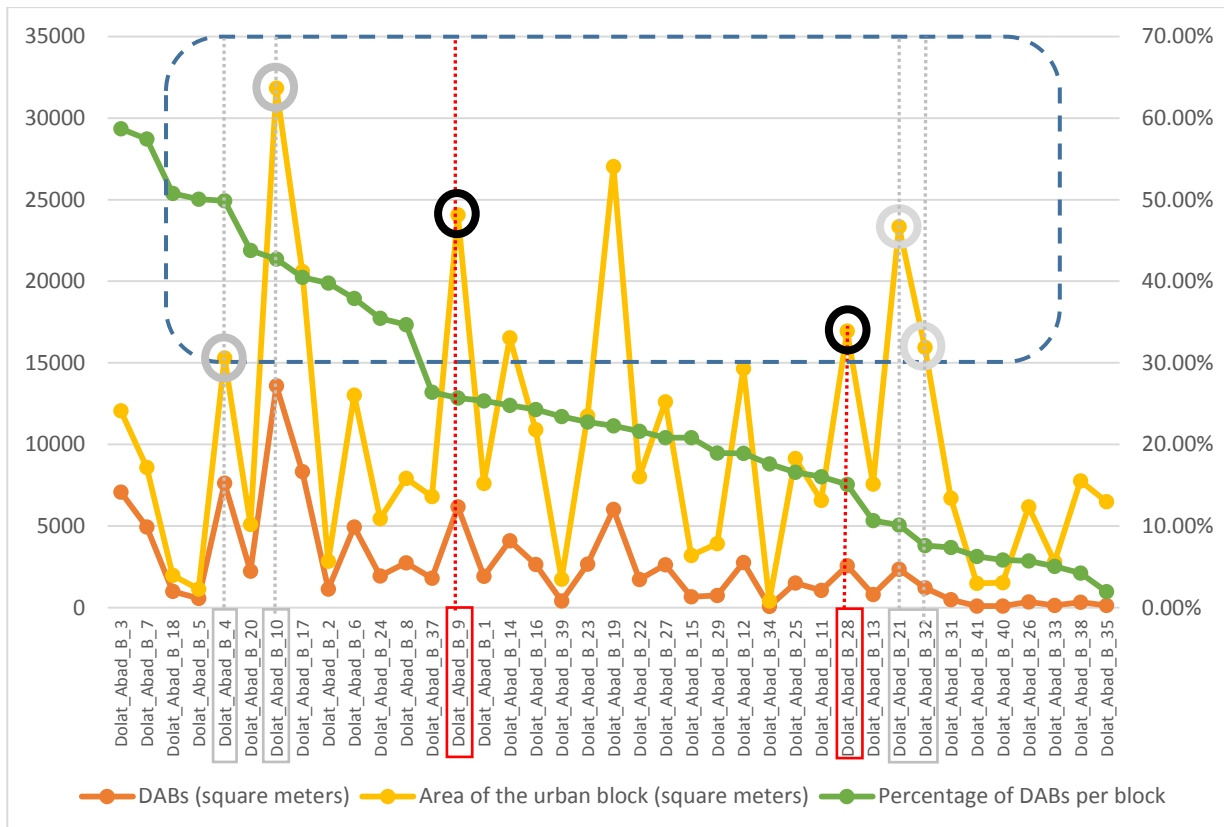


Figure 4.21: The diagram generates methods for selecting two case studies (one with a higher and one with a lower proportion of DABs per block) inside Dolat-Abad urban tissue in Yazd (see Appendix A-5)

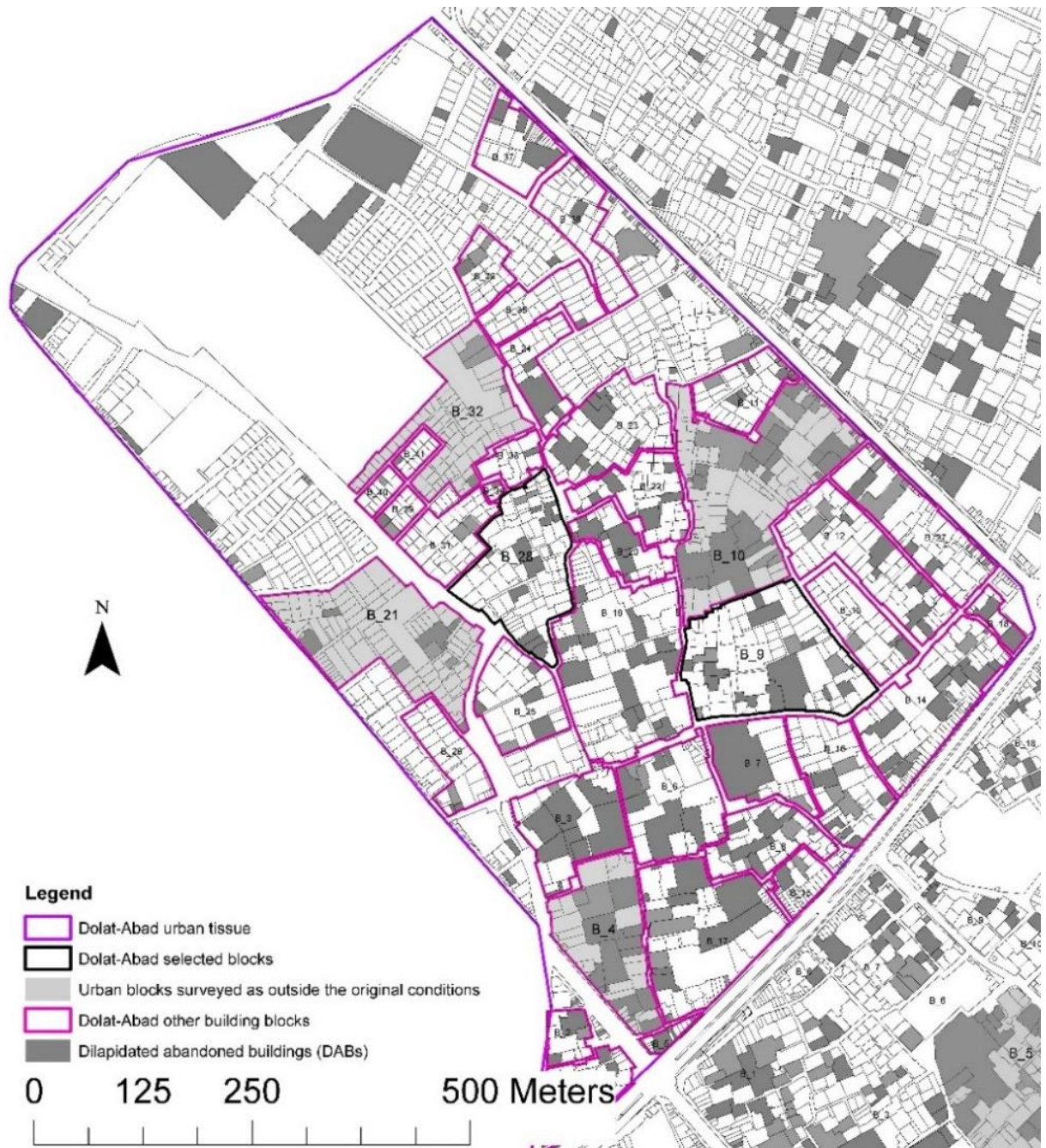


Figure 4.22: The map depicts a procedure for selecting two case studies inside Dolat-Abad urban tissue in Yazd (Source: author generated)

Yazd; Gonbad-i-sabz urban tissue (B-8 and B-47): Through a similar procedure for selecting case studies, B-47 has developed the lowest percentage of DABs, while having a suitable size for cross-case studies. On the other hand, B-8 and B-1 could be both nominated as proper cases which have yielded a larger percentage of DABs per block (Figure 4.23).

However, during visual inspections, it was clarified that B-1 has largely lost its original condition. As a consequence, B-8 is selected as the sample block with a higher proportion of DABs and B-47 as the sample block with a lower proportion of DABs (Figure 4.24).

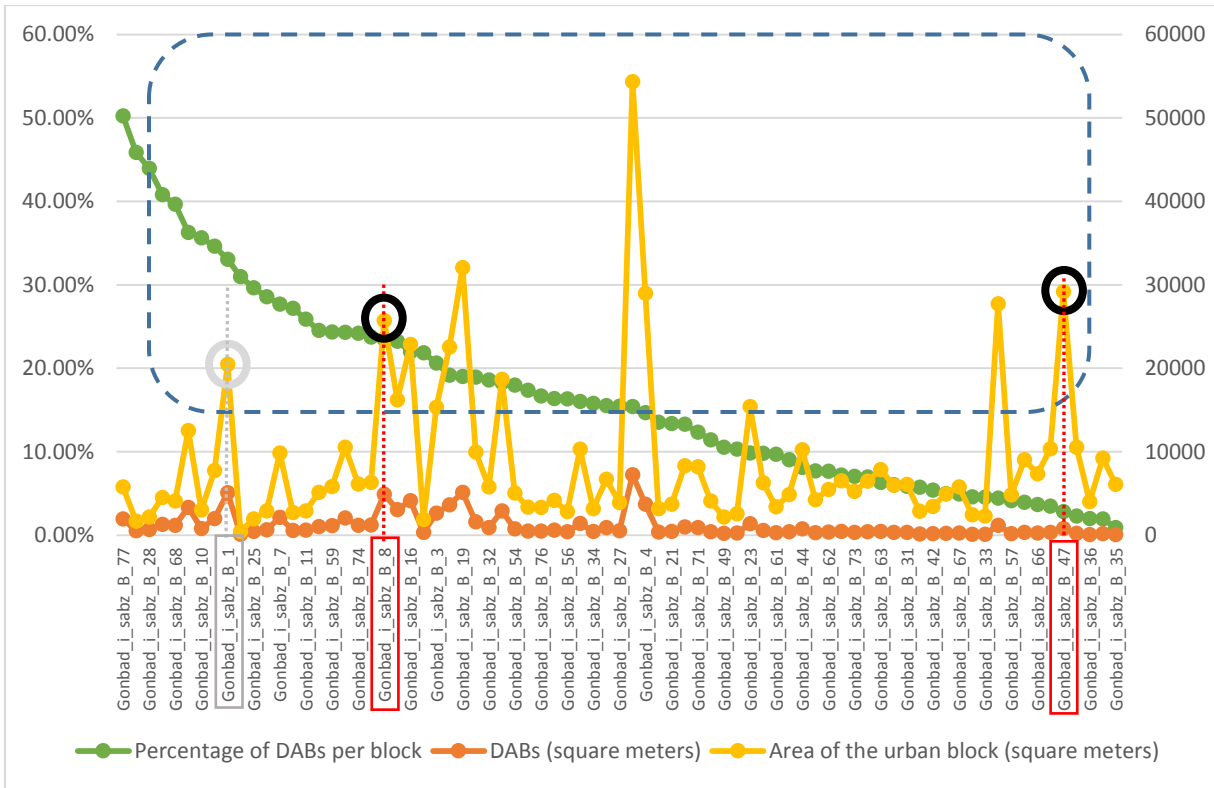


Figure 4.23: A diagram generated for selecting two case studies (one with a higher and one with a lower proportion of DABs per block) inside Gonbad-i-sabz urban tissue in Yazd (see Appendix A-6)



Figure 4.24: The map depicts a procedure for selecting two case studies inside Gonbad-i-sabz urban tissue in Yazd (Source: author generated)

Isfahan; urban tissue in the South of Masjid-Ali (B-7, B-1 and B-2): The selection procedure in historic Isfahan could be considered similar to what was discussed for Yazd and Kashan. Accordingly, there are only four urban blocks (B-2, B-1, B-9 and B-7), which almost cover a suitable size for this study (Figure 4.25).

Nonetheless, during pilot studies, B-9 was observed not to be suitable for the purpose of this study, and because it is adjacent to modern road developments (Figure 4.26). Thus, B-2 is considered as a case with a higher proportion of DABs, while B-1 and B-7 respectively are selected to represent cases with a medium and lower proportion of DABs (per block) in historic Isfahan.

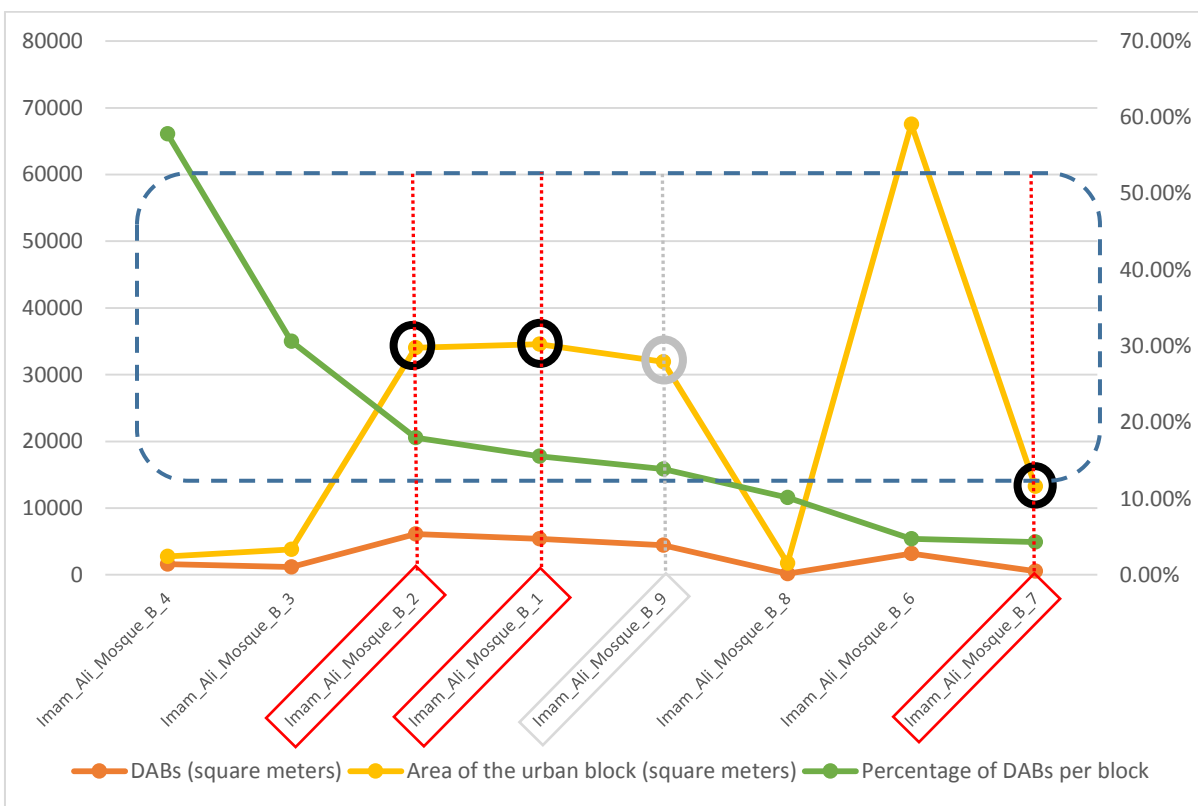


Figure 4.25: A diagram elaborates the process of selecting three case studies inside an urban tissue located in the south of Imam-Ali square in Isfahan (Appendix A-7)

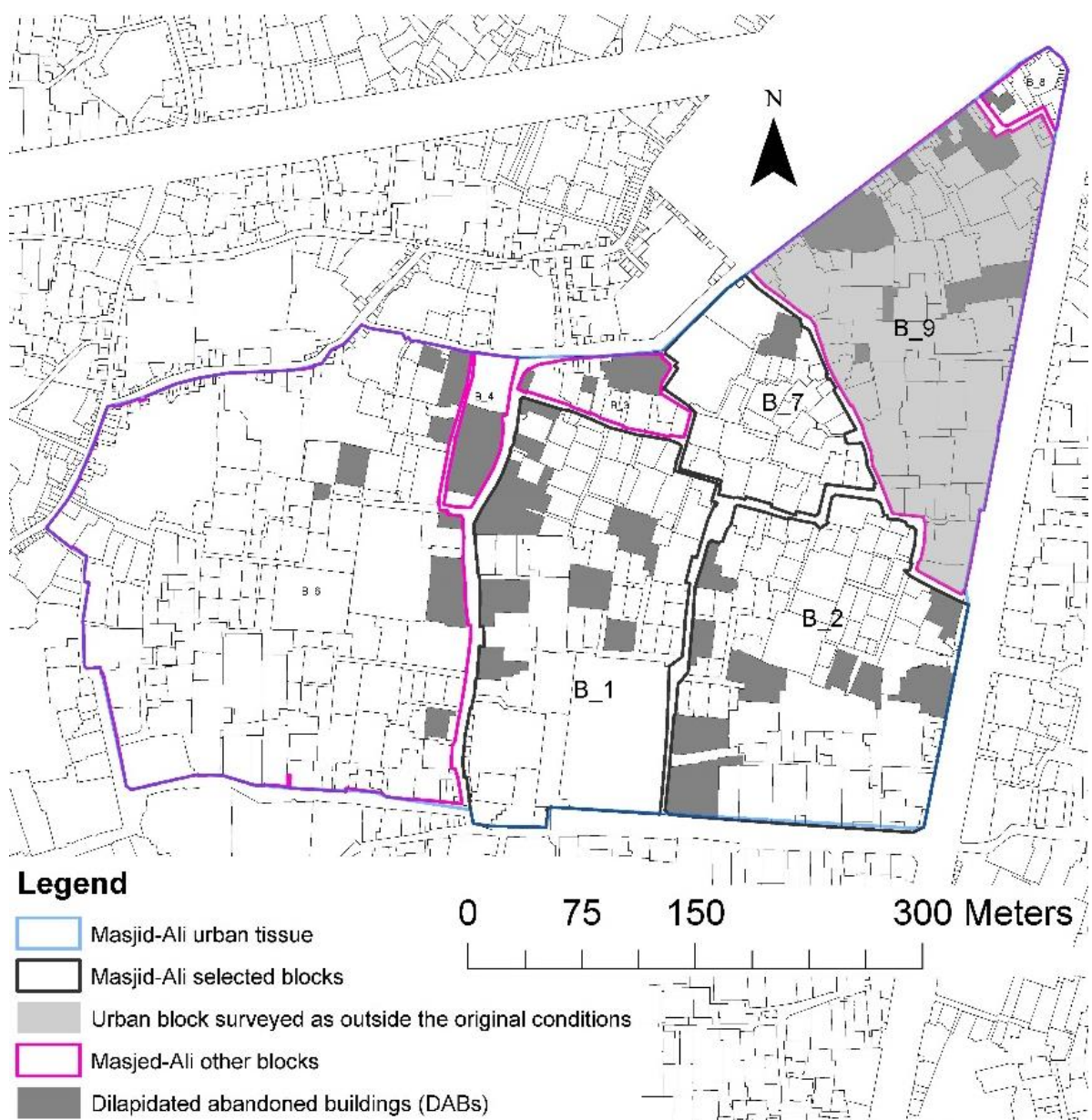


Figure 4.26: The map depicts a procedure for selecting three urban blocks in a pre-selected urban tissue, in historic Isfahan based on calculations by Khod Avand Consultants (2008), (Source: author generated)

4.6. Methods of data collection

There are four primary methods of data collection, implemented in this research, undertaken in three historic Iranian cities (March-May 2018) by the researcher. The methods include: (1) pilot studies, (2) street surveys, (3) in-depth interviews, and (4) field observations, which will be discussed in more detail. In all activities, four categories of data were gathered (see section 3.6, Chapter 3), namely spatial (factual), demographic and attitudinal data, as well as information relevant to current socio-spatial planning contexts.

The first, second and third categories of data are related to local conditions and residents, while the latter category methods beyond socio-spatial situations, and gathers complementary information regarding the current planning context in the historic city, and via conducting semi-structured interviews with practitioners, developers and policymakers. Complementary to each other, all four types of collected data are later exploited to assess conditions of spatial liminality against the areas of DABs inside 15 urban blocks in three historic Iranian cities (see Table 4.6).

4.6.1. Pilot studies for reaching a thematic saturation point

Pilot studies were conducted as a preliminary activity for: (1) selecting suitable urban blocks (as discussed in section 4.5.4), and (2) designing a reliable street survey for understanding spatial, attitudinal and demographic conditions of vulnerability-liminality, among communities in the 15 selected case studies.

Regarding the latter, street surveys become relevant when researchers are interested in examining common views held by a specific group of people. Moreover, it is generally unrealistic to conduct interviews with a whole population. And therefore one significant question for preparing the design of the street survey could be restated as ‘how many participants need to be engaged for obtaining the reliable outcomes?’ (Berg, 2001, p.45).

In this sense, none of the quantitative methods are clearly relevant to this study because of the unknown nature of spatial liminality. Nevertheless, theoretical saturation could be utilised, which is originally defined as the point at which no additional themes are found from the reviewing of successive data regarding a category being investigated (Glaser and Strauss, 1967).

Respectively, a qualitative method of on-site survey design was planned and implemented, based on several in-depth pilot interviews among residents, regarding socio-spatial problems in the historic city (see Appendix E-7-1). Respectively 18 and 17 residents were interviewed within selected urban blocks in Kashan and Yazd, for gaining a reliable level for a thematic saturation point, wherein new information conforms to patterns of the data already collected.

Thematic saturation in both Yazd and Kashan was evident when at least 10 pilot in-depth interviews were conducted, while new responses did not produce substantial firsthand

information, which shows that further data collection could be redundant. In Isfahan, the number of random participants in 10 pilot in-depth interviews seemed sufficient, yielding no more significant data compared to the previously pilots conducted.

4.6.2. Field studies and physical observations

Field studies were planned and conducted simultaneously during street surveys (Appendix B). Observations aimed to explore and record the current condition of DABs, as well as changes in land use, within 15 sample blocks of historic Iranian cities (2008--2018). The two measuring criteria as discussed in section 3.6 (see Table 3.5) include: (a) urban accessibility assessment, and (b) analysing current land use.

This inquiry (1) records spatial adjacencies between DABs and refugee⁶ settlements in historic cities of Iran in 2018, (2) measures the proportion of DABs in historic cities between 2008 and 2018, (3) measures areas accommodated by all Iranian local residents⁷ (defined as active urban areas for gauging spatial liminality type-B) in 2018, (4) examines areas accommodated by refugee settlement fabrics in 2018 (measuring spatial liminality type-A), and (5) records the areas allocated to newly-built houses.⁸ The latter corresponds to land value in Iranian historic cities (Hanachi et al., 2007).

The activity recording factual aspects of spatial liminality (type-A and type-B) is intended to be complementary to attitudinal and demographic information, as will be discussed in section 4.6.3. The field inspections are conducted among several comparable case studies (i.e. urban block areas between 1.5 to 6 hectares), shortlisted after conducting the pilot investigation, as discussed in section 4.5.4.

Accordingly, the 15 selected urban blocks were investigated by conducting visual surveys as well as (non-participant) observation of behaviour. Every single urban block was surveyed during at least three nonconsecutive working days.

In historic Yazd and Kashan, among each of the six pre-selected urban tissues containing a large, medium and low proportion of DABs, 12 urban blocks were selected and surveyed. Each

⁶ In this research residents are classified in two major groups: (1) Refugees and/or non-Iranian disadvantaged communities, and (2) Iranian-local residents. The first group then is recognised to be the subject of spatial liminality type-A in historic cities of Iran, although in many circumstances Iranian residents of historic areas could also be considered subjects of liminality. However, to avoid complexity in this research the latter group is considered to be outside spatial liminality type-A.

⁷ See footnote 6.

⁸ Newly-built houses in this research indicate structures that are less than five years old, constructed between 2008 and 2018.

couple of selected samples indicate urban blocks which have yielded a larger and smaller extent of DABs, amongst all urban blocks in selected urban tissue. In the case of Isfahan, a qualitative method was conducted in which an urban tissue was selected in close proximity to a contemporary mega-project inside historic areas (see section 4.5.2). Consequently, three urban blocks were selected in Isfahan based on the logic that cases should have a higher, medium and lower proportion of DABs, as discussed in section 4.5.4.

4.6.3. Street surveys – compiling 12 questions

Street surveys were developed based on the themes produced during in-depth pilot interviews (see section 4.6.1). The final product incorporated 12 questions, targeting attitudinal and demographic situations of vulnerability-liminality inside traditional cities of Iran (see Appendix E-4).

The street survey was conducted in 15 selected urban blocks, including six urban blocks in historic Kashan, six urban blocks in Yazd and three blocks in Isfahan (see section 4.5.4). To arrive at a reliable point of thematic saturation, about 10 participants in each selected urban block seemed sufficient for the current inquiry (section 4.6.1). Thus, it is estimated that at least 150 street surveys needed to be conducted in this research. Consequently, at the end of the data collection procedure, 161 street surveys were conducted, in which residents inside 15 selected urban blocks voluntarily answered two types of inquiries.

Demographic inquiry: The inquiry was formed around five questions and reflected conditions of spatial liminality type-A regarding the influx of refugees and/or disadvantaged communities in historic areas. These questions also correspond to the proposed measuring criteria for evaluating spatial liminality in historic urban fabrics, regarding economic vulnerability and ethnicity-race assessments, as proposed in section 3.6, Chapter 3 (see Table 3.5).

Accordingly, the first question (how long have you been living in your current place?) could somehow clarify conditions of vulnerable newcomers, while corresponding to the influx of refugees and non-Iranian economic migrants in historic areas (Behzadfar, 2012a). In this sense, the influx of refugees and low-income communities (defined as spatial liminality type-A in this research) is strongly associated with the vulnerability of newcomers as well as the existence of cheaper/low-quality housing resources inside historic cores (Tavassoli, 1987a).

The second question (did you rent or buy this house?) could estimate socio-spatial unstable conditions for non-Iranian disadvantaged populations, who do not own a house in such stigmatised urban areas and can only afford to hold a lease (Behzadfar, 2012a). Thus, the question can reiterate the condition of vulnerability-liminality among residents.

The third question (does your home need urgent maintenance or not?) can also report that disadvantaged residents could not afford to repair their houses (Tavassoli, 1987b). In this case, such residences are susceptible to collapse during natural disasters, and their occupants could be seen as vulnerable (Andalib, 2010). Thus, this question can measure spatial liminality in historic areas.

The occupation of the heads of families could determine levels of public poverty, in which pensioners, labourers and/or unemployed residents receive regular aid from government for their survival (Curtis and Hooglund, 2008). In this case, the fourth question (what is the occupation of the head of your family?) could depict the poverty of residents as an explicit condition of spatial liminality type-A in historic cities.

The fifth question (what is your ethnicity?) could directly represent the number of refugees and/or poor non-Iranian immigrants, as an indicator of the liminal population in historic areas, based on Mortland (1987).

Attitudinal inquiry: This inquiry is formed around seven questions that could reflect attitudinal ramifications of spatial liminality, as experienced by residents in historic areas. The seven questions which are suggested in the inquiry correspond to the proposed measuring criteria for evaluating spatial liminality in historic urban fabrics (Table 3.5). The evaluation criteria assess social-spatial vulnerability among local and migrant communities via measuring physical and social safety, the sense of belonging to place and community perception regarding historic cities, as proposed in section 3.6, Chapter 3.

Respectively, the first question (why have you settled in historic areas?) could highlight the socio-spatial vulnerability of residents who have settled in historic areas purely for occupying cheaper housing opportunities, and generally in line with what Behzadfar (2012a), Mirmiran (2011) and Tavassoli (1987a) have suggested.

The second, third and fourth questions (what are the most chronic problems in your historic areas?), (what are the most important local problems in your neighbourhood?) and (what makes your neighbourhood unsafe?) can represent a combination of residents' perceptions regarding

the sense of belonging to place and physical-social safety (Behzadfar, 2012a). Thus, the questions can measure socio-spatial liminality/vulnerability and can represent a state similar to 'permanent liminality', as Szakolczai (1998, p.209) suggests.

The fifth question (what do you think about dilapidated-abandoned buildings?) could represent the feelings of residents regarding DABs (as liminal spaces and their consequent liminality) (Stavrides, 2010), that characterise a real or perceived lack of safety, which equates to socio-spatial vulnerability among residents.

The sixth and seventh questions (what are your preferred methods of participation for revitalising historic areas?) and (do you leave your house for a better accommodation option outside historic areas?) could clearly reflect a sense of place identity, as well as levels of social-capital among residents (Behzadfar, 2012a). Such evaluation can lead to measuring spatial liminality type-B by assessing sense of belonging to place (generated by the formation of territoriality and social groupings) and a general understanding of residents' perceptions regarding historic cities (section 3.4.8, Chapter 3).

4.6.4. In-depth interviews

Based on the measuring criteria as discussed in section 3.6 (see Table 3.5) this final data collection procedure becomes complementary to the three types of inquiry as suggested above. Thus, it contains several semi-structured interviews with a variety of stakeholders in historic urban areas. The activity has generated open discussions with representatives from three Iranian government agencies (for policymakers in historic fabrics see section 2.4.6), as well as professionals and practitioners including experienced local builders-developers, architects, Iranian urban scholars, planners, and urban designers regarding historic urban areas in Yazd, Kashan and Isfahan (see Appendix F).

This type of data collection aimed to scrutinise conditions of DABs and liminality inside historic Iranian cities, which can be generated as a result of contemporary socio-spatial planning practices/policies. Hence, interviewees were being asked to explain the aftermath of contemporary planning contexts in historic areas, by addressing several questions pertaining to contemporary programs/policies and their impacts on DABs. Thus, two sets of questions were prepared. The first set targets representatives from several government agencies (policymakers) and the second set addresses professionals, practitioners and developers (see Appendices E-7-2 and E-7-3).

Table 4.6: Table represents the methods of data collection implemented for investigating spatial liminality in historic Iranian cities based on section 3.6 (see Table 3.5)

Aspects of spatial liminality	Proposed measuring criteria for evaluating spatial liminality	Measuring independent variables (2018)
Factual--spatial aspects	Urban accessibility assessment	Assessing vehicular accessibility; sample blocks which are selected for studying in historic Iranian cities should be in relative original condition and not including modern vehicular streets/widened roads
	Analysing current land use	Percentage of all refugee settlement fabrics per block (m2) Percentage of dilapidated abandoned buildings per block 2008--2018
Demographic aspects	Economic vulnerability assessment	Percentage of new settlers per block
		Percentage of leaseholders per block
		Percentage of low-income, disadvantaged communities (i.e. households in which the heads of families are labourers or unemployed) per block
		Percentage of homes which need urgent repairs per block
		Percentage of foreign refugees per block
Attitudinal aspects	Social-spatial vulnerability assessment	Percentage of residents who perceive cultural-hygienic problems
		Percentage of residents who perceive a lack of civic services and infrastructure
		Percentage of residents who see the existence of dilapidated, abandoned or deteriorated buildings as a chronic problem
	Physical and social safety assessment of local communities	Percentage of residents who are concerned about the lack of public safety
		Percentage of residents who see foreign refugees as a danger
		Percentage of residents who see the existence of dilapidated abandoned buildings as a danger
		Percentage of residents who see narrow depopulated roads as a danger
	Assessing sense of belonging to place	Percentage of residents who are interested in exchanging their property with other residential options (of equal value) outside historic areas
		Percentage of residents who put their property up for sale
	Assessing community	Percentage of residents who perceive the lack of vehicular accessibility-narrow roads as a local problem

	perceptions regarding historic cities	Percentage of people who perceive the historic city as a cheap housing option, so have chosen to settle in such low-quality urban areas
Socio-spatial planning context	Assessing the aftermath of current policies, strategic planning/development inside historic cities of Iran	Conducting semi-structured interviews among actors in the three historic cities (see Appendices E-7-2 and E-7-3 for interview questions)

4.7. Analytical tools and methods

This section represents the analytical logic upon which spatial liminality is scrutinised against the extent of DABs in each of the 15 surveyed urban blocks in Yazd, Kashan and Isfahan. The analysis is fundamentally based on four types of inquiries necessary for understanding spatial liminality in historic areas (see section 3.6) where the effects of spatial liminality need to be investigated via at least four dimensions, namely spatial (factual), demographic and attitudinal enquiry, and by analysing current socio-spatial planning context.

4.7.1. Spatial (factual) analysis

Spatial analysis examines the possible relationships between percentages of DABs per block in 2018 against four independent variables that could indicate conditions of spatial liminality including: (1) the extent of DABs (i.e. association between old and new DABs), (2) extent of refugee settlements (i.e. spatial liminality type-A), (3) extent of all Iranian local settlements (i.e. spatial liminality type-B), and (4) extent of newly-built houses (i.e. value of land in historic areas). The factual analysis also discloses spatial adjacencies between DABs and refugee settlements in historic cities of Iran in 2018. Notably, ArcGIS software is utilised for calculating current areas of DABs as presented in this research project (see Appendices A and B).

Data trimming is the process of eliminating or excluding extreme values, or outliers, from a dataset (Allen, 2017). Data trimming as utilised in spatial analysis for a number of reasons can be accomplished by taking various approaches. In this case, outliers are defined as urban blocks that have shown abnormal qualities in more than 75% of occasions in each dataset.

4.7.2. Demographic analysis

Demographic analysis examines the possible relationships between the extent of DABs in 2018 against several independent variables of spatial liminality type-A in historic cities as previously discussed (section 4.6.3). Independent variables have measured: (1) the population of refugees, (2) the population of new-settlers, (3) the proportion of leaseholders, (4) the percentage of highly deteriorated residences, and (5) the population of low-income disadvantaged communities per urban block. In the current analysis, SPSS software is exploited for tabulating and analysing demographic proportions in each urban block (see Appendix C).

The analysis is conducted at three levels: (1) among all residents, (2) separately among Iranians, and (3) refugee residents. At the second and third levels “data clustering and segmentation techniques” are utilised to extrapolate analysis and relevant outcomes.

During descriptive analysis, each individual in a multivariate sample may be represented by a point in a multidimensional Euclidean space. Cluster analysis, in this case, attempts to group these points into separate sets which correspond to marked features of the sample (Everitt, 1979). It is assumed that data points which are in the same group should have similar properties and/or features, while data points in different groups should have different properties and/or features (Gower, 1967).

Clustering in this research is a useful technique for statistical data analysis based on connectivity distance between case studies (i.e. 15 selected urban blocks) that have shown similar or closer yields of DABs. In this case, during the attitudinal and demographic analysis of cases in both Yazd and Kashan, six surveyed urban blocks were clustered in three groups as blocks with the highest, medium and lowest percentage of DABs (see Chapter 6).

4.7.3. Attitudinal analysis

The analysis examines attitudinal aspects of spatial liminality type-B in 15 cases within three historic Iranian cities (as discussed in section 3.4.8, Chapter 3) including: (1) a sense of belonging to place, (2) a sense of place-satisfaction, (3) social capital among residents, (4) a sense of social-spatial safety among participants, (5) the perceptions of residents regarding proximity to DABs, and (6) a sense of place-identity among residents.

Several inquiries were randomly conducted amongst residents, as discussed in section 4.6.3. The questions extracted: (1) the proportion of communities who have immigrated to historic areas for cheaper housing options, (2) the percentage of residents’ concerns regarding local and

large-scale urban problems in historic areas, (3) the percentage of residents who are interested in participating in regenerating historic neighbourhoods, (4) the percentage of residents who expressed their concerns regarding the lack of socio-spatial safety in neighbourhoods, (5) the existence of DABs, and (6) the percentage of residents who are interested in swapping houses with external dwellings/properties (of equal value) outside historic areas. In the current analysis, SPSS software is exploited for tabulating and analysing attitudinal proportions in each urban block (see Appendix D).

The analysis is conducted at three levels: (1) among all residents, (2) separately among local and (3) refugee residents. In the second and third levels, “data clustering and segmentation techniques” are used to analyse results in Yazd and Kashan within three segments, including three couples of urban blocks in each city, which have yielded highest, medium and lowest percentages of DABs, and similar to what was described regarding demographic analysis (section 4.7.2, see also Chapter 7).

4.7.4. Socio-spatial planning context analysis

By conducting in-depth interviews amongst several qualified expert interviewees (as discussed in section 4.6.4), a pile of multi-factorial information was produced by this research. For analysing such information, the current research implements a qualitative ‘cutting and sorting’ procedure, which involves identifying quotes or expressions that seem somehow important, and then arranging them into piles of things that go together (Ryan & Bernard, 2003, P.91).

As a result of applying cutting and sorting techniques, three significant themes were developed: (1) the formation of DABs (cause and effect), (2) government agencies and current revitalisation policy-projects in historic cities (describing strengths, weaknesses and recommendations), and (3) negative aspects of current revitalisation practices in historic cities (see section 8.4, Chapter 8). The results of such thematic comparison must go through critical narrative analysis (Riessman, 1993). Such analysis forms the backbone of discussion, which later supports the findings obtained by other analytical methods including spatial (factual), demographic and attitudinal.

4.7.5. Advanced analysis and triangulation

Once descriptive analysis was conducted based on outcomes (sections 4.7.1 to 4.7.4), at the next level, inferential analysis was devised, which culminates in the triangulation of outcomes and forms the discussion and application (see Chapters 9 and 10). Thus, Pearson's correlation test was run to validate the relationship between the proportion of DABs (in 2018) against

factual aspects of spatial liminality (section 4.7.1), in 15 sample blocks of historic Kashan, Yazd and Isfahan. To do so, the percentages of DABs in each urban block are interpreted as ordinal variables (in five clusters of very high, high, medium, low and very low) and analysed in SPSS.

Several Chi-tests of independence are also run to monitor mathematical relationships between the proportion of DABs (in 2018) against attitudinal-demographic aspects of spatial liminality in 15 case studies (see Chapter 9). To do so, the percentage of DABs in each urban block is interpreted to ordinal variables at five levels including: (1) very high, (2) high, (3) medium, (4) low, and (5) very low, which are analysed in conjunction with the already established attitudinal/demographic database in SPSS.

The whole inquiry leads to the triangulation of all four types of interpretation (as presented in Part II) and finally shapes a discussion for understanding the properties of DABs, which consequently offers a theoretical tool for revitalising historic cities via the lense of spatial liminality type-B (Chapter 9).

4.8. Research ethics

This research includes field studies, street surveys and interviews. As a result, ethics approval was sought, involving human participants (see Appendix E). The ethics application was approved by the Office of Research Ethics, Compliance and Integrity, The University of Adelaide, and interpreted as ‘involving no more than low risk for research participants’, with ethics approval number H-2018-047 (Appendix E-1). The approved document was fully executed during the implementation of field research (March-May 2018) in three historic cities of Iran (Appendix E-2). Accordingly, a field study adverse event and general risk assessment protocol were prepared for all participants in this research (Appendix E-8)

4.9. Summary

This chapter has outlined methods to explore the correlation between spatial liminality and the extent of DABs (between 2008 and 2018) in three historic cities of Iran. It elaborated qualitative and quantitative aspects of two major research questions: (RQ1) “to what extent could spatial liminality be identified and monitored against the formation of physical deteriorations in historic cities of Iran?” and (RQ2) “to what extent can spatial liminality, as an analytical tool, facilitate the revitalisation of historic urban fabrics in Iran?”

The chapter explained how the research was conducted through mixed methods by implementing several case studies. It illustrated the logic upon which the cases were selected

and elaborated how data was collected including pilot-studies, street surveys, in-depth interviews and field studies. Research ethics were highlighted along with several methods of data collection, which required personal encounters between the researcher and the public.

The chapter also detailed four methods of data analysis (spatial, demographic, attitudinal investigations, as well as scrutiny of the socio-spatial planning context), which culminated in discussion (Chapter 9), including several inferential analyses and triangulation of outcomes. The research has been identified as both exploratory and interpretive; thus, a constructivist notion of research is formulated and further discussed in more detail in Chapters 5, 6, 7 and 8 in Part II.

Part II: Identification of spatial liminality

in historic Iranian cities

So far, Part I of this thesis has discussed the research context, background literature and mixed methods to evaluate and analyse spatial liminality in historic cities of Iran. Correspondingly, Part II studies the correlations between spatial liminality and the proportion of DABs (as elaborated in section 4.2, Chapter 4) that should be empirically identified, measured and compared in several historic case studies.

Therefore, by implementing methods as proposed in Chapter 4 (Methodology), Part II of this thesis explains the data collection procedures and their consequent results. The descriptive analysis provides a direct response to the central question of the research, where there are in-depth inquiries on the correlation between DABs and influential factors in the formation of spatial liminality.

Part II is presented in four chapters, as previously elaborated in section 3.6 in Chapter 3 regarding (1) spatial (factual), (2) demographic, (3) attitudinal, and (4) socio-spatial aspects of the liminal life in historical cities.

Part II is scrutinising socio-spatial vulnerability (through the lense of spatial liminality) in fifteen selected urban blocks inside seven urban tissues, in three historic cities. The method of selecting case studies as deliberated in Section 4.5.4, (Chapter 4) thoroughly covers the maximum variation of DABs inside sample blocks of Kashan, Yazd and Isfahan between 2008-2018.

Chapter 5: Spatial (Factual) Results and Analysis



Dilapidated abandoned urban fabrics in Kashan, 2018
(Source: author)

5.1. Introduction

This chapter investigates spatial liminality in conjunction with empirical references in 15 urban blocks. The spatial (factual) inquiry has collated data by conducting field inspections and street surveys, (see section 4.6.2, Chapter 4). The chapter begins by scrutinising the condition of land and land use in selected urban blocks.

Based on such records, this chapter discloses results regarding the relationship between the extent of DABs (as surveyed in 2018) versus four independent factual-liminal variables. Such indicators include: (1) the ratio of refugee settlements fabrics, which examines spatial liminality type-A, (2) the ratio of all local-Iranian settlements, which examines spatial liminality type-B relevant to a sense of community, (3) the proportion of newly-built homes that reflects land value, and (4) the ratio of DABs in the 2008 survey, which investigates the effects of older DABs on the formation of future DABs (in 2018).

Thus, to understand the correlation between the percentage of DABs and the formation of spatial liminality, each urban block is studied as an independent entity, existing within its larger historic urban tissue. The analysis utilises graphs and bar charts to illustrate factual-spatial conditions of liminality inside sample blocks.

To do so, each spatial-factual independent variable is juxtaposed on a graph which shows urban blocks proportionately arranged based on levels of DABs, presented from highest to lowest ratio per block (as surveyed in 2018 by the researcher). Such graphical juxtapositions provide empirical grounds for independent analysis. As an analytical technique, data trimming is used where extreme values or outliers are excluded from a dataset. In this case, outliers are defined as urban blocks that have shown an abnormal quality in more than 75% of occasions in each dataset.

The results of Chapter 5 along with Chapters 6,7 and 8 in Part II are used to propose spatial liminality as a new epistemological tool in urban design, referring to social-spatial vulnerability that is almost impossible to observe by image-based Lynchian methods.

5.2. An overview of the current condition of land use inside historic cities

As discussed in section 3.6 in Chapter 3, an inquiry into the current conditions of land use could provide the most reliable source of information for understanding factual aspects of spatial liminality in a historic city. Respectively, by exploring the current condition of land use as surveyed inside the three case studies, on average historic Kashan has yielded the largest ratio

(36%) of DABs per block among other cases, whilst in historic Yazd and Isfahan this proportion was respectively 34% and 29% (Appendix B-1).

As the primary evidence for the existence of spatial liminality type-A in three historic cities, it is confirmed that on average 5% of surveyed areas in Kashan are recognised as foreign refugee settlements.¹ This liminal proportion respectively reached 8% in historic Yazd but declined to just 1% in historic Isfahan. This considerable variance in Isfahan could relate to a stronger economy regarding price of land and properties in more populated cities (see Table 4.4, Chapter 4).

Such correlation between the higher value of land and smaller extent of DABs can be reconfirmed regarding the surveyed blocks of historic Isfahan that have accommodated the most significant proportion (16%) of newly-built homes (structures less than five years old), far ahead of Yazd and Kashan, which respectively lodged only 7% and 11% of newly-built structures (Figure 5.1).

Nonetheless, urban areas occupied by all local Iranian residents can also be seen as a representation of social groups (who have not yet left such areas), that reflect spatial liminality type-B in historic neighbourhoods. Accordingly, in Isfahan, Yazd and Kashan, respectively 70%, 58% and 61% of local Iranian residents are living in historic areas (categorised as active urban areas² in Appendix B-1), that represent higher levels of spatial liminality type-B in larger cities, such as Isfahan, and can be also relevant to higher land value in more populated urban areas (Figure 5.1).

¹ Socio-spatial interactions/interconnections between residential areas that form a larger cluster of refugee settlements are outside the scope of this research.

² Active urban areas in this chapter are conceptualised as areas accommodated by all Iranians or local residents. It equates with all historic areas except DABs and refugee settlement fabrics.

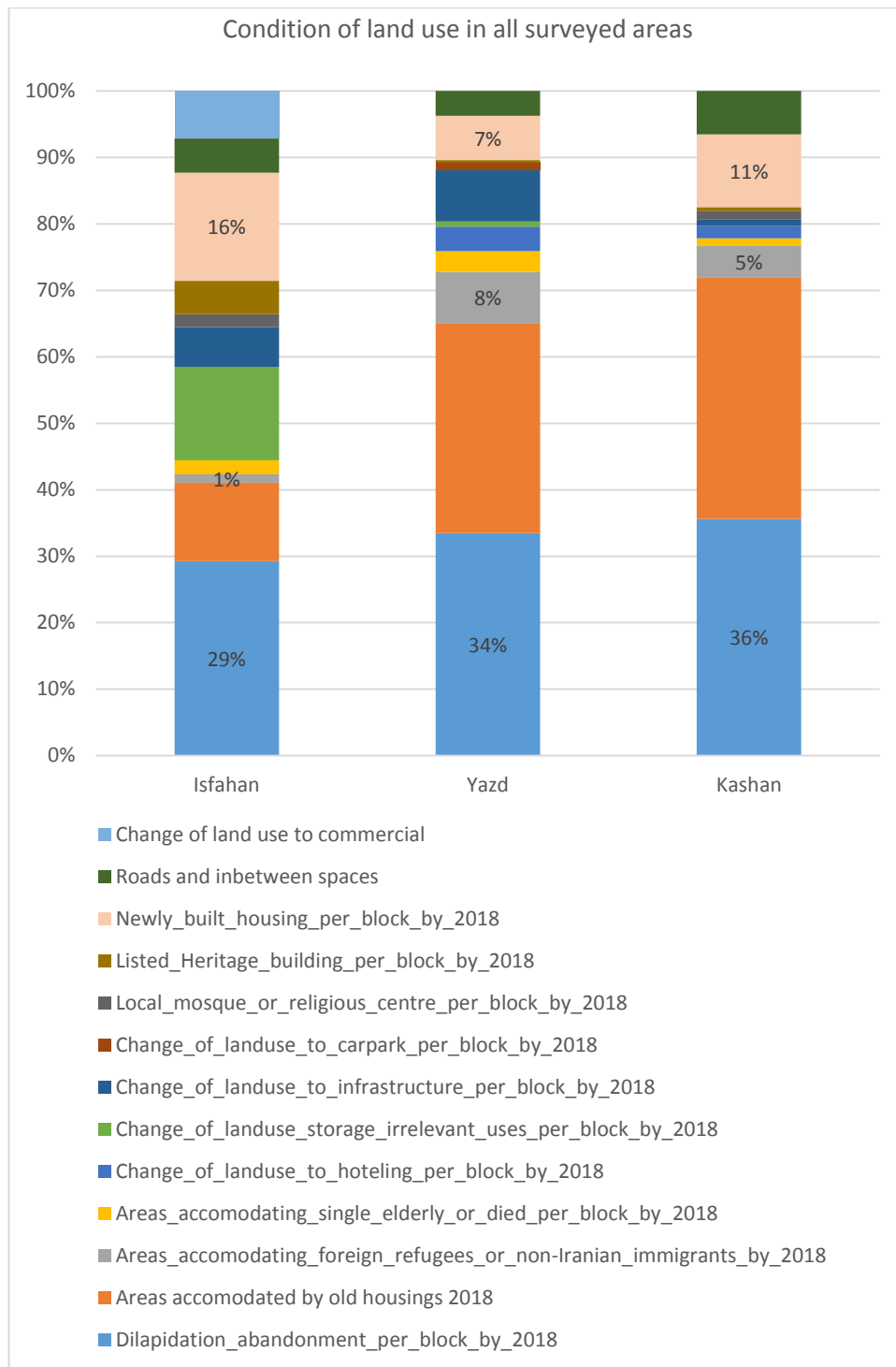


Figure 5.1: Overall conditions of land use inside the surveyed sample blocks of three historic cities in Iran, 2018 (Appendix B-1)

5.2.1. Kashan

In Darb-i-Isfahan (the urban tissue with a higher ratio [43%] of DABs) 48% of urban spaces are occupied by all local Iranian residents as active urban areas (Appendix B-2), while foreign refugees only accommodate 9% of all areas. In Mohtasham (the urban tissue with a medium

ratio [34%] of DABs) 64% of urban spaces are occupied by all local Iranian residents (as active urban areas), while foreign refugees accommodate only 2% of all areas. In Posht-i-Mashhad-i-paeen (the urban tissue with the lowest ratio [%29] of DABs) 71% of urban spaces are occupied by all local Iranian residents, while foreign refugees accommodate 3% of all areas. Additionally, newly-built homes covered 6%, 11% and 16% of whole tissue areas respectively in Darb-i-Isfahan, Mohtasham and Posht-i-Mashhad-i-paeen (Figure 5.2).

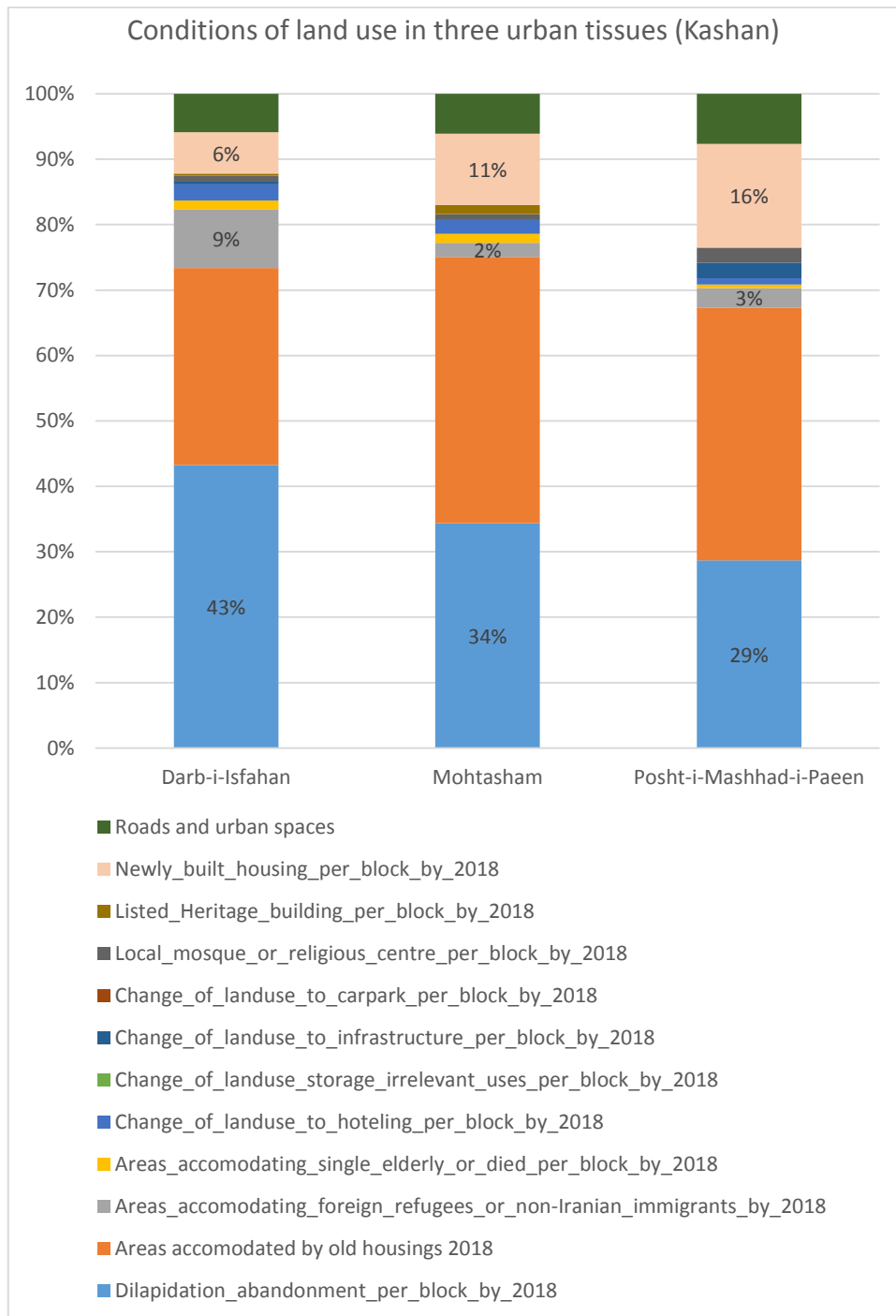


Figure 5.2: Conditions of land use inside three urban tissues of historic Kashan by 2018 (Appendix B-2)

Darb-I-Isfahan urban tissue (sample blocks B-1 and B-2): By examining current conditions of land use in B-1 (the block with a higher ratio [45%] of DABs) it becomes evident that areas accommodated by refugees or non-Iranian migrants cover up to 12% of the block, while active urban areas (occupied by all local Iranian residents) form 43% of the block (Appendix B-3). The change in land use to hoteling has also shaped 5% of the block, which could be considered a significant change since 2008. Nonetheless, in B-2 (i.e. the block with a lower ratio [42%] of DABs) it becomes evident that areas accommodated by refugees or non-Iranian immigrants have covered up to 7% of the block, while all local Iranian residences form 51%. Besides, the change in land use to hoteling has shaped only 1% of B-2 between 2008 and 2018. Newly-built homes have also accommodated 6% and 7% respectively in B-1 and B-2 (Figures 5.3 and 5.4).

Mohtasham urban tissue (sample blocks B-15 and B-16): By examining current conditions of land use in B-15 (i.e. the block with a higher ratio [44%] of DABs) it becomes evident that areas accommodated by refugees or non-Iranian immigrants have covered only 2% of the block, while active urban areas (occupied by all local Iranian residents) form 54% of the block (Appendix B-3). Nonetheless, in B-16 (the block with a lower ratio [21%] of DABs) areas accommodated by refugees or non-Iranian migrants also form 2% of the block, while all local Iranian settlements (known as active urban areas) form 77% of the block. Additionally, the change in land use to hoteling makes up 5% of the area of B-16, which could be considered a significant change between 2008 and 2018. Nevertheless, newly-built homes accommodate 12% and 9% of all areas respectively in B-15 and B-16 (Figures 5.3, 5.5 and 5.6).

Posht-i-Mashhad-i-Paeen (selected blocks B-3 and B-5): By examining current conditions of land use in B-3 (i.e. the block with a higher ratio [33%] of DABs) it becomes evident that areas accommodated by refugees or non-Iranian migrants covers 4% of the block, while local Iranian residents occupy 63%. Nonetheless, in B-5 (the block with a lower ratio [19%] of DABs) areas accommodated by refugees or non-Iranian migrants form only 2% of the block, while all local Iranian residents form 79%. Newly-built homes also cover 12% and 27% of all areas respectively in B-3 and B-5 (Figures 5.3 and 5.7).

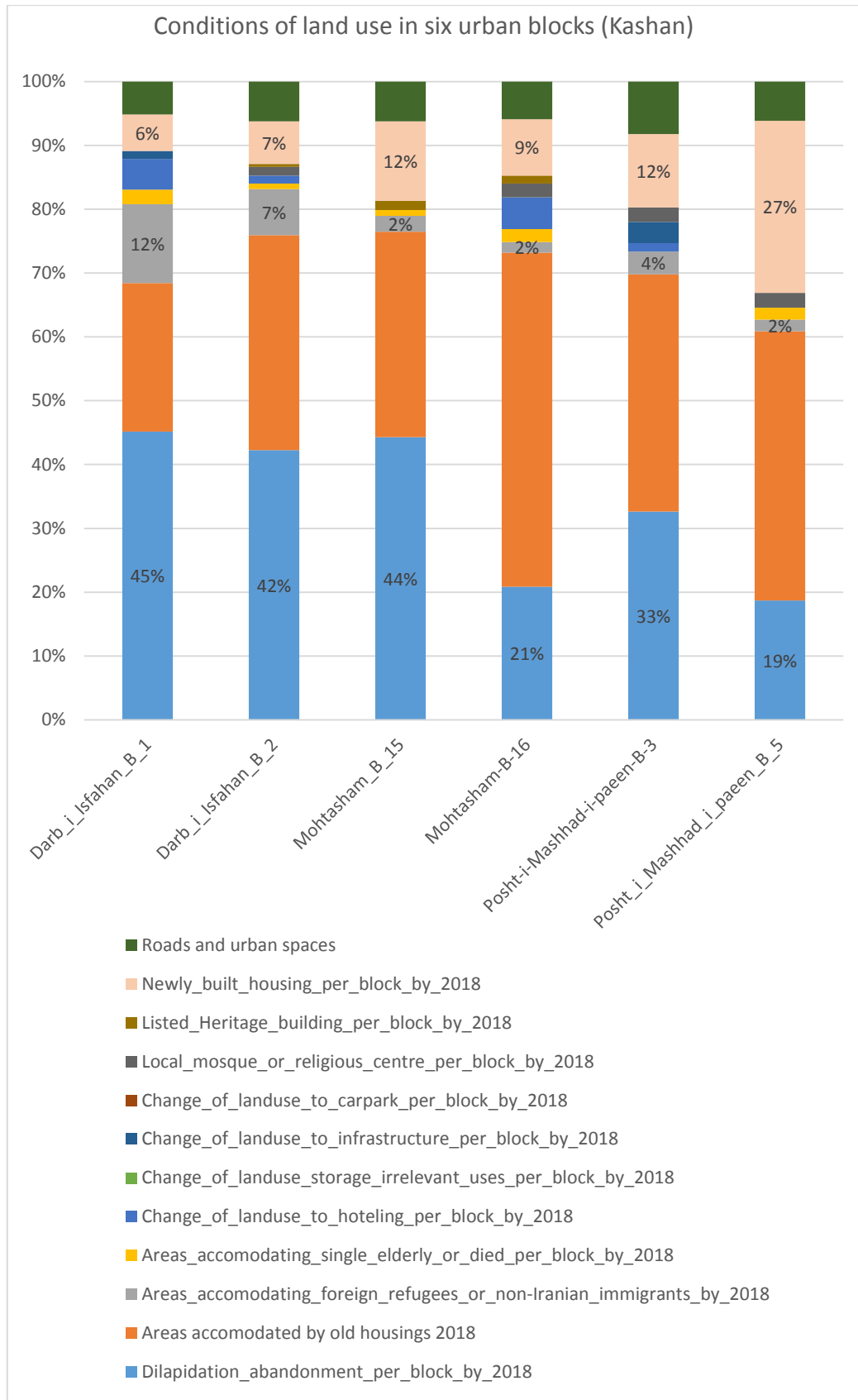


Figure 5.3: Comparing the condition of land use inside six sample blocks of historic Kashan by 2018 (Appendix B-3)

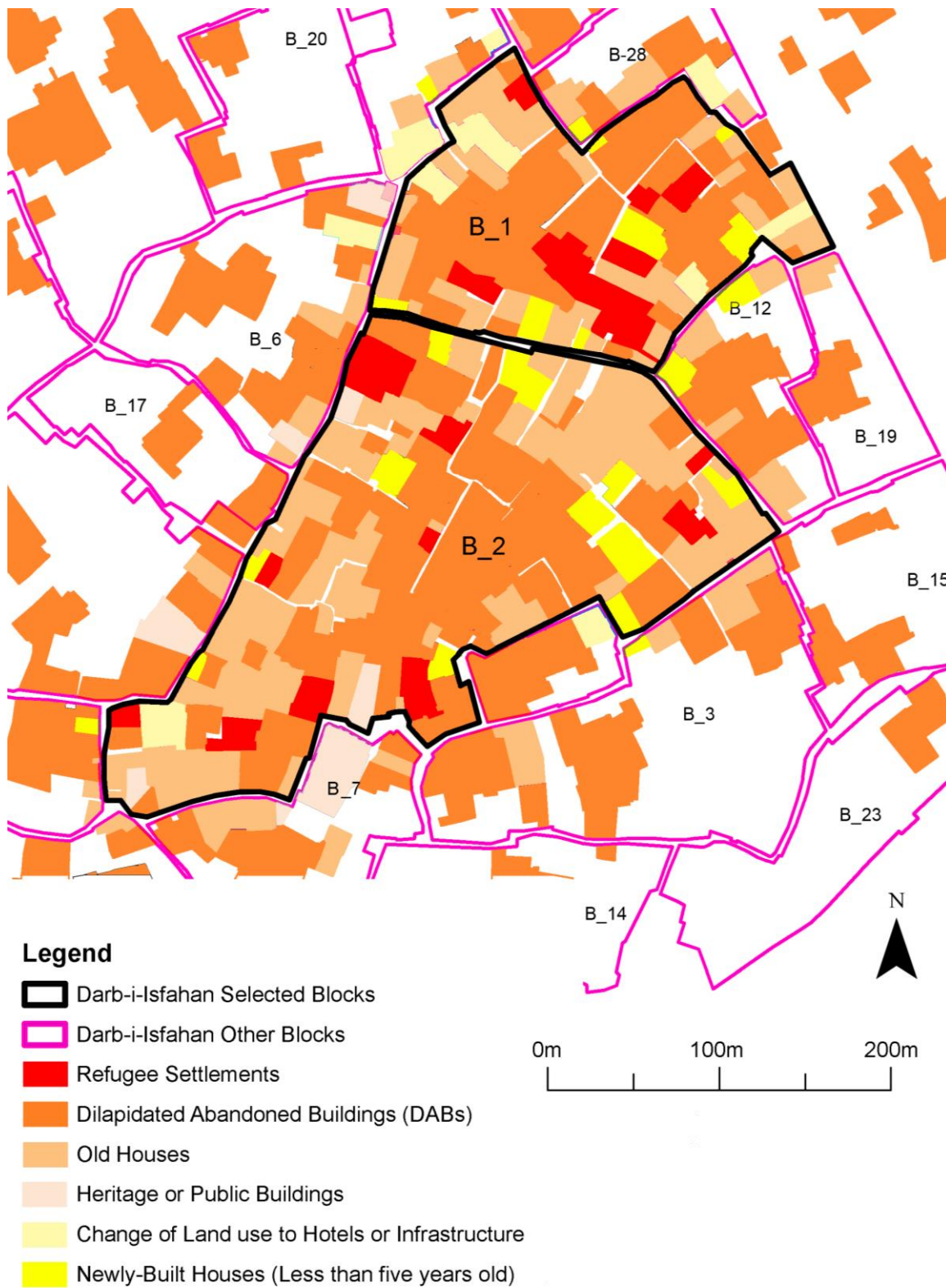


Figure 5.4: Land use plan, B-1 and B-2 sample blocks in Darb-i-Isfahan urban tissue, historic Kashan, Iran 2018 (Appendix B-3)

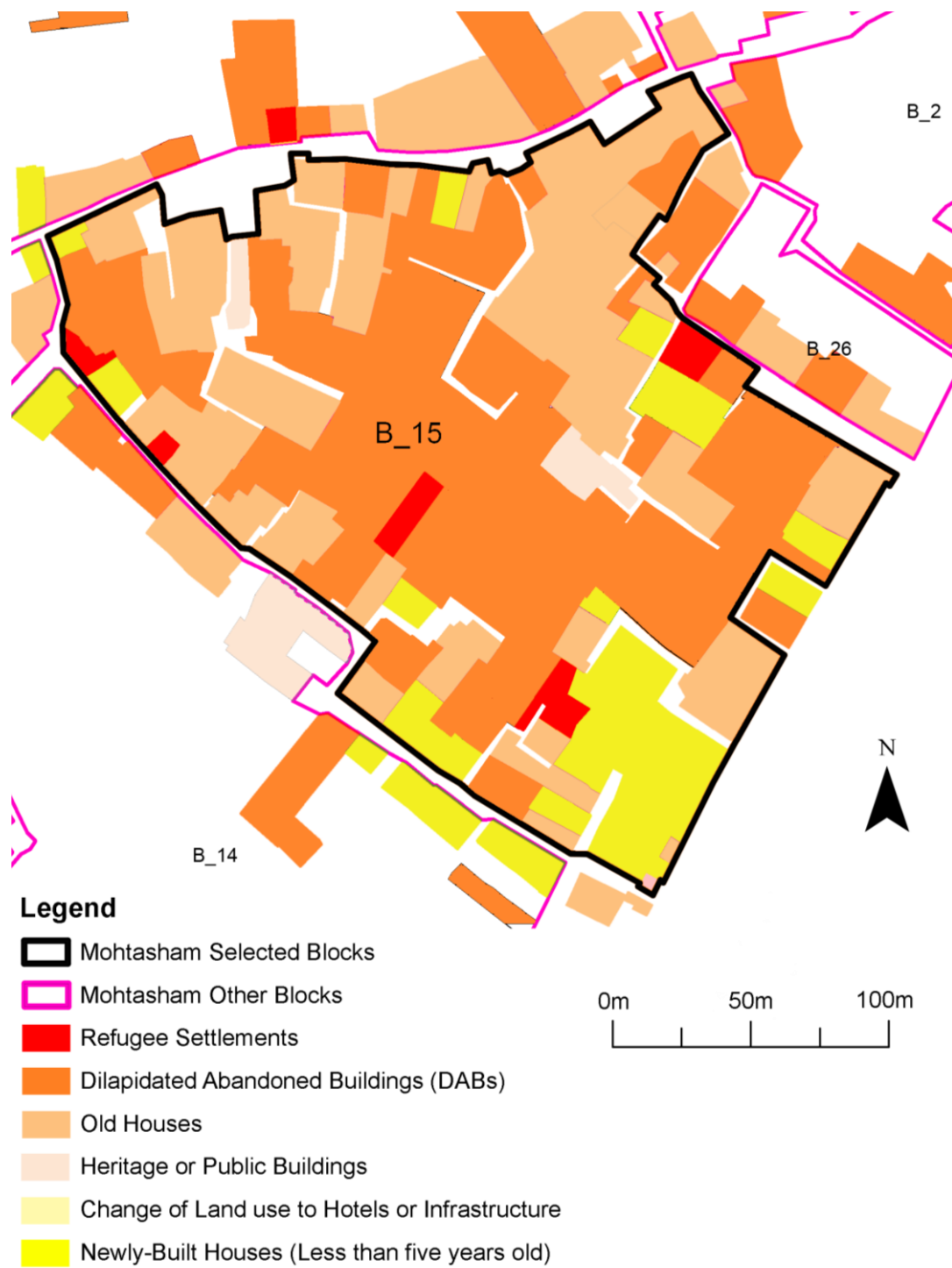


Figure 5.5: Land use plan, B-15 sample block in Mohtasham urban tissue, historic Kashan, Iran 2018 (Appendix B-3)

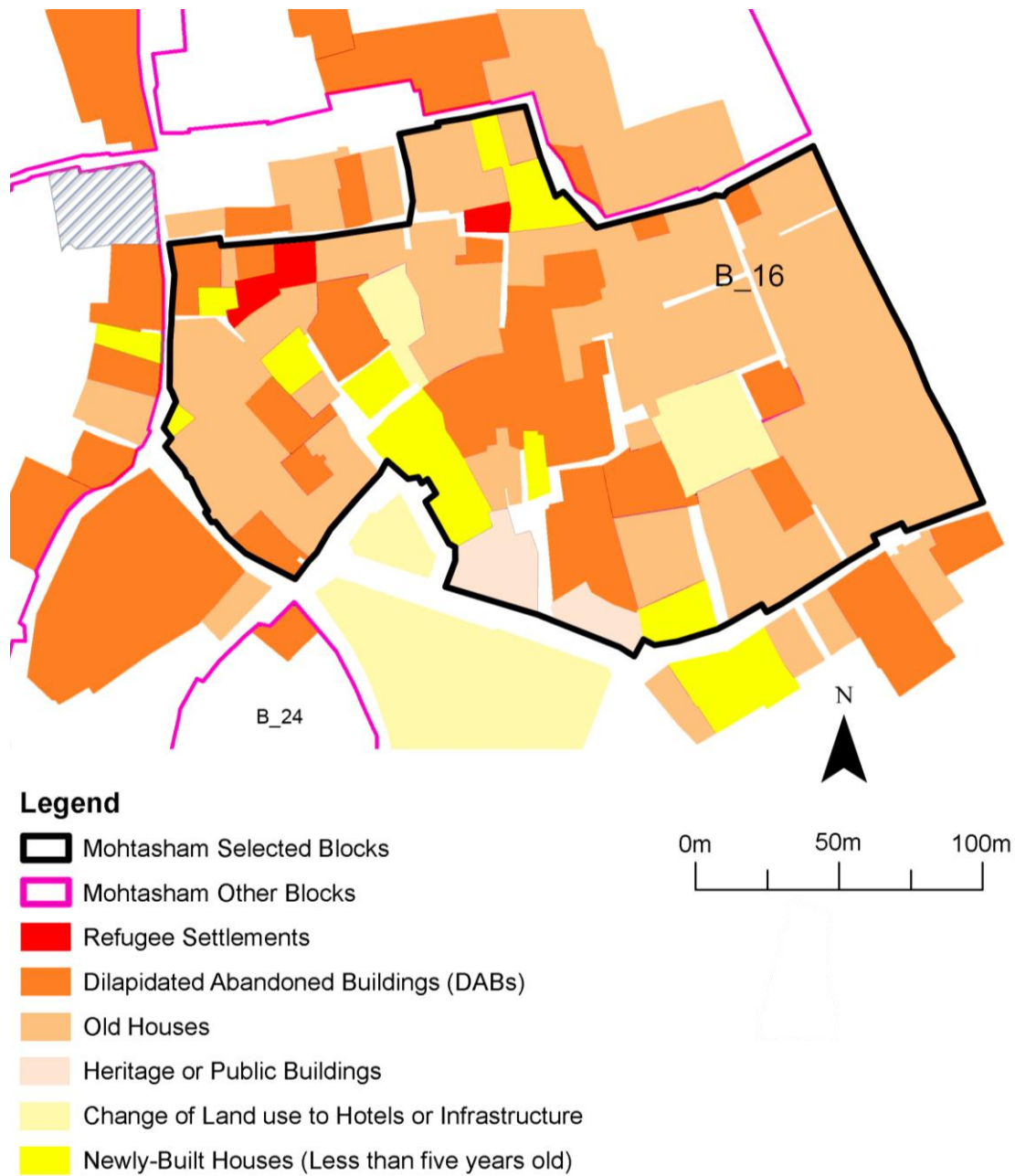


Figure 5.6: Land use plan, B-16 sample block in Mohtasham urban tissue, historic Kashan, Iran 2018 (Appendix B-3)

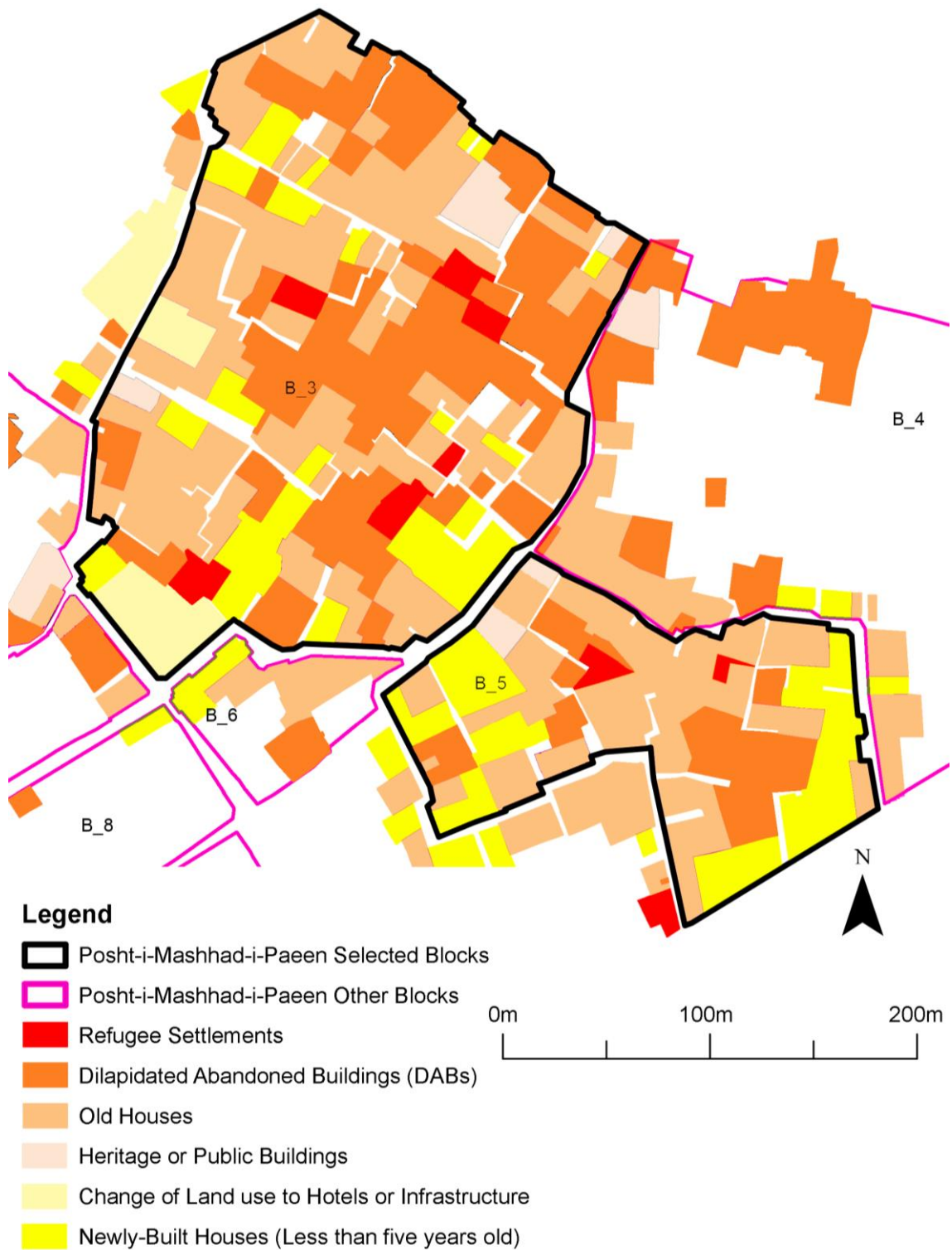


Figure 5.7: Land use plan, B-3 and B-5 sample blocks in Posht-i-Mashhad-i-Paean urban tissue, historic Kashan, Iran 2018 (Appendix B-3)

5.2.2. Yazd

Inside the three selected urban tissues of Yazd, the social-spatial equations which affect change in land use can be perceived as more complex, compared to Kashan. For instance, in Godal-i-Mosalla (the urban tissue with a higher ratio [40%] of DABs) 51% of urban spaces are occupied by all local Iranian residents (specified as active urban areas in Appendix B-4), while foreign refugees or non-Iranian immigrants accommodate 9% of all areas. Nonetheless, the change in land use to hoteling forms 7% of all land area in Godal-i-Mosalla.

In Dolat-abad (the urban tissue with a medium ratio [34%] of DABs) 65% of urban spaces are occupied by local Iranian residents (as active urban areas), while only 1% are accommodated by foreign refugees, which seems to be an anomaly and will be further investigated in this section.

Consequently, in Gonbad-i-sabz (the urban tissue with the lowest ratio [%24] of DABs) 64% of land area is active urban area, occupied by all local Iranian residents, while foreign refugees accommodate an unexpected ratio of 12%. Nonetheless, the change in land use to infrastructure forms 25% of land area in Gonbad-i-sabz, which could be seen as a significant transformation in urban tissue. Additionally, newly-built houses cover 1%, 15% and 8% of the tissue areas respectively in Godal-i-Mosalla, Dolat-Abad and Gonbad-i-Sabz (Figure 5.8).

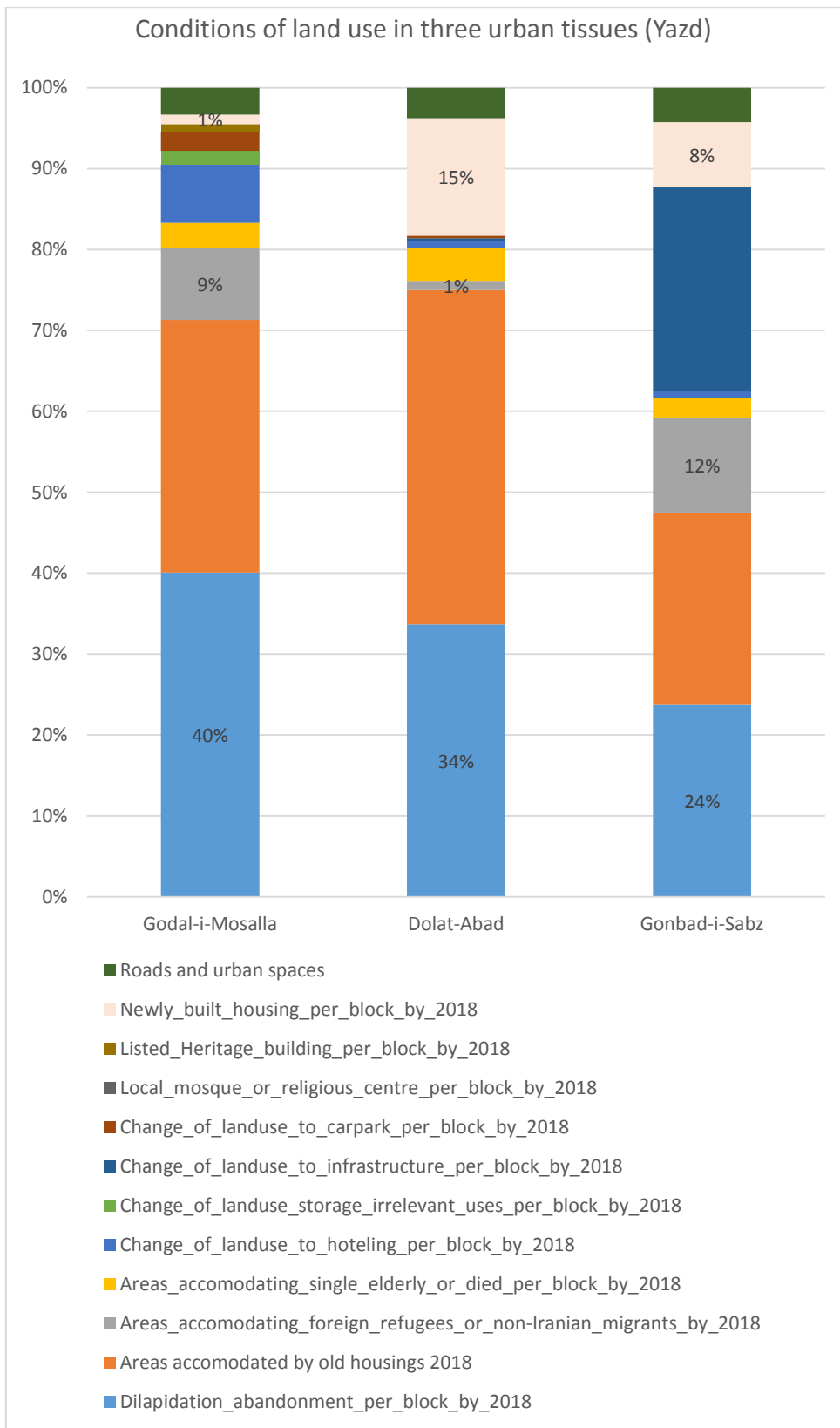


Figure 5.8: Comparing conditions of land use inside three urban tissues of historic Yazd by 2018 (Appendix B-4)

Godal-i-Mosalla urban tissue (selected blocks B-43 and B-30): By examining current conditions of land use in B-43 (i.e. the block with a higher ratio [44%] of DABs) this became distinguishable that areas accommodated by all refugees or non-Iranian migrants cover 14% of the block, while local Iranian residents occupy 42% (indicated as active urban areas in Appendix B-5). However, newly-built houses cannot be identified in this urban block. Furthermore, about 6% of all areas have been transformed into hoteling in B-43. Nonetheless, in B-30 (the block with a lower ratio [36%] of DABs) areas accommodated by refugees or non-Iranian immigrants form only 4%, while local Iranian residents occupy 60%. Nonetheless, about 8% and 2% of all urban areas in B-30 has been respectively transformed to hoteling and newly-built houses between 2008 and 2018 (Figures 5.9 and 5.10).

Dolat-abad urban tissue (selected blocks B-28 and B-9): By scrutinising current conditions of land use in B-28 (i.e. the block with a higher ratio [36%] of DABs per block) it becomes evident that areas accommodated by refugees or non-Iranian immigrants cover 0% of the block, while local-Iranian settlements (known as active urban areas in Appendix B-5) form 64%. This anomaly can be explained by the fact that since 2015 foreign refugees have been forced to evacuate B-28, as clarified during street surveys and interviews by the researcher. Nonetheless, in B-9 (the block with a lower ratio [32%] of DABs) areas accommodated by refugees or non-Iranian immigrants form only 2% of the block, while all local Iranian residents in active urban areas occupy 66% of B-9. Newly-built houses also cover 5% and 21% of all areas respectively in B-28 and B-9 (Figures 5.9 and 5.11).

Gonbad-i-sabz urban tissue (selected blocks B-8 and B-47): By investigating current conditions of land use in B-8 (i.e. the block with a higher ratio [39%] of DABs) it was apparent that areas accommodated by refugees or non-Iranian immigrants cover a huge proportion (20%) of the whole block, while all local Iranian residents in active urban areas occupy about 41%. Roads and thoroughfares also form approximately 7% of all areas in B-8, which makes it unique among other sample blocks. Nonetheless, in B-47 (the block with a lower ratio [13%] of DABs) areas accommodated by refugees or non-Iranian immigrants form only 6% of the block, while all local Iranian residents in active urban areas reside in 81% of land on the block. The change in land use to infrastructure forms 44% of all land area in B-47, which could be considered an unprecedented change. Newly-built houses cover 11% and 6% of all areas respectively in B-8 and B-47 (Figures 5.9, 5.12 and 5.13).

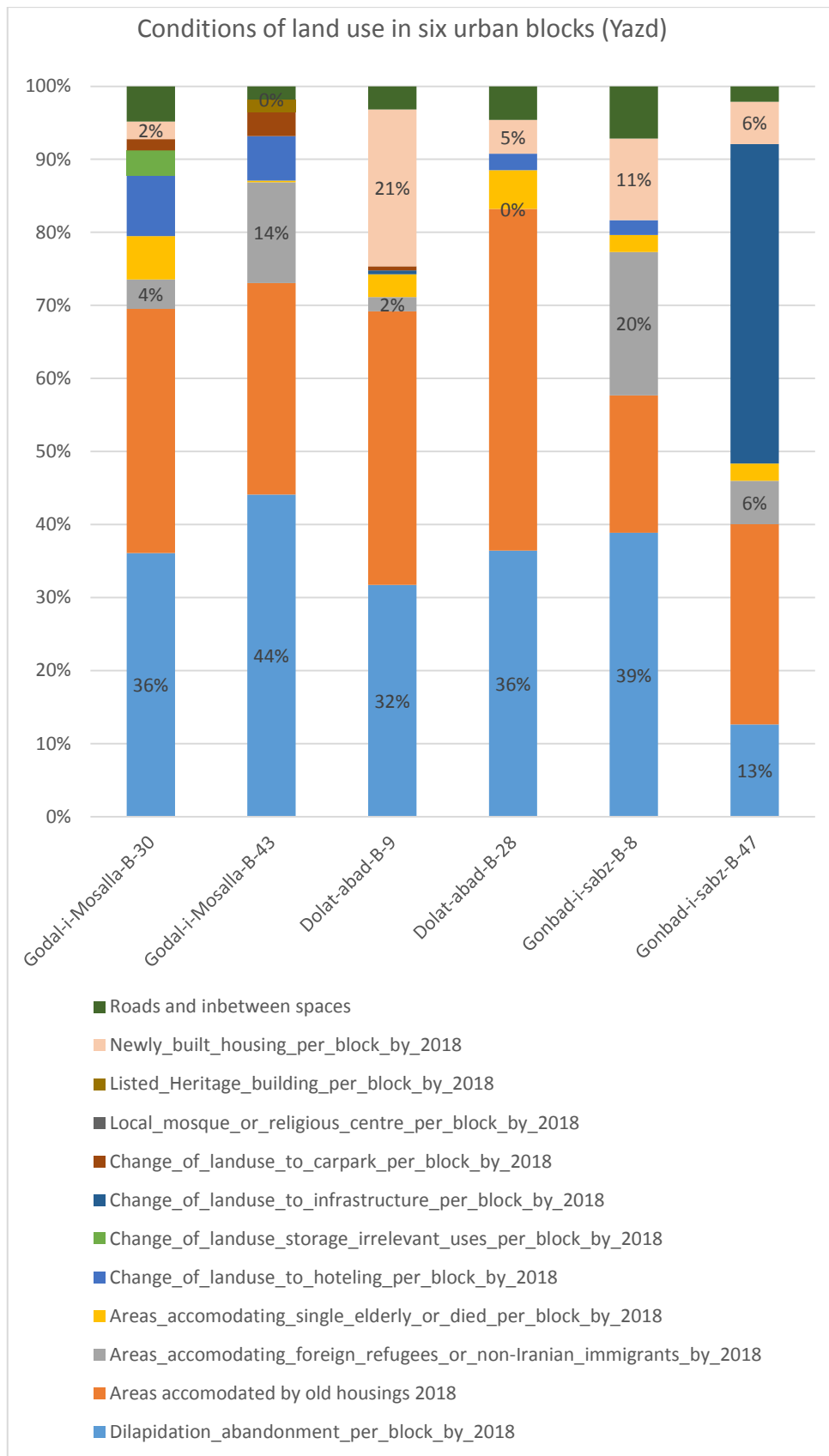


Figure 5.9: Comparing conditions of land use inside six urban blocks in historic Yazd by 2018 (Appendix B-5)

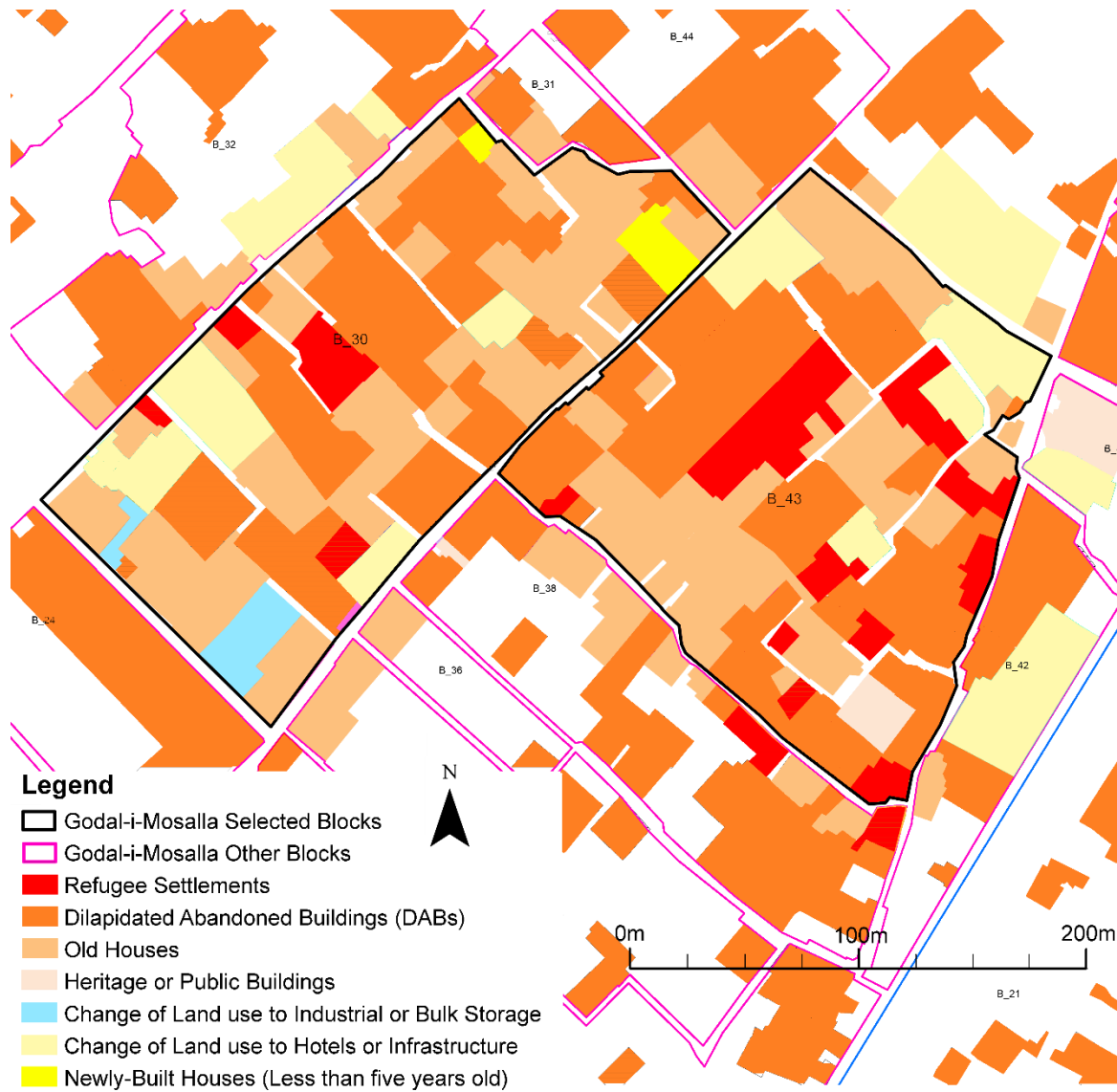


Figure 5.10: Land use plan, B-30 and B-43 sample blocks in Godal-i-Mosalla urban tissue, historic Yazd, Iran 2018 (Appendix B-5)

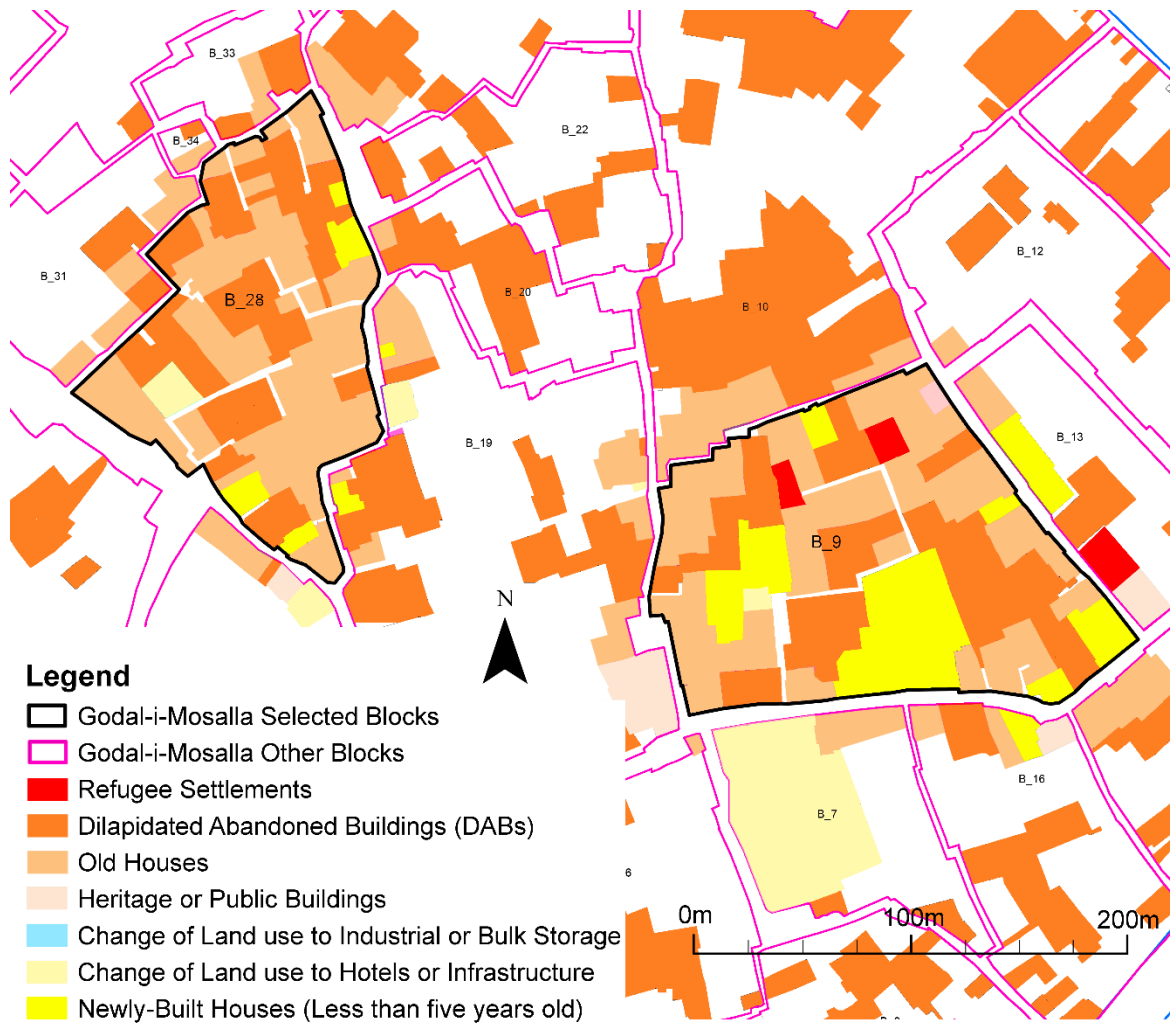


Figure 5.11: Land use plan, B-28 and B-9 sample blocks in Dolat-abad urban tissue, historic Yazd, Iran 2018 (Appendix B-5)

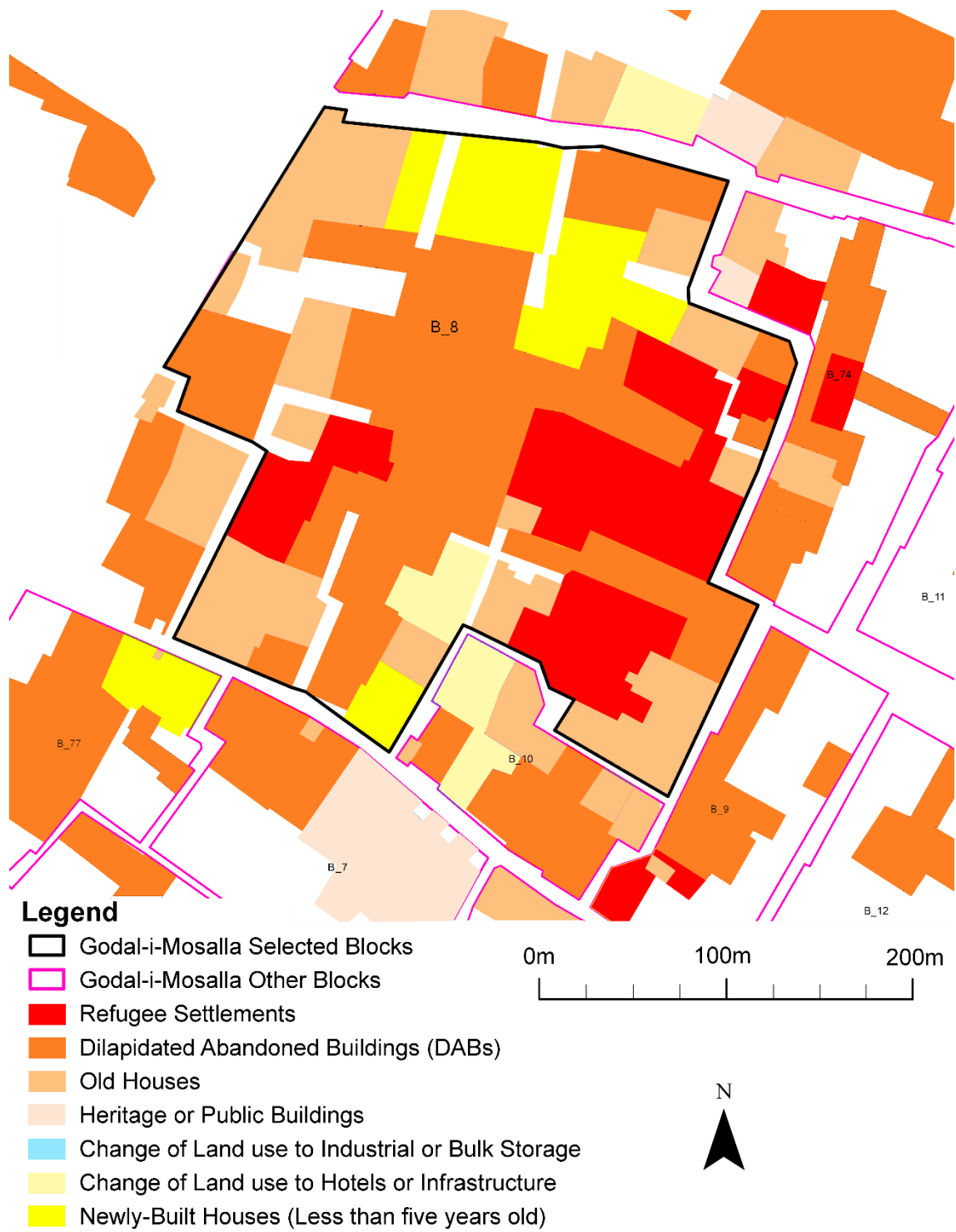


Figure 5.12: Land use plan, B-8 sample block in Gonbad-i-sabz urban tissue, historic Yazd, Iran 2018 (Appendix B-5)

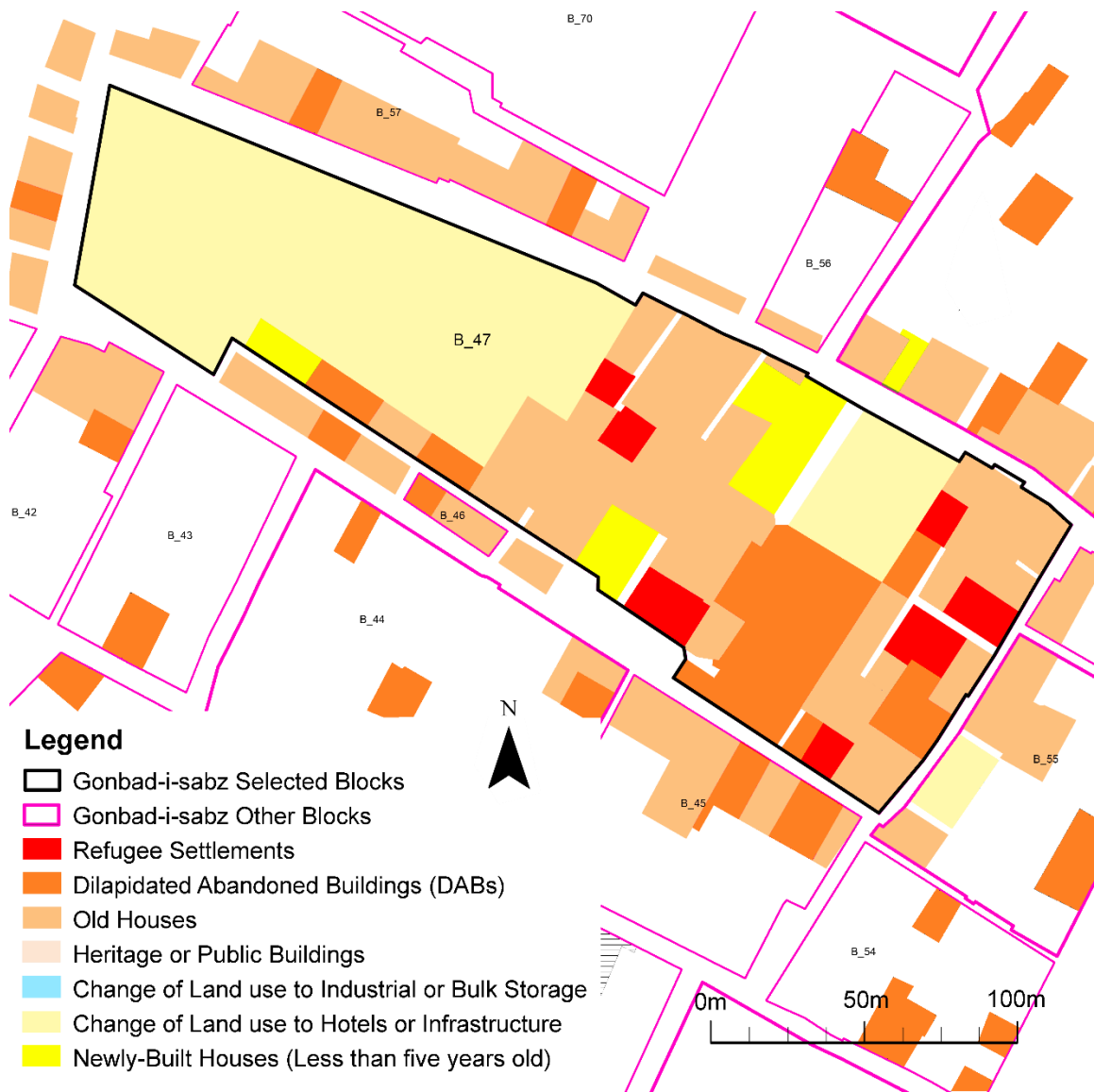


Figure 5.13: Land use plan, B-47 sample block in Gonbad-i-sabz urban tissue, historic Yazd, Iran 2018

5.2.3. Isfahan

Inside the three selected urban blocks of Isfahan, the urban equations which are shaping land use can be fundamentally different, compared to Kashan and Yazd.

For instance, in B-1 (the urban tissue with a higher ratio [40%] of DABs) 59% and 12% of urban spaces are respectively occupied by all local Iranian residents (known as active urban areas in Appendix B-5) and newly-built houses (i.e. homes under five years old) while only 1% are housed by foreign refugees. Nonetheless, the change in land use to infrastructure makes up a considerable proportion of 14% in B-1, while 15% of the land area is transformed to bulk storage, which seems to be an anomaly in a historic urban tissue, compared to Yazd and Kashan.

In B-7 (the urban tissue with a medium ratio [27%] of DABs) respectively 72% and 18% of urban spaces are lodged by all local Iranian residents (known as active urban areas) and newly-built houses, while only 1% of land area is accommodated by foreign refugees. Furthermore, about 18% of all land area in B-7 is covered by registered heritage buildings.

Consequently, in B-2 (the urban tissue with the lowest ratio [19%] of DABs), respectively 79% and 19% of urban spaces are occupied by all local Iranian residents (as active urban areas) and newly-built houses, while only 2% are accommodated by foreign refugees. Nonetheless, the change in land use to multi-storey commercial structures formed 15% of the land area in B-2; while about 18% of land area is allocated to bulk storage (e.g. warehouses), that again seems to be an anomaly, compared to other case studies.

Accordingly, the relative closeness of three urban blocks to the historic bazaar could be seen as the primary reason for the formation of warehouses (e.g. commercial bulk storage) inside the three sample blocks. Nonetheless, as the third most populated city in Iran, land and property in historic Isfahan have become a precious commodity (Table 4.4, Chapter 4). Nonetheless, a stronger economy could explain such abnormal changes in land use inside Masjid-Ali urban tissue, compared to other cases in Yazd and Kashan (Figures 5.14 and 5.15).

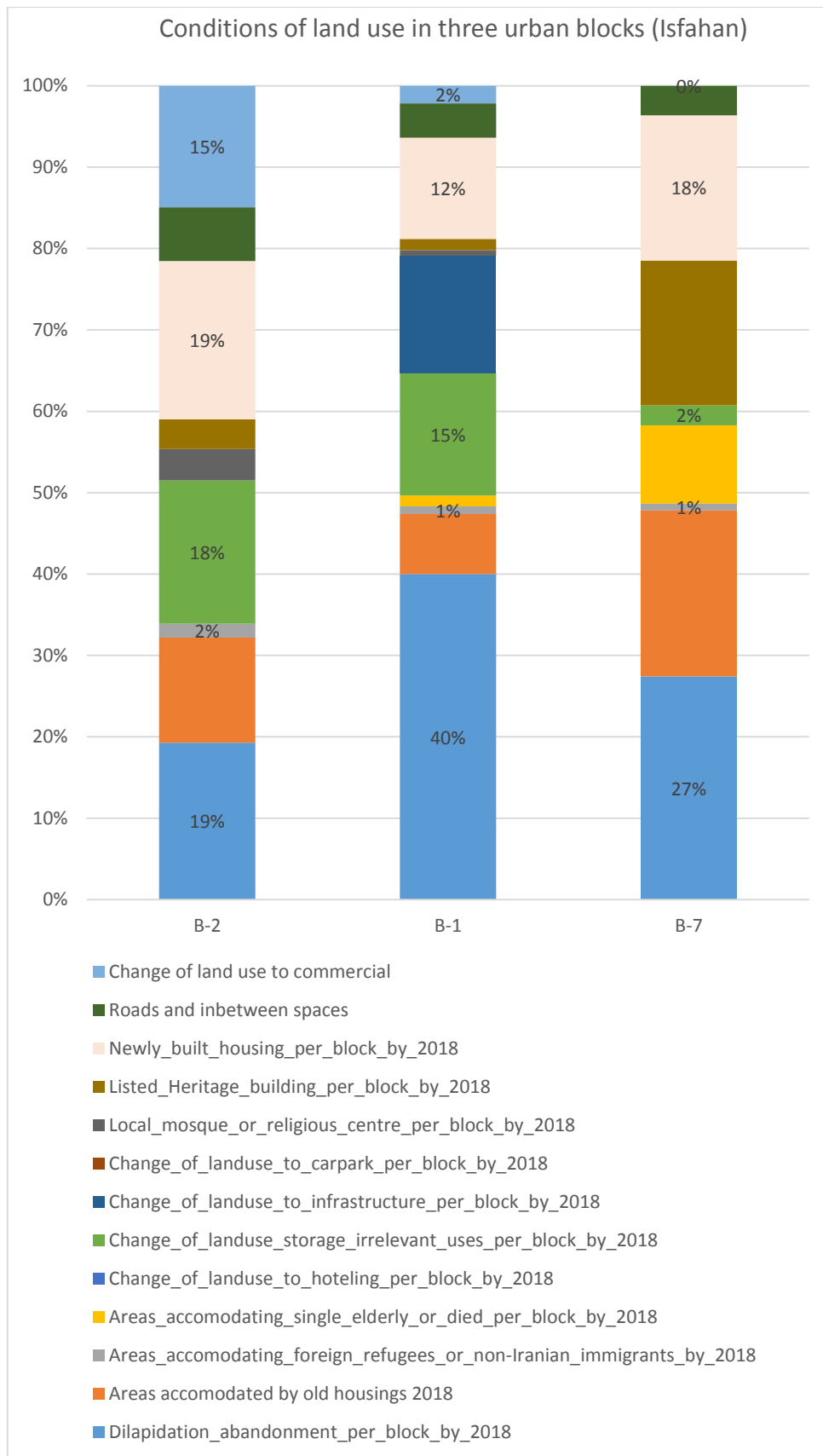


Figure 5.14: Comparing conditions of land use inside three urban blocks in historic Isfahan by 2018 (Appendix B-5)

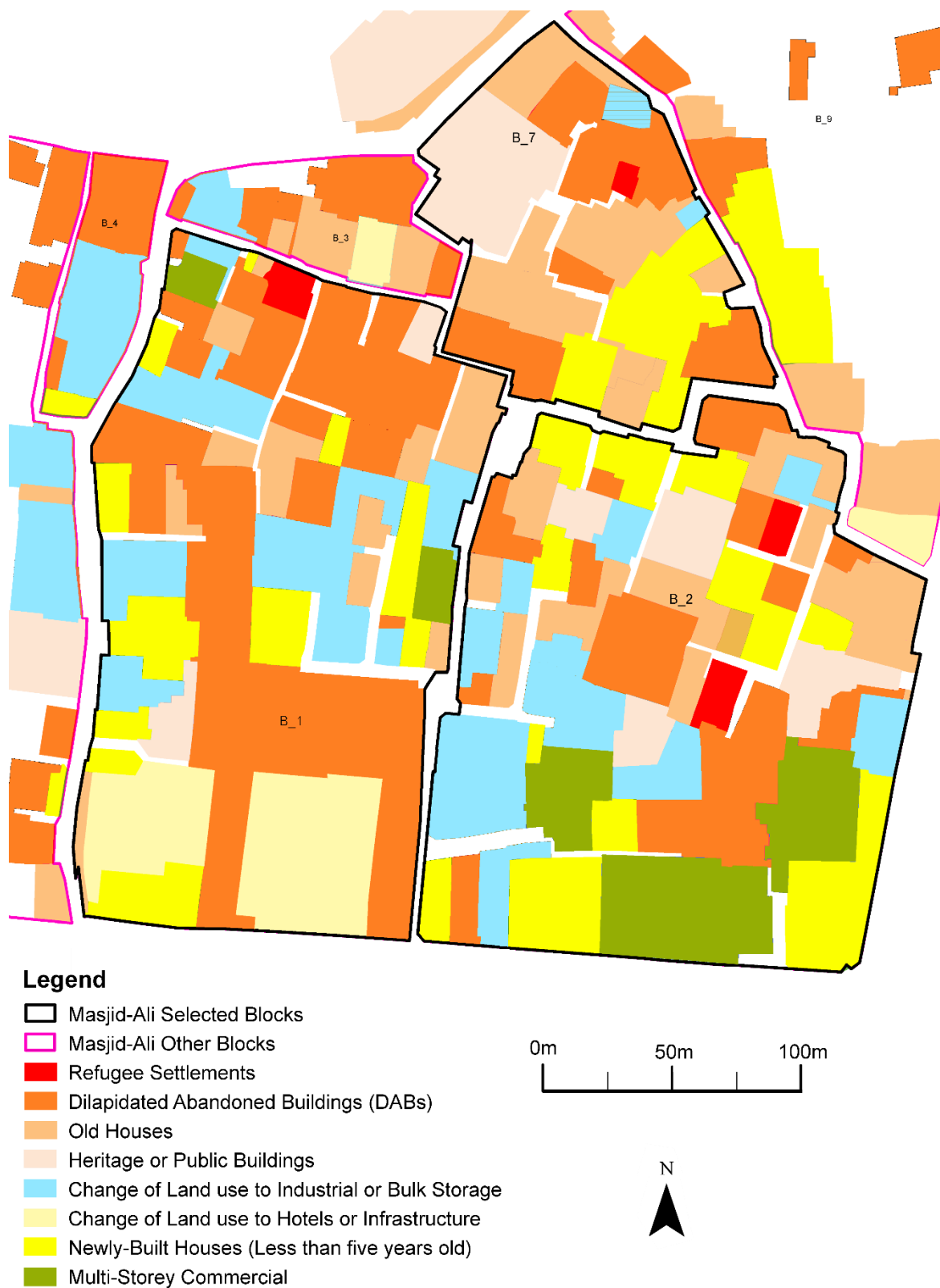


Figure 5.15: Land use plan, B-1, B-7 and B-2 sample blocks in Masjed-Ali urban tissue, historic Isfahan, Iran 2018 (Appendix B-5)

5.3. Spatial adjacency between refugee settlements and DABs

This section examines spatial adjacency between DABs and refugee settlements by utilising visual mapping analysis via ArcGIS software:

In all sample blocks in historic Kashan, a close association can be clearly observed between refugee settlements and DABs. The nature of such a correlation here could be identified as a type of coexistence, upon which refugee settlement fabrics in almost all cases abut the boundaries of DABs (Figures 5.4 to 5.7). In historic Kashan, such spatial adjacency may contain a partial association (see for example Figure 5.6, where some refugee settlements have very limited common boundaries with adjacent DABs), or a complete association (see Figure 5.4 where DABs have surrounded some refugee settlements). Hence, it can be observed that refugee settlements may bridge the gap between DABs, and generate informal access (e.g. pedestrian shortcuts) between some thoroughfares (Figure 5.5).

Not unlike historic Kashan, inside the surveyed sample blocks of Yazd in five cases (B-8, B-9, B-43, B-47 and B-30) a clear coexistence between the extent of refugee settlements and DABs are identifiable (Figures 5.10 to 5.13). Nonetheless, there is a need to reiterate a socio-spatial condition in relation to B-28 (Figure 5.11), that since 2015 refugees have been forced to move out of this urban block. Thus, no refugee settlements are recognisable in this sample block. Accordingly, in the centre of B-47 (Figure 5.13) several refugee settlements could be observed, that are not adjacent to DABs. However, it should be noted that the whole western half of the block was formerly comprised of DABs, which has recently been reutilised as indoor and outdoor public playgrounds (see Section 5.2.2).

Not unlike the situation in historic Kashan and Yazd, the three sample blocks of Isfahan also demonstrate a physical coexistence between refugee settlements and DABs (Figure 5.15). On the other hand, the number of refugee settlements in Isfahan is considerably less than the other two historic cities. Such a quality could be relevant to the stronger economy of land that makes properties a precious commodity in the areas near the historic bazaar (see section 5.2.3). In this case, one may consider that refugees could find a very limited number of affordable housing opportunities in historic areas, given the strategic positioning of the three building blocks.

5.4. Comparing ratios of DABs in three historic cities, 2008--2018

This section initially computes and analyses changes in the extent of DABs by comparing two field surveys; one previously conducted in 2008 (see section 4.5.2, Chapter 4) and the other

conducted in the same blocks, during March to April 2018, by the current research. Descriptive analysis shows how the size of DABs has rapidly grown during almost a decade, while the extent of active urban areas (occupied by all local Iranian residents) have simultaneously declined, among surveyed urban blocks in three historic Iranian cities.

In historic Kashan, the average percentage of DABs has grown by 16% from 20% to 36%, between 2008 and 2018. In historic Yazd, however, the average ratio of DABs is only 2% less than Kashan in the 2018 survey. In Yazd, DABs have grown by 10%, an increase from 24% to 34% for the same period. In historic Isfahan, the proportion of DABs also has increased by 14% from 15% to 29%. Consequently, it is evident that in the three Iranian historic cities in this study, the average percentage of DABs has increased to about 14% over nearly a decade (Figure 5.16).

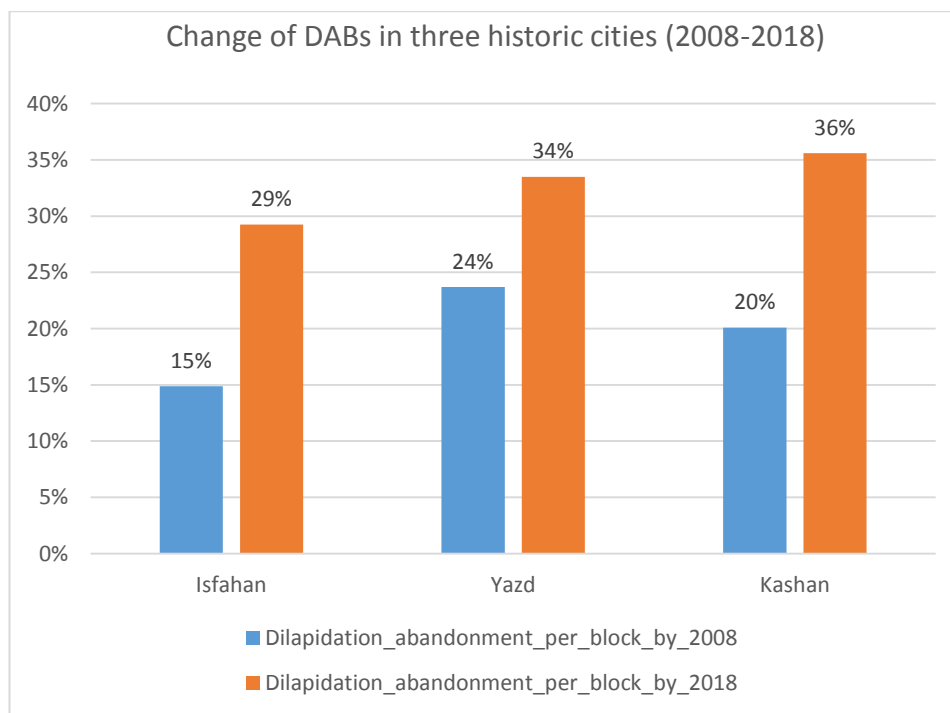


Figure 5.16: Comparing the average ratio of DABs inside three Iranian historic cities, 2008--2018 (Appendix B-1)

This urban trend could be perceived as a phenomenon that relates to the past (2008) and present (2018) extent of DABs, where the deleterious impacts of DABs have destroyed historic areas almost in an equal manner. As a direct consequence of such observations inside historic cities, active urban areas could be defined as those urban areas occupied by all local Iranian residents and may consist of any type of land use, excluding DABs and refugee settlements (Appendix B-1).

5.4.1. Correlation between the proportion of DABs in historic cities, 2008--2018

This section shows how the formation of current DABs could be relevant to the extent of previous DABs in 15 sample blocks. It is explained how DABs can proportionally reproduce. Thus, the following discussion reveals how DABs can play a role as liminal urban fabric, which in turn can lead to the creation of further DABs.

In the three larger case studies, the size of current DABs (as surveyed in 2018) has proved to be correlated to the extent of DABs as surveyed in 2008. It is a phenomenon that can simultaneously be confirmed in historic Isfahan, Kashan and Yazd.

In both Kashan and Yazd within 66% of cases, there is a visual correlation observable between the current (2018) and previous (2008) extent of DABs. Accordingly, with the exception of B-15 and B-16 (in Kashan), B-30 and B-9 (in Yazd) in all other sample blocks of Kashan and Yazd, the extent of DABs in the 2008 and 2018 surveys has incrementally grown, as graphically depicted in the line chart by the almost identical incline in Figure 5.17.

Moreover, the number of surveyed cases in Isfahan is not sufficient to be compared to the results in Yazd and Kashan. Nevertheless, among the three studied urban blocks, in two cases (B-1 and B-7) a relationship between the size of the previous (2008) and current (2018) DABs can be detected (Figure 5.17).

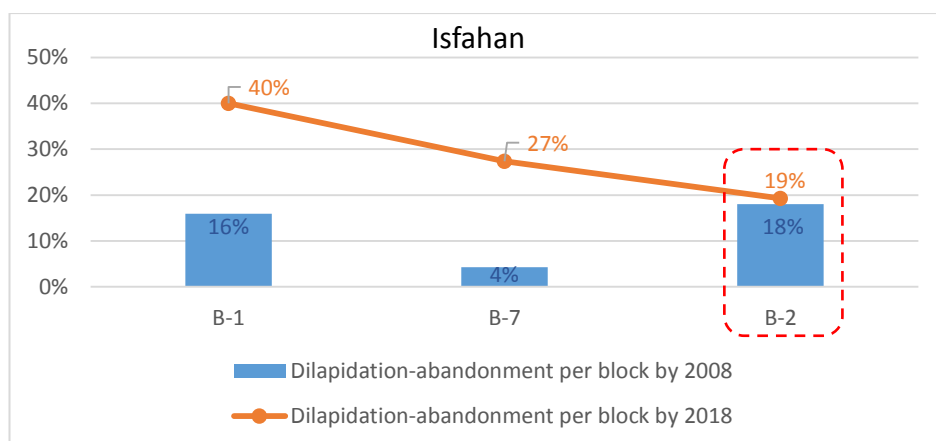
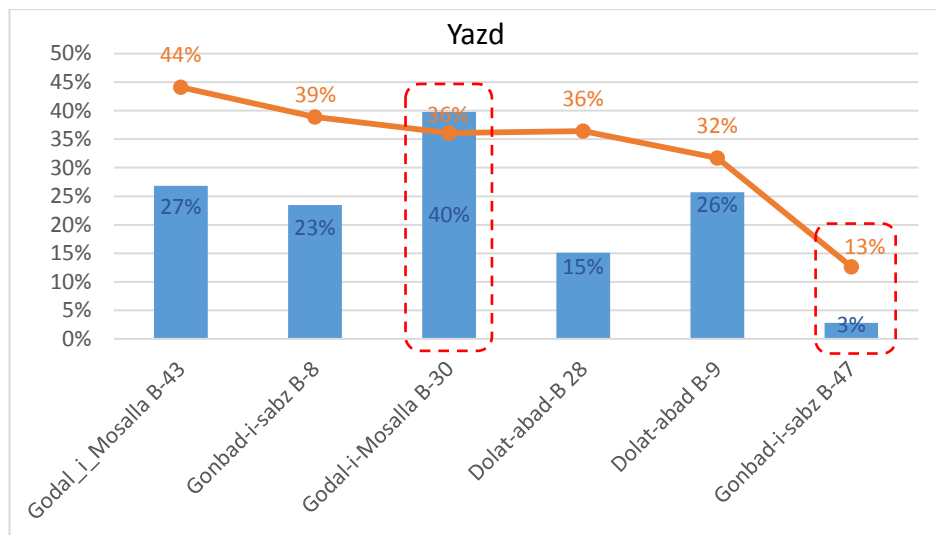
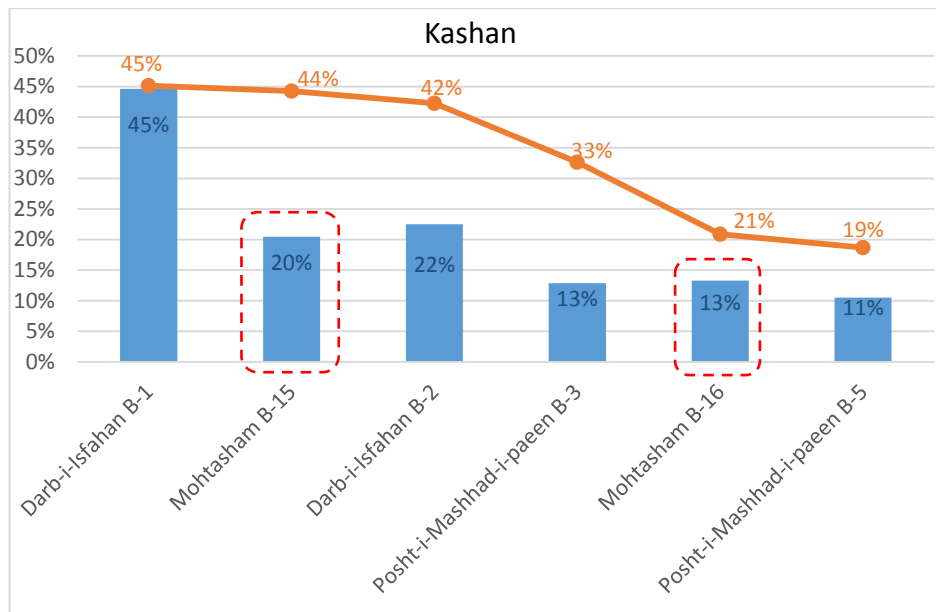


Figure 5.17. Analysing the impact of previous DABs (2008) on the formation of new DABs in the 2018 survey (Appendix B-3, B-5 and B-6)

5.5. Comparing the ratio of DABs to the proportion of refugee settlement fabrics

In section 5.2, the presence of liminal refugees was confirmed in three historic cities of Iran. This discovery solely proved the incidence of spatial liminality type-A. Accordingly, Kashan with the highest proportion of DABs [36%], has yielded refugee settlement areas, which form 5% of all surveyed zones in the historic city. Yazd, with nearly a similar portion of [34%] DABs, has yielded refugee settlements which form an extent equal to 8% of the whole surveyed area. Furthermore, inside sample blocks in Isfahan (with a lower ratio [29%] of DABs), only 1% of the surveyed area has been transformed into refugee settlements (Figure 5.18).

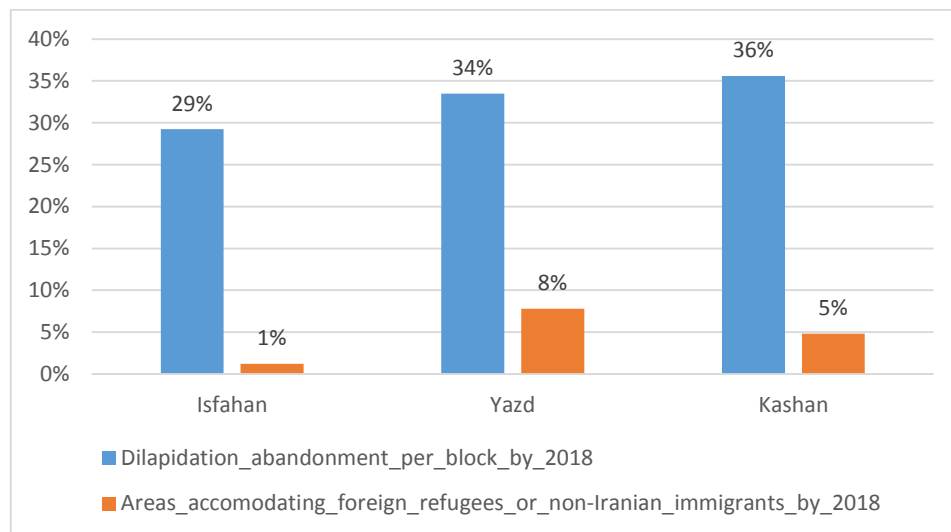


Figure 5.18: Comparing the average ratio of DABs versus the areas of refugee settlements in the surveyed areas of three historic Iranian cities (Appendix B-1)

5.5.1. Correlation between DABs and the proportion of refugee settlements

This section shows how the size of refugee settlements can be relevant to the extent of DABs in three historic cities. In Kashan, within 83% of cases, a strong visual relationship could be observable between the current extent of DABs and the proportion of refugee settlements. Accordingly, with one exception³ (B-15) in all other sample blocks of Kashan when the size of refugee settlements increased DABs have clearly increased too (Figure 5.19).

In Yazd, among 66% of cases, a relationship can be noticed between the ratio of DABs and the proportion of refugee settlements. Accordingly, with three exceptions (B-8, B-28⁴ and B-47) in

³ Explanation of contextual and universal outliers requires further research which is outside the scope of this thesis.

⁴ As discussed in section 5.2.2, since 2015 refugees have been forced to leave B-28 and in this sense, by omitting B-28 a direct relationship can be observed in 66% of cases.

other sample blocks of Yazd (respectively B-43, B-30 and B-9), when the size of refugee settlements increased the extent of DABs did too.

In Isfahan, there is no clear association between the extent of DABs and the proportion of refugee settlements. This exceptional phenomenon, as noted in section 5.2.3 can be attributable to the greater value of land and properties in Isfahan (as the third largest city in Iran), deriving from its strong economy that promotes the commercial use of properties in historic areas. Thus, the proportion of refugee settlements inside historic Isfahan is very low, compared to other cases (Figure 5.18). Therefore, the ratio of such liminal accommodation is not relevant to the size of DABs in the sample blocks of historic Isfahan (Figure 5.19).

This section has suggested that DABs can play a role as liminal urban fabrics, which may meaningfully be related to the size of refugee settlements: a phenomenon observed in both Kashan and Yazd. Inside the three larger case studies, smaller cities with lower population (e.g. Kashan), the relationship between the size of DABs and the extent of areas accommodated by refugees or non-Iranian immigrants is stronger, compared to larger cities (Isfahan), where the stronger economy can weaken such liminal associations.

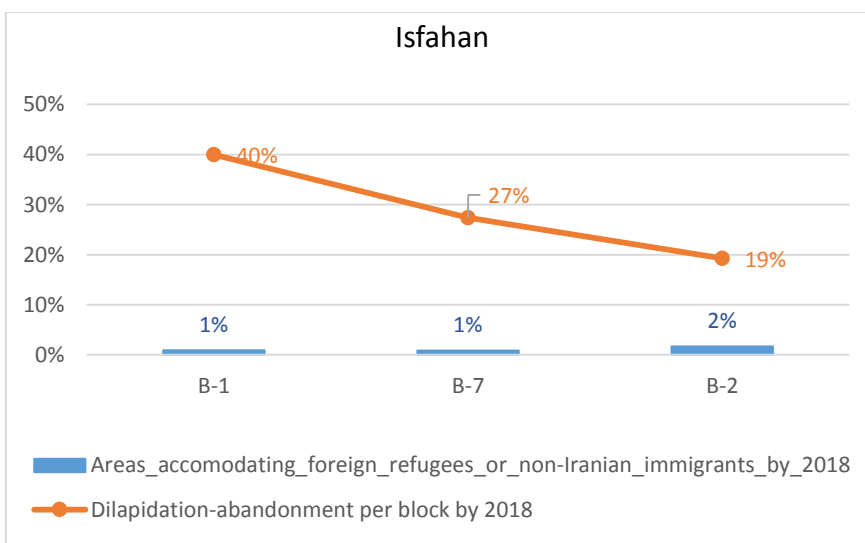
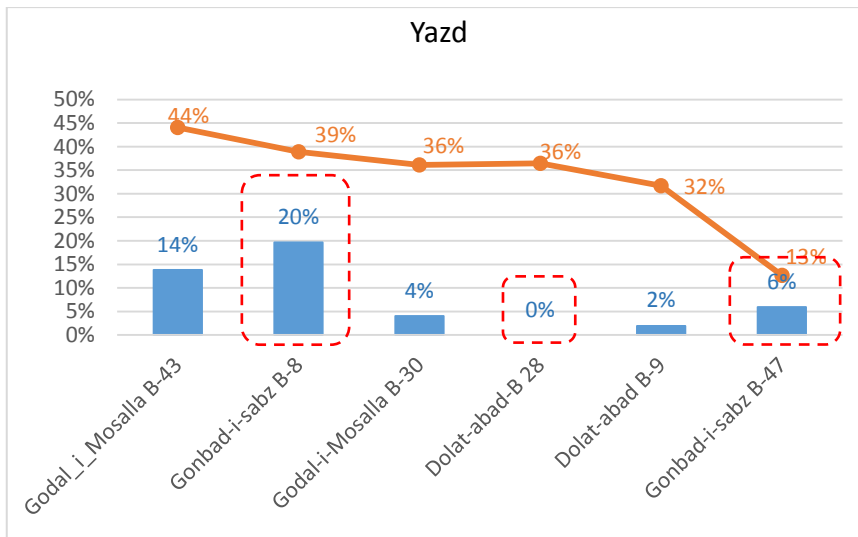
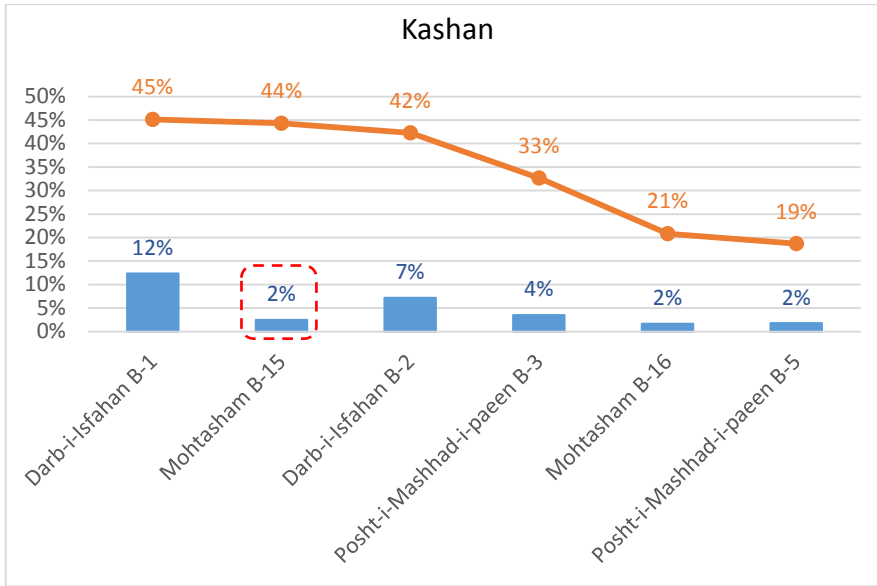


Figure 5.19: Analysing the impacts of DABs on the formation of refugee settlement fabrics in three historic cities in Iran (Appendix B-3, B-5 and B-6)

5.6. Comparing the proportion of DABs against the ratio of newly-built houses

Section 4.6.2 discussed that in historic urban areas, the higher value of land could be somehow relevant to the larger percentage of building investments. As a result, by comparing the extent of DABs against the proportion of newly-built homes, this chapter aims to measure the correlation between the value of land and the percentage of DABs in historic cities.

Among three larger case studies with one exception (i.e. historic Yazd), a reverse relationship can be seen between the average proportion of DABs and the percentage of areas which are occupied by all newly-built houses. Accordingly, in historic Kashan (the urban areas with a higher ratio [36%] of DABs), the extent of areas occupied by newly-built homes has only reached 11%, whilst in Isfahan (urban areas with a lower ratio [29%] of DABs), this percentage has increased to 16% (Figure 5.20).

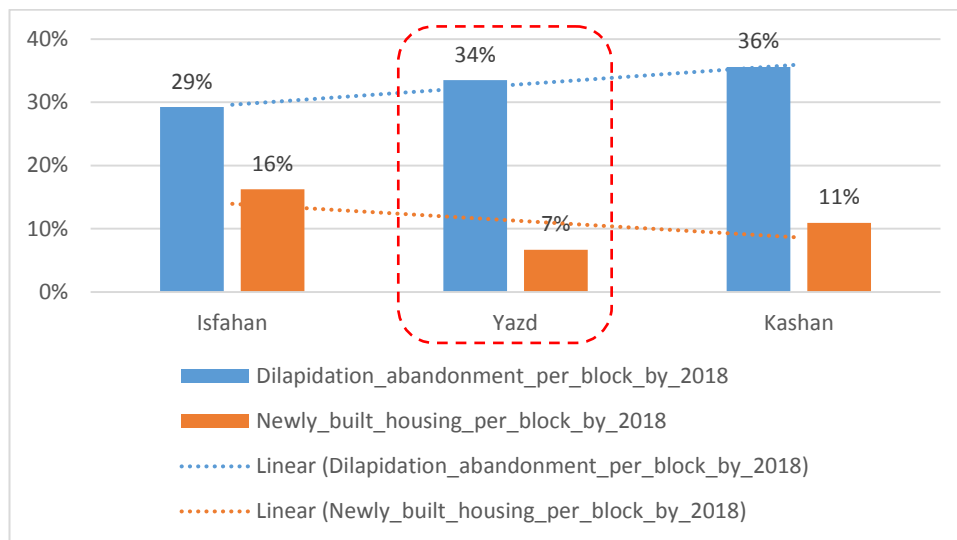


Figure 5.20: Comparing the average ratio of DABs versus the areas occupied by newly-built houses in three historic Iranian cities (Appendix B-1)

5.6.1. Correlation between DABs and the proportion of newly-built houses

This section shows how the extent of DABs could be inversely related to the percentage of newly-built houses per block, reconfirming how the liminal aspects of DABs are exacerbating domestic building investment and the value of properties in historic areas.

In the three larger case studies of Isfahan, Kashan and Yazd, it is evident that DABs are inversely correlated to the percentage of new building investments.

For instance, in 66% of cases in historic Kashan and Yazd, an opposite correlation can be visually observed between the size of DABs and the area covered by newly-built houses (under five years old). Accordingly, with only two exceptions (B-15 and B-16 in Kashan, and B-8 and B-47 in Yazd), in the four other sample blocks of Kashan and Yazd the area of newly-built houses has increased when the ratio of DABs has decreased (Figure 5.21). Additionally, in Isfahan among the three surveyed urban blocks, in all cases, a strong reverse relationship between the area covered by newly-built houses and the percentage of DABs (per block) could be detected. Such qualities can reconfirm the essential reverse relationship between the higher value of land and the lower extent of DABs in historic Isfahan.

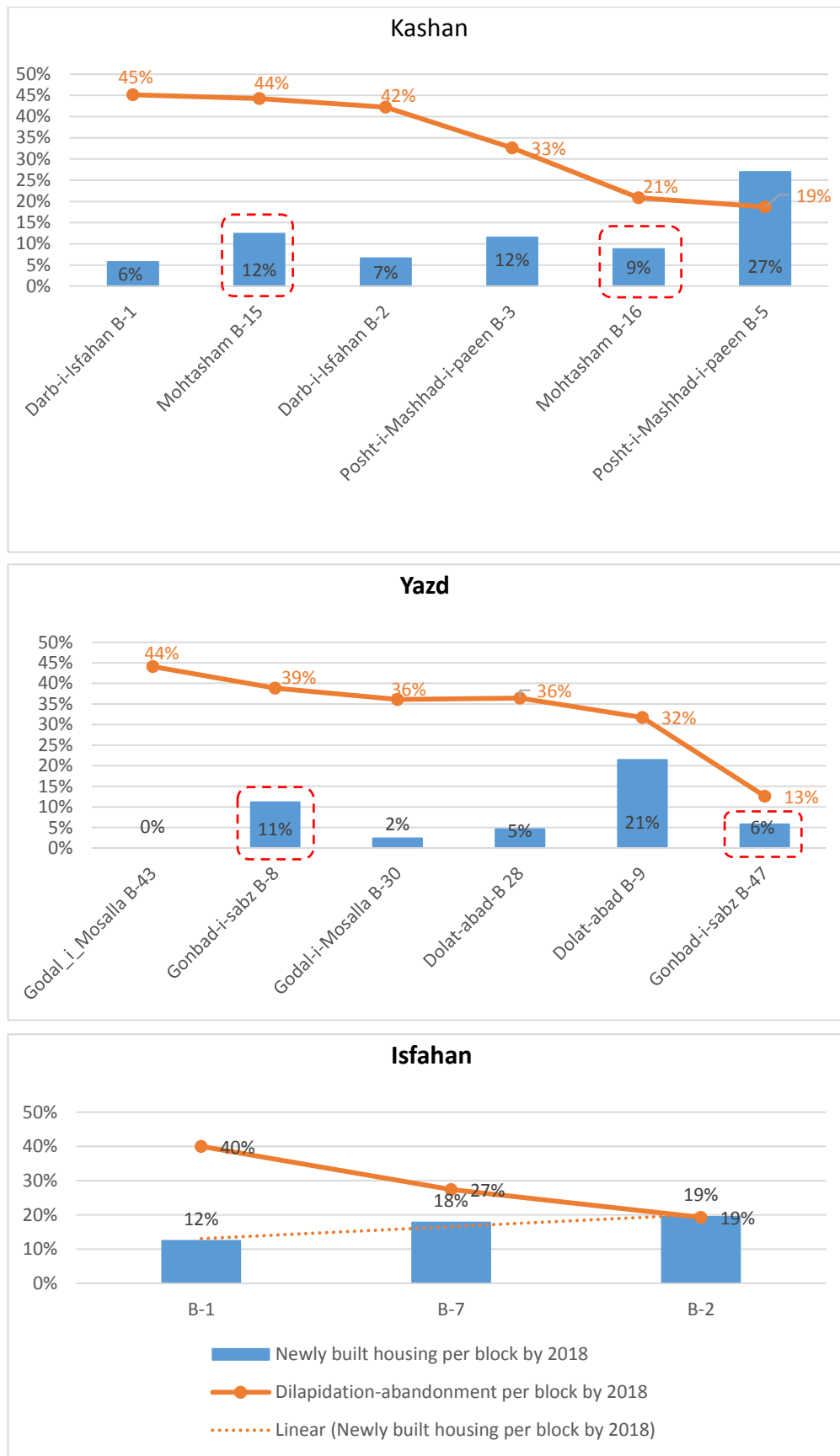


Figure 5.21: Analysing the impacts of DABs on the proportion of newly-built houses in Kashan, Yazd and Isfahan, 2018 (Appendix B-3, B-5 and B-6)

5.7. Comparing the proportion of DABs against the size of all local Iranian settlement fabrics

Section 3.4 (Chapter 3) has explained how spatial liminality type-B generated a sense of belonging to place among identity groups in medieval cities of Iran. It was discussed that today, the lack of spatial liminality type-B could diminish the sense of place-satisfaction that may lead to the emigration of local Iranian residents. Accordingly, by measuring the correlation between DABs and the extent of all local Iranian settlements (indicated as active urban areas in this research) this section aims to measure the correlation between the proportion of DABs and lack of spatial liminality type-B (expressed by the emigration of local Iranian residents) in three historic cities.

Accordingly, a reverse relationship could be observed between the percentage of DABs and the proportion of areas accommodated by all local Iranian residents (active urban areas) in these historic cities. Consequently, in historic Kashan where 36% of the all surveyed areas are identified as DABs, the percentage of all local Iranian residents (including active urban areas) has reached 60%. Respectively in Yazd, although 34% of all surveyed areas are demarcated as DABs, the percentage of all local Iranian residents reached 59%. Nevertheless, this linear-correlative behaviour is also evident in historic Isfahan, where almost 29% of the total land area is surveyed as DABs. In this case, the proportion of all areas occupied by local Iranian residents has reached 70% (Figure 5.22).

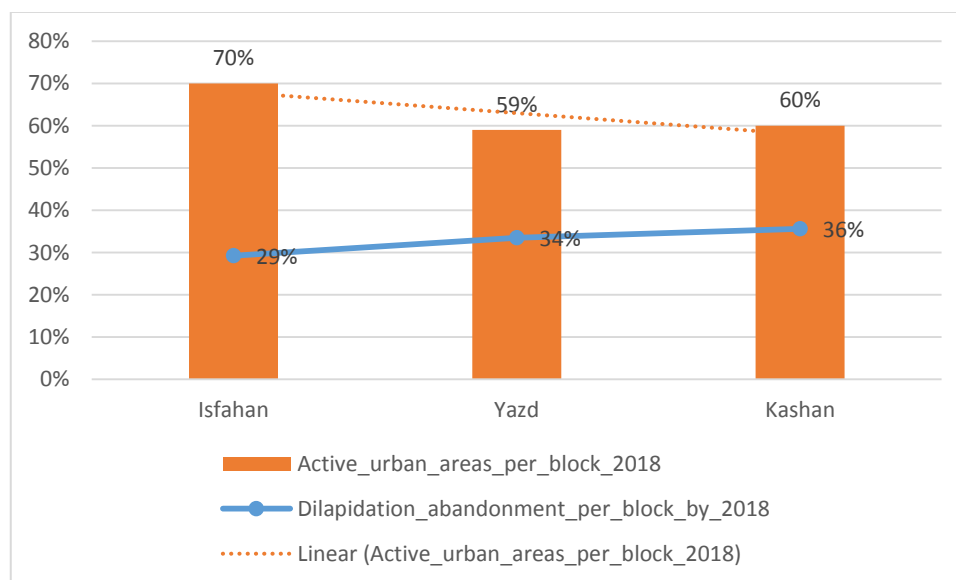


Figure 5.22: Comparing the average ratio of DABs per block versus the areas occupied by all local Iranian settlements (active urban areas) in three Iranian historic cities (Appendix B-1)

5.7.1. Correlation between DABs and the extent of areas occupied by all Iranian residents

This section shows how the extent of DABs could show an adverse relationship with the percentage of areas occupied by all local Iranian residents per block. This quality could clearly reconfirm the liminal aspects of DABs upon which spatial liminality type-B is weakened as a result of the larger extent of DABs. This lack of spatial liminality type-B shrinks the size of areas occupied by all local Iranian residents, and consequently could encourage further emigration of local Iranian residents from historic areas (see section 3.4.8). Such a quality is strongly observed in all three larger case studies.

In 83% of cases in Yazd and Kashan, a reverse correlation is perceived between the size of DABs and the extent of active urban areas occupied by all local Iranian residents. Accordingly, with only one exception, in each city (B-15 in Kashan, B-8 in Yazd) in all other sample blocks of Kashan and Yazd the size of areas occupied by local Iranian residents has increased, when the percentage of DABs has reduced. Furthermore, in Isfahan among the three studied urban blocks, a reverse relationship between the proportion of areas occupied by all local Iranian residents and the proportion of DABs per block could be detected (Figure 5.23).



Figure 5.23: Analysing correlations between the extents of DABs and the proportion of active urban areas, occupied by all local Iranian residents in Yazd, Kashan and Isfahan in 2018 (Appendix B-3, B-5 and B-6)

5.8. Detecting outliers in spatial analysis

In Kashan, B-15 and B-16 appeared to be outliers among four datasets as analysed in sections 5.4 to 5.7 (Table 5.1). Nonetheless, B-15 is an anomaly in all four datasets, and therefore can be convincingly excluded from results as a universal outlier. When B-15 is removed from the analysis, the proportion of refugee settlements becomes completely interrelated with the extent of DABs inside surveyed urban areas (Table 5.2). This is also evident in 80% of cases, that is, the proportion of DABs in the 2018 survey becomes correlated to the proportion of DABs in the 2008 survey. Besides, among cases, it is observed that DABs could generate spatial liminality type-A in the sense that it could directly discourage building investments (in 80% of cases) and generate a lack of spatial liminality type-B by facilitating the emigration of local Iranian residents in 100% of cases.

Table 5.1: Outliers in historic Kashan

Outlier	B-15	B-16
Times of anomaly/all datasets	4/4	2/4

Table 5.2: Analysing correlations between several independent variables of spatial liminality and the extent of DABs in 2018 in historic Kashan

Historic City	Analytical aspects of liminality	Measuring criteria against the % of DABs in 2018 (per block)	Correlation between DABs and pre-defined aspects of spatial liminality (including outliers)		All outliers	% correlations excluding major outlier (B-15)
			Observable in cases	Interpreting the level of relationship		
Kashan	Spatial (factual)	Proportion of areas accommodated by refugees (spatial liminality type-A)	83%	Very Strong	B-15	100%
		Proportion of DABs 2008	67%	Strong	B-15, B-16	80%
		Proportion of newly-built houses (the value of the land)	67% (reverse relationship)	Strong	B-15, B-16	80%
		Proportion of areas accommodated by all local Iranian residents (spatial liminality type-B)	83% (reverse relationship)	Very Strong	B-15	100%

*Outliers shown in red

In Yazd, B-8 and B-28 appeared to be outliers. Accordingly, B-8 showed incompatible qualities three times in four datasets, reiterated in more than half of the cases (Table 5.3). Nonetheless, B-28 is also an exceptional case, while it is a part of a notorious zone, where foreign refugees have been forced to move out since 2015 (see section 5.2.2). Thus, B-8 can be excluded from all datasets as a legitimate universal outlier, while B-28 can be excluded from one specific dataset (and its relevant analysis), comparing the percentage of DABs against the ratios of refugee settlements per block.

When outliers are discarded during analysis, it is clarified that the proportion of refugee settlement areas in 75% of cases are interrelated with the percentage of DABs per block (Table 5.4). It is also evident that (in 67% of cases) the size of DABs as calculated by the 2018 survey can be correlated with the percentage of DABs as presented by the 2008 survey. Among cases, it becomes evident that DABs could generate spatial liminality type-A in the sense that it could directly discourage building investments (in 80% of cases), and eradicate spatial liminality type-B by facilitating the emigration of local Iranian residents in 100% of cases.

Table 5.3: Outliers in Yazd

Outlier	B-8	B-28	B-47	B-30	B-9
Times of anomaly/all datasets	3/4	1/4 Refugees are forced to evacuate	2/4	1/4	1/4

Table 5.4: Analysing correlations between several independent variables of spatial liminality and the extent of DABs in 2018 in historic Yazd

Historic City	Analytical aspects of liminality	Measuring criteria against the % of DABs in 2018 (per block)	Correlation between DABs and pre-defined aspects of spatial liminality		All outliers	% correlations excluding major outlier (B-8)
			Observable in cases	Interpreting the level of relationship		
Yazd	Spatial (factual)	The proportion of areas accommodated by refugees	50%	Moderate	B-8, B-28, B-47	75%
		Proportion of DABs 2008	67%	Strong	B-30, B-9	67%
		Proportion of newly-built houses	67% (reverse relationship)	Strong	B-8, B-47	80%
		Proportion of areas accommodated by all local Iranian residents	83% (reverse relationship)	Very Strong	B-8	100%

*Outliers shown in red

In Isfahan, as a result of the limited number of cases, no outliers can be recognised. Nonetheless, unlike other case studies, only four refugee settlements are detected in historic Isfahan (Figure 5.15). This lack of refugee settlements is attributable to the relatively expensive land value compared to Yazd and Kashan. Thus, it can be interpreted that the strong economy did not allow historic areas to become principally available for poor marginalities, such as refugees.

This quality could reinstate the hypothesis (section 1.3, Chapter 1) that in more populated cities (such as Isfahan) land prices are not as inexpensive as lower populated historic cities. That is why the size of DABs and the proportion of areas occupied by refugees (spatial liminality type-A) are totally irrelevant in the case of Isfahan (section 5.5). However, an apparent reverse relationship (in all three cases) could be identified between the percentage of DABs and the ratio of newly-built houses.

Additionally, in two-thirds of cases, the proportion of local Iranians shows a reverse relationship with the percentage of DABs per block. There is also a relationship in two-thirds of cases observable, between the percentages of DABs as surveyed respectively in the 2008 and 2018 surveys. These qualities suggest that disused areas in historic cities could act as liminal urban fabrics, even in Isfahan, where DABs have reproduced themselves proportionally in two-thirds of cases.

Table 5.5: Analysing correlations between several independent variables of spatial liminality and the extent of DABs in 2018, in historic Isfahan

Historic City	Analytical aspects of liminality	Measuring criteria against the % of DABs in 2018 (per block)	Correlation between DABs and pre-defined aspects of spatial liminality	
			Observable in cases	Interpreting the level of relationship
Isfahan	Spatial (factual)	Proportion of areas accommodated by refugees	0%	None
		Proportion of DABs 2008	0%	None
		Proportion of newly-built houses	100% (reverse relationship)	Very Strong
		Proportion of areas accommodated by all local Iranian residents	100% (reverse relationship)	Strong

5.9. Summary

The data in this chapter was collected via conducting several field surveys in three historic cities, as fully calculated in Appendix B. The field surveys revealed the current condition of land use within 15 sample blocks. A comparison (as per section 4.6.2) was conducted in order to understand the correlation between the extent of DABs in 2018 (as the dependent variable) and the four independent variables of spatial liminality including: (1) extent of DABs in 2008 (representing the associations between old and new DABs), (2) extent of refugee settlements in 2018 (representing spatial liminality type-A), (3) extent of all local Iranian settlements in 2018 (representing spatial liminality type-B), and (4) extent of newly-built houses in 2018 (representing the value of land in historic areas).

The results of the four spatial-factual independent variables of liminality are juxtaposed in several graphs, which in their background show urban blocks proportionately arranged based on their levels of DABs in 2018, depicted from the highest to the lowest ratio. Consequently, the resultant graphs are visually compared and analysed. The chapter verifies factual correlations between the immigration of refugee residents (i.e. spatial liminality type-A), the value of land (via measuring the percentage of newly-built houses), the emigration of local Iranian residents (that equates to a lack of spatial liminality type B) on one side, and the physical extent of DABs (2018) per block on the other. It also indicated that the extent of DABs in 2008 and 2018 could be seen to be proportionally associated.

The chapter analysed social-spatial deleterious effects of DABs within historic cities of Iran, due to the analytical lens of liminality. The magnitude of relationships between spatial liminality and the percentage of DABs were mainly relevant to the economy of the land and the population of the broader urban context. In this sense, the ramification of spatial liminality discovered were more intensive in low-populated historic areas (e.g. Kashan), compared to highly populated areas, where the nature of such relationships is perceived as in decline (e.g. Isfahan).

The chapter explained how housing resources in historic cities can become unreachable for liminal communities (such as refugees), and as a consequence of the stronger economy in highly populated urban areas, for example in Isfahan. To further support such claims as presented in this chapter, Chapters 6 and 7 will also examine several demographic and attitudinal aspects of spatial liminality regarding the extent of DABs (per urban block) in three larger historic case studies.

Chapter 6: Demographic Results and Analysis



A thoroughfare in historic Kashan, 2018 (Source: author)

6.1. Introduction

As discussed in the previous chapter (section 5.5), physical aspects of spatial liminality (type-A) can be correlated in relation to the extent of DABs in three historic Iranian cities. In this chapter, the demographic aspects of liminality will be investigated in conjunction with more empirical references in the 15 urban blocks under study.

In section 3.3 it is discussed how spatial liminality type-A can assist individuals or groups in non-Iranian disadvantaged communities experience their rites of passage (in a state of liminality). In this case, the liminal population may become vulnerable, suspended in-between their past and future; neither can be considered as their previous self nor have they yet become a citizen of the new land. As a direct result of such a phenomenon, one of the primary aspects of spatial liminality type-A can be observed as an abnormal influx of non-Iranian disadvantaged and/or refugee communities, which may occur as a result of unprecedented socio-spatial transformations (see sections 1.2.2 and 1.2.3, Chapter 1). In this sense, many parts of the historic cities of Iran could be conceived as refugee camps (see section 3.3.3, Chapter 3).

Accordingly, Chapter 6 aims to explore possible relationships between demographic aspects of spatial liminality (type-A) and the proportion of DABs per block. To obtain a reliable level of demographic information, five questions were asked (see section 4.6.3). The results in this chapter are generated based on the comparisons between several pre-defined demographic aspects of the liminal population against the percentage of DABs per block, and by conducting street surveys in select case studies (Appendix C).

The analysis is presented at three levels for each evaluation criteria. At the first level, a descriptive bar chart represents possible correlations between each independent variable and the percentages of DABs per block for all residents. At the second and third levels, an advanced crosstab analysis represents the overall distribution of independent variables separately among local Iranian occupants and non-Iranian disadvantaged residents within surveyed blocks.

At the latter two levels data clustering and segmentation techniques are employed to analyse relevant outcomes. In this case, in Yazd and Kashan, six surveyed urban blocks were clustered in three groups with the highest, medium and lowest percentage of DABs.

6.2. Comparing periods of residency per block

Among 161 respondents, a question was asked in order to understand links between demographic conditions of new settlers (as a possible indicator of liminality) and the percentage of DABs per block (see section 4.6.3, Chapter 4). The question targeted the period of residency of participants in historic areas. The relevant responses may include one of the following options: (1) less than one year, (2) between one and five years, (3) between five and 10 years, (4) between 10 and 60 years, and (5) over 60 years, and/or being an original resident and/or living in an inherited house (see Appendix C-1).

The results of the survey show that inside the three historic cities of Yazd, Kashan and Isfahan, 11% of respondents are relative newcomers (occupied their homes for less than a year). Additionally, 22% verified they had settled in the historic city between one and five years ago. Nonetheless, only 9% of residents confirmed they had immigrated to historic areas between five and 10 years ago. Correspondingly, about 42% of residents confirmed they had moved into their homes between 10 and 60 years ago. Nonetheless, original residents inside historic cities only formed about 17% of the participating population (Figure 6.1).

The data shows an apparent dichotomy between respondents who have lived inside the historic city for more than five years and those who have immigrated there for less than five years. Respectively, Figure 6.1 suggests that a large proportion of residents (about 33%) have gradually moved to historic cities during the past five years (2013--2018). A considerable proportion of these relative newcomers comprise low-income disadvantaged communities who opt for chapter housing (see section 7.2, Chapter 7).

Consequently, to set up an evaluation criterion, a minimum of five years of residence is suggested as a measure for identifying newcomers (as possible liminal residents). Accordingly, as the primary inquiry in this research suggests (see section 4.2, Chapter 4); the following discussions aim to understand the correlation between the percentage of newcomer residents and the ratio of DABs in three historic Iranian cities.

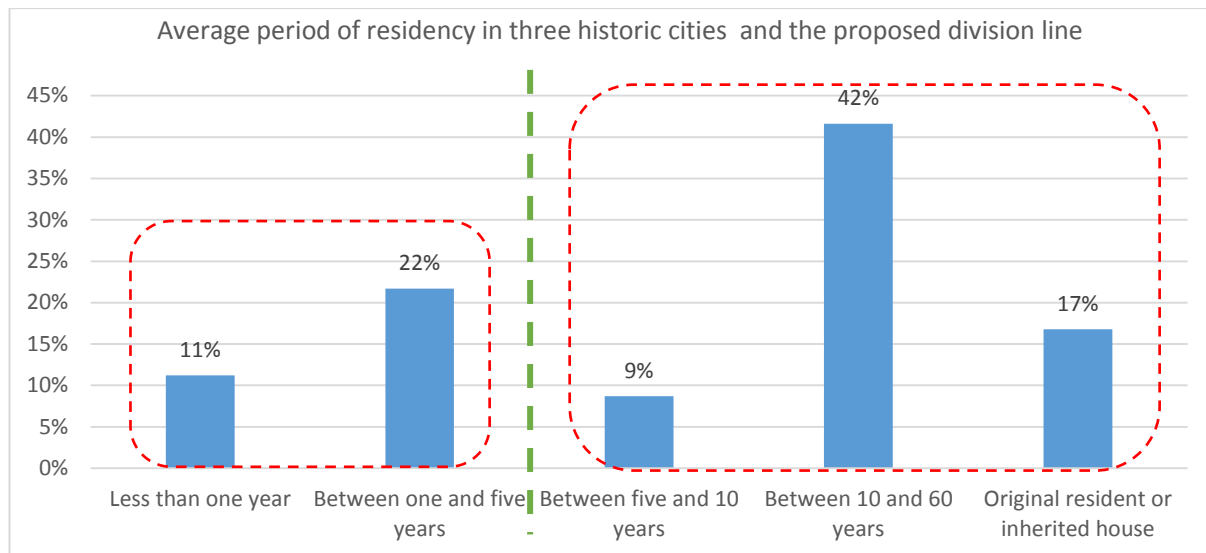


Figure 6.1: Average period of residency in three historic cities of Iran (Appendix C-1-1)

In Kashan, 8% of respondents had moved into their homes (between April 2017 and 2018). Additionally, 18% verified they had settled in the historic city between one and five years ago. Nonetheless, only 12% of residents had moved into historic areas between five and 10 years ago. Correspondingly, a majority (51%) of residents had settled between 10 and 60 years ago. Nonetheless, original residents inside historic cities only form 12% of the population (Figure 6.2). The data suggest that 26% have gradually settled inside the historic city during the past five years. This relatively significant proportion can indicate newcomers that largely overlap with low-income/disadvantaged communities (see section 6.5). Thus, there is a probability that such residents have immigrated to Kashan due to cheaper housing options (see section 7.2, Chapter 7).

In Yazd, about 14% of respondents had settled for less than a year, while 23% verified that they had settled in the historic city between one and five years ago. Only 9% of residents confirmed they had settled between five and 10 years ago. As expected, a significant proportion (38%) of residents confirmed they had settled between 10 and 60 years ago, while original residents inside historic cities only formed 18% of the population (Figure 6.2). Not unlike Kashan, results in Yazd also show that a large proportion of residents (36%) have gradually settled inside historic areas during a period of less than five years. This relatively significant proportion of newcomers could be single out as non-Iranian (liminal) disadvantaged communities or foreign refugees, who have chosen cheap housing options (see section 7.2, Chapter 7).

In three surveyed blocks of Isfahan, 10% of respondents had settled in historic areas for less than a year, while 30% confirmed they had settled between one and five years ago. However,

none of the residents confirmed they had settled in the historic city between five and 10 years ago. Additionally, 30% of residents confirmed they had settled in surveyed areas between 10 and 60 years ago. Nevertheless, original residents in sample blocks formed 30% of the population (Figure 6.2). Accordingly, inside the surveyed areas (not unlike Yazd and Kashan) a large proportion (40%) of residents had gradually settled in historic areas during the past five years. This significant proportion of newcomers also indicates low-income disadvantaged communities in historic Isfahan (sections 6.5 and 7.2).

Accordingly, the following discussion examines affiliations between the percentages of all new settlers per block (i.e. people who have settled in historic areas between 0-5 years) and the proportion of DABs per block.

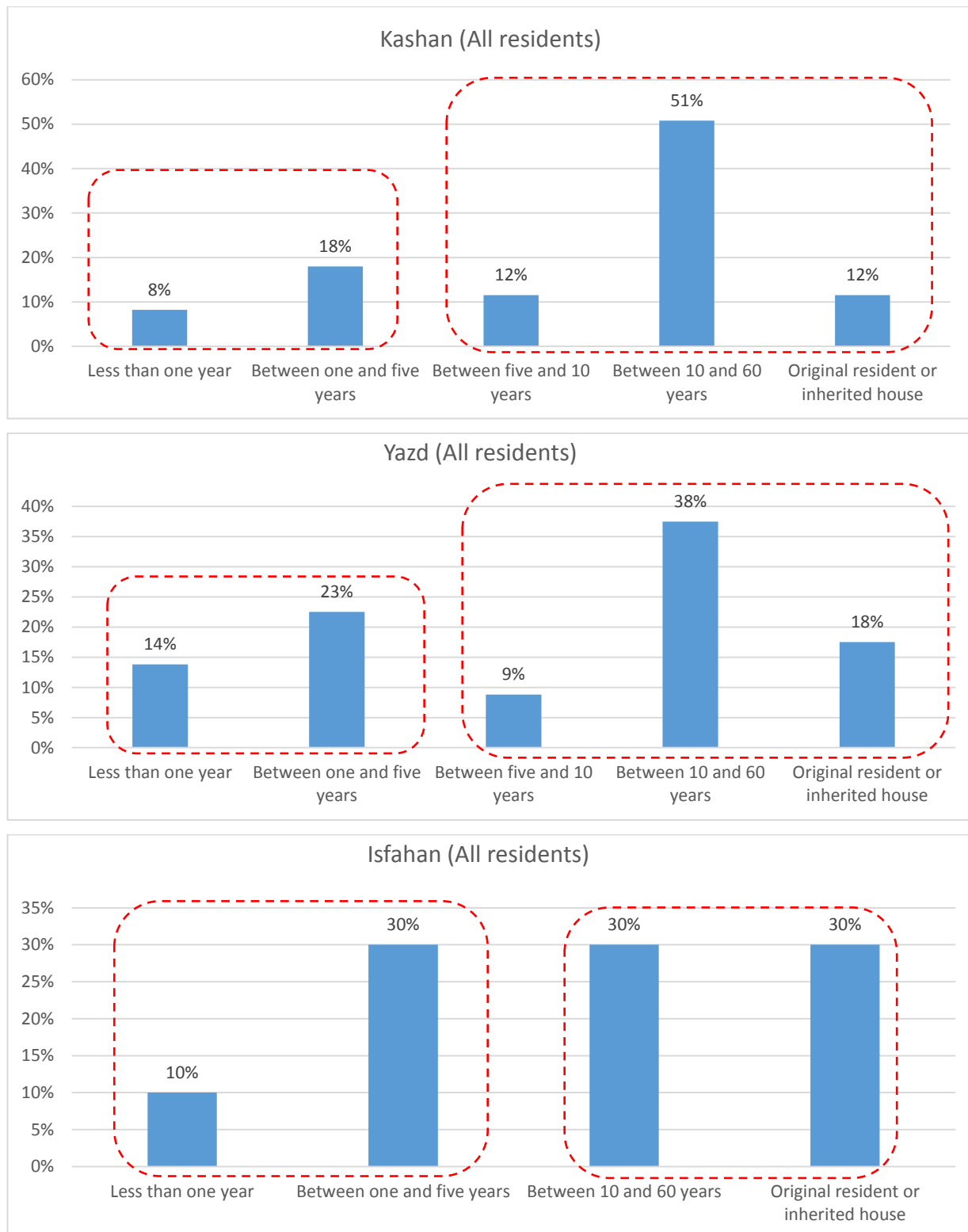


Figure 6.2: Overall period of residency in three historic Iranian cities (Appendix C-1-2)

6.2.1. Correlation between DABs and the proportion of all new settlers

In Kashan, the largest percentages of newcomer residents per block are concentrated in the two most dilapidated-abandoned urban blocks (B-1 and B-15). Accordingly, in other sample blocks

of Kashan with a lower percentage of DABs (respectively B-2, B-3, B-16 and B-5) the proportion of newcomers has significantly decreased (Figure 6.3).

Among urban blocks of Yazd, a clear tendency can be observed, wherein the percentage of newcomers establish a direct link with the ratio of DABs per block. Nonetheless, among the three studied urban blocks of Isfahan, a relationship between the population of new settlers and the quantity of DABs per block cannot be detected that relate to stronger land economy (Figure 6.3).

The strong correlation between the percentage of all newcomers and the proportion of DABs in Yazd and Kashan can indicate the liminal qualities of DABs. Accordingly, this can suggest that spatial liminality type-A can establish a strong correlation with the extent of DABs, that has attracted a large proportion of low-income and/or non-Iranian newcomers towards historic areas.

A lack of association between the proportion of DABs and the percentage of all newcomers in Isfahan¹ can be seen as an anomaly (Figure 6.3), which mainly relates to higher land value in Isfahan, as previously elaborated in sections 5.2, 5.5 and 5.6.

In this sense, it can be assumed that because of the strategic adjacency of surveyed blocks and the Isfahan Bazaar, DABs are a valuable commodity and mostly utilised as commercial storage areas (see section 5.2.3 and Figure 5.14). In this case, unlike Kashan and Yazd, the historic fabrics of Isfahan could not be considered as a cheap housing option for newcomers or disadvantaged, liminal communities.

¹ This lack of correlation is also relevant to a lesser number of case studies in Isfahan, compared to that of Kashan and Yazd.

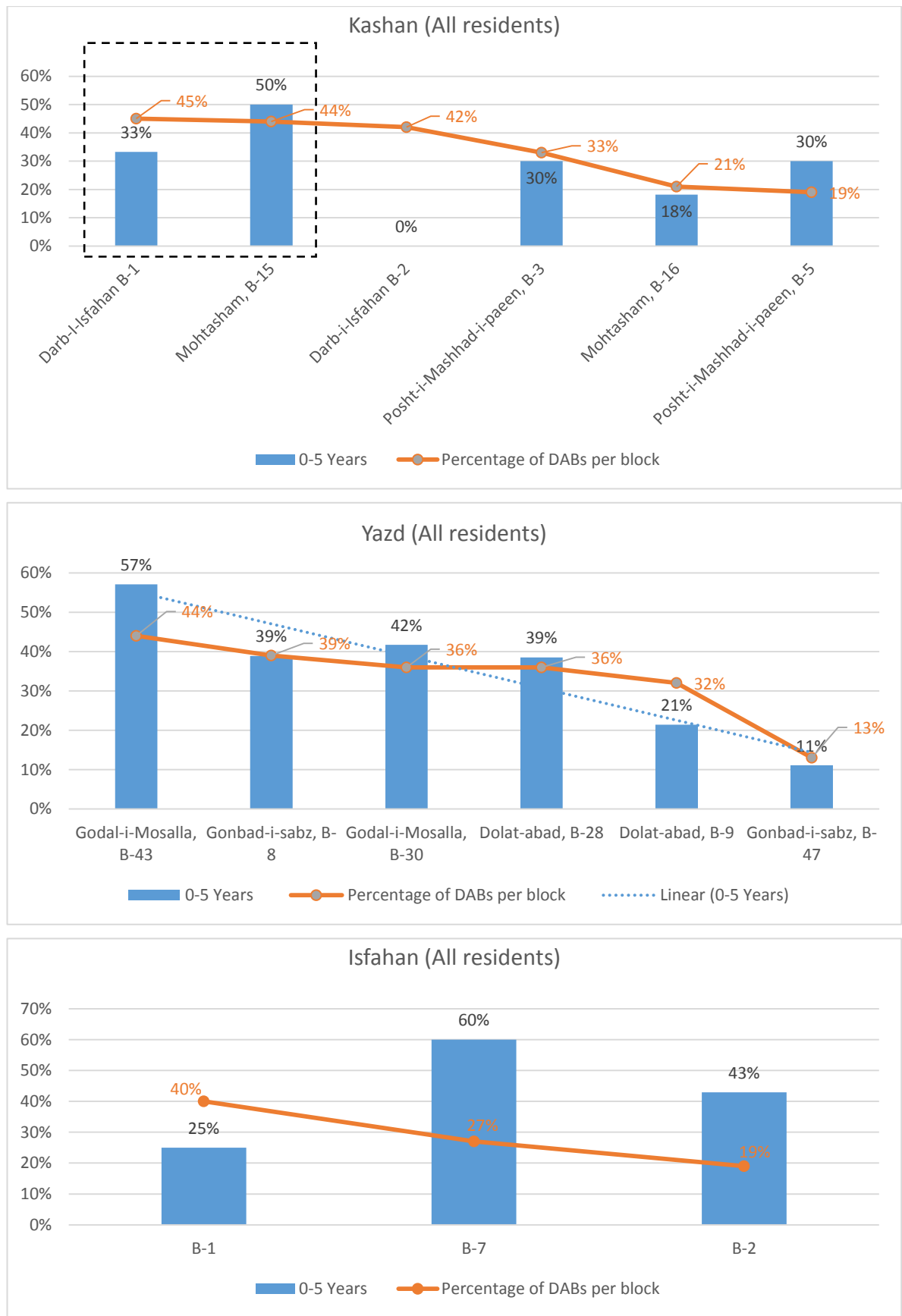


Figure 6.3: Analysing the proportion of all new settlers in historic cities in 2018 (Appendix C-1-3)

6.2.2. Correlation between DABs and the overall distribution of new settlers

In an assorted crosstab analysis based on the period of residency and percentage of DABs in Yazd, Kashan and Isfahan a meaningful link between the two variables among local residents cannot be recognised (Figure 6.4).

On the other hand, it is clarified that significant proportions of 75%, 89% and 100% of refugee residents respectively in Kashan, Yazd and Isfahan have settled in historic fabrics for a period less than five years (Figure 6.5). Besides, within these three historic cities, a significant link between the overall distribution of newcomer refugees and the extent of DABs is observable.

Accordingly, in Kashan 42% of newcomer refugees have settled in one-third of surveyed sample blocks with the highest proportion of DABs (i.e. DABs=45% and 44%), while only 33% of newcomer refugees have settled in two-thirds of urban blocks with the lowest proportion of DABs (i.e. DABs=42 %, 33%, 21% and 19%).

Additionally, almost all refugee residents who have settled in historic Kashan for a period of more than five years are living in highly dilapidated areas (i.e. DABs=45%, 42% and 33%). Such a demographic trend can suggest that the liminal qualities of highly dilapidated-abandoned blocks (i.e. spatial liminality type-A) can generate a preferable condition² for refugees who have immigrated to historic areas for a longer period of time.

In Yazd, the two sample blocks with the highest percentage of DABs (i.e. DABs=44% and 39%) contain 66% newcomer residents, while in four other urban blocks with a lower percentage of DABs the population of newcomer refugees was only 23%.

In Isfahan, 80% of newcomer refugees have settled in two highly dilapidated-abandoned urban blocks, while only 20% have settled in an urban block with a lesser percentage of DABs.

² Preferred condition can be relevant to the lower value of housing and/or a lack of public supervision by police and immigration authorities that allows refugees to reside for a longer period of time in highly dilapidated-abandoned urban blocks, to be further deliberated in Chapter 9.

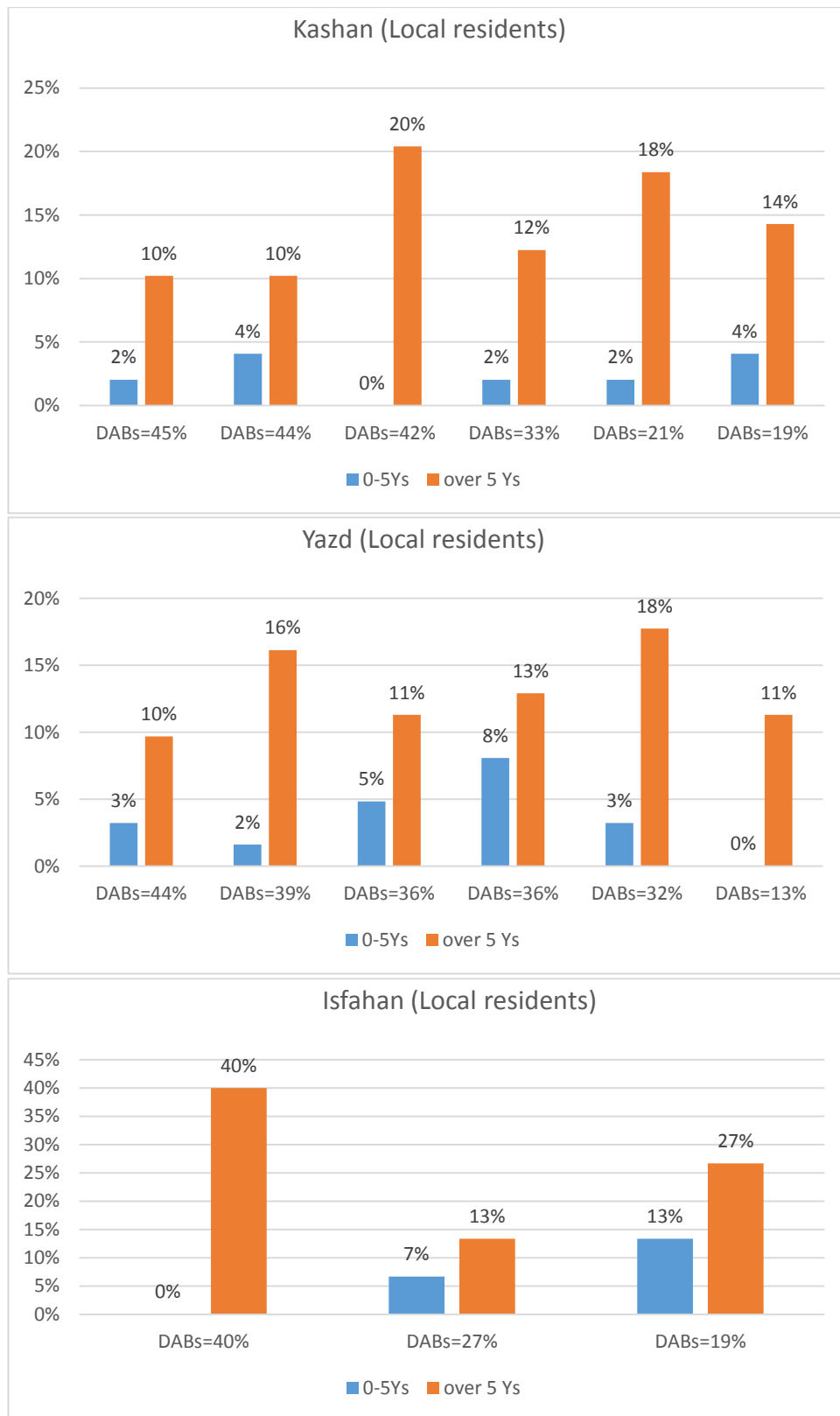


Figure 6.4: Comparing the overall distribution of new settlers per block among local residents in three historic cities (Appendix C-1-4)

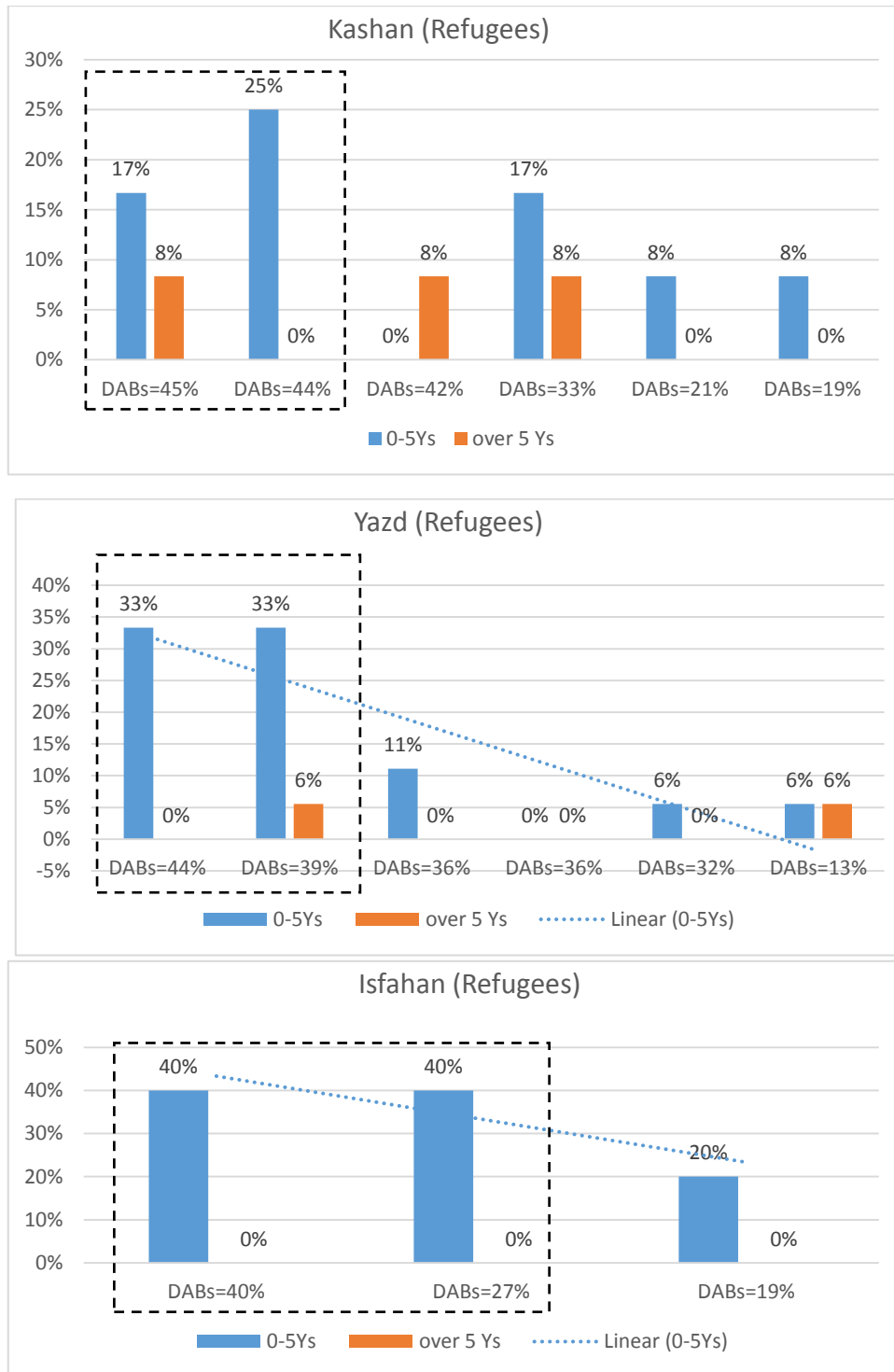


Figure 6.5: Comparing the overall distribution of new settlers per block among refugees in three historic cities (Appendix C-1-5)

6.3. Comparing types of housing tenure per block

Among all 161 respondents, a question was asked in order to understand the percentage of leaseholders (as a possible indication of liminal residents) per block (see section 4.7.3, Chapter

4). Relevant answers may include one of the two following options: (1) I am a leaseholder, or (2) I am the owner of this house (see Appendix C-2).

The results of the survey show that inside Yazd, Kashan and Isfahan, on average, almost 28% of respondents are leaseholders. Nonetheless, 72% verified that they own their residences (Appendix C-2-1). Besides, in the sample blocks of Kashan, Yazd and Isfahan about 25%, 30% and 30% of respondents respectively are identified as leaseholders (Appendix C-2-2).

Accordingly, it is quite probable that among this large percentage of leaseholders inside these historic cities, many residents belong to non-Iranian disadvantaged and/or refugee communities, who have chosen a cheap housing option (section 7.2). Thus, as the main inquiry in this research previously suggested (see Section 4.2, Chapter 4); the following discussions aim to understand the relationship between the proportion of leaseholders (as an independent variable of spatial liminality type-A) and the ratio of DABs per block in 15 urban blocks.

6.3.1. Correlation between DABs and the proportion of all leaseholders

In Kashan, the largest percentages of leaseholder residents per block (i.e. respectively 22% and 40%) are concentrated in the two most dilapidated-abandoned urban blocks (B-1 and B-15). Accordingly, with one exception (B-3) in other sample blocks of Kashan with a lower percentage of DABs (respectively in B-2, B-16 and B-5), the proportion of leaseholders has also significantly decreased (Figure 6.6).

In Yazd, the largest percentages of leaseholders (i.e. respectively 50% and 33%) are accumulated in the two most dilapidated-abandoned urban blocks (B-43 and B-8). Accordingly, with one exception (B-47) in other sample blocks of Yazd with a lower percentage of DABs (respectively in B-30, B-28 and B-9) the proportion of leaseholders has significantly decreased (Figure 6.6).

Similarly, among the three studied urban blocks of Isfahan, the largest percentages of leaseholders (i.e. respectively 25% and 60%) are concentrated in two urban blocks (B-1 and B-7) with the highest percentage of DABs, while the urban block with the lowest proportion of DABs (B-2) only yielded 19% of leaseholders (Figure 6.6).

Thus, in all three cases, a conspicuous relationship between the percentage of DABs and the proportion of all leaseholders per block became evident.

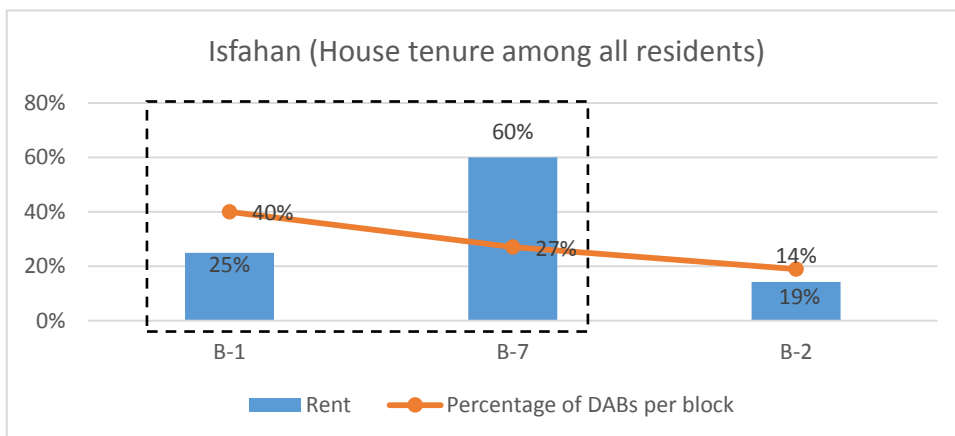
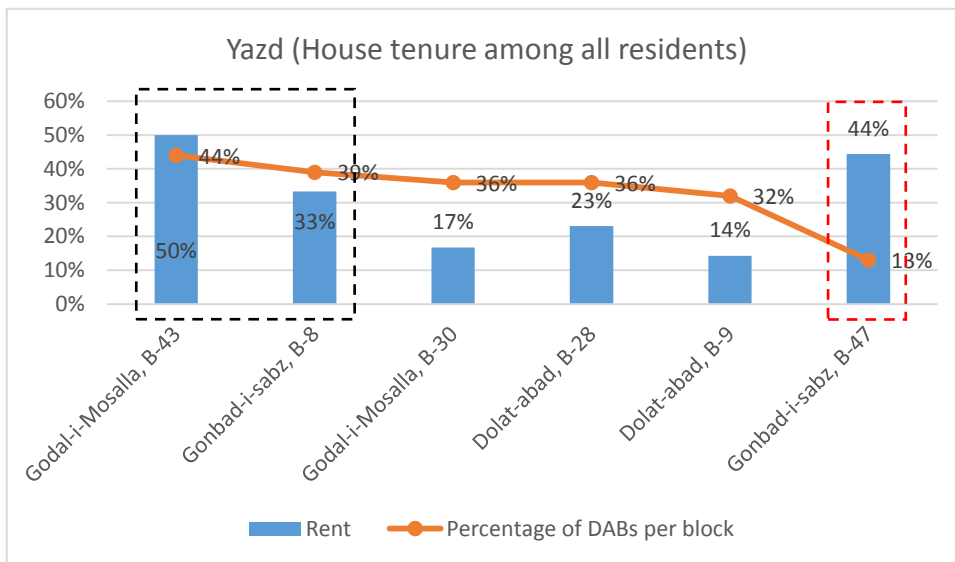
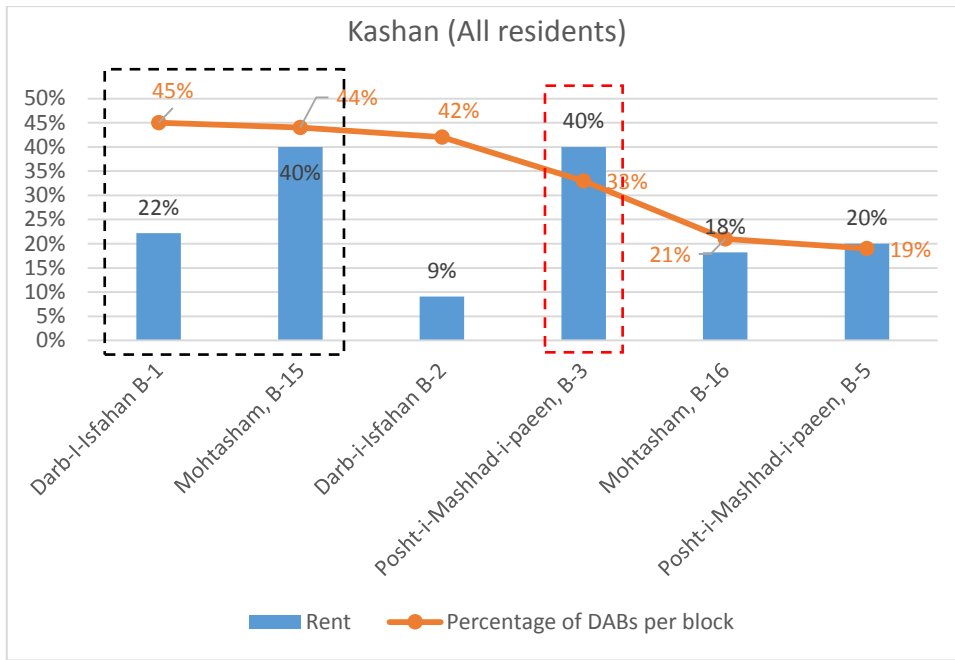


Figure 6.6: Analysing the percentage of all leaseholders in historic cities in 2018 (Appendix C-2-3)

6.3.2. Correlation between DABs and the overall distribution of housing tenure per block

As a result of conducting a crosstab analysis among local residents, an association between the percentage of DABs and the distribution of leaseholders in Yazd, Kashan and Isfahan cannot be observed (Figure 6.7). However, a significant association between the overall distribution of refugee leaseholders and the percentage of DABs in these cities is evident (Figure 6.8).

In Kashan, 42% of leaseholder refugee are accumulated in one-third of urban blocks with the highest percentage of DABs (i.e. DABs=45% and 44%), while only about 50% of refugee leaseholders have settled in two-thirds of urban blocks with the lowest percentage of DABs (i.e. DABs=42%, 33%, 21% and 19%). Nonetheless, only 8% of refugees who own their settlements are gathered specifically in the most dilapidated-abandoned urban block (i.e. DABs=45%). Such a meaningful distribution of housing tenure can suggest that spatial liminality type-A has been accompanied by highly dilapidated-abandoned blocks. It seems that DABs can generate a desirable condition³ either for non-Iranian newcomers or for immigrants who have settled in historic areas for a longer period of time with a chance to own their residences (Figure 6.8).

Additionally, in Yazd, 66% of refugee leaseholders are accumulated in one-third of surveyed cases which have yielded the largest proportion of DABs per block (i.e. DABs=44% and 39%). Nevertheless, only 28% of leaseholder refugees are living in two-thirds of surveyed cases, with the lowest percentage of DABs per block (i.e. 36%, 36%, 32% and 13%).

In Yazd, not unlike Kashan, only 6% of refugees own their settlements, while also gathered in one of the highly dilapidated-abandoned urban blocks which can generate a desirable condition⁴ for liminal residents (i.e. DABs=39%). This demographic trend can reiterate the idea that highly dilapidated-abandoned urban blocks in historic Yazd can be associated with spatial liminality type-A, which generates a preferable place⁵ for better-off refugees to own their dwellings.

Furthermore, in Isfahan, 80% of leaseholder refugees have settled in two highly dilapidated-abandoned urban blocks, while only 20% are accommodated in the urban block with the lowest percentage of DABs (Figure 6.8).

³ A desirable condition for refugees can be relevant to the lower value of housing and/or lack of public supervision by police and immigration authorities that allows better-off refugees to own properties in highly dilapidated-abandoned urban blocks.

⁴ See footnote 3.

⁵ Ibid.

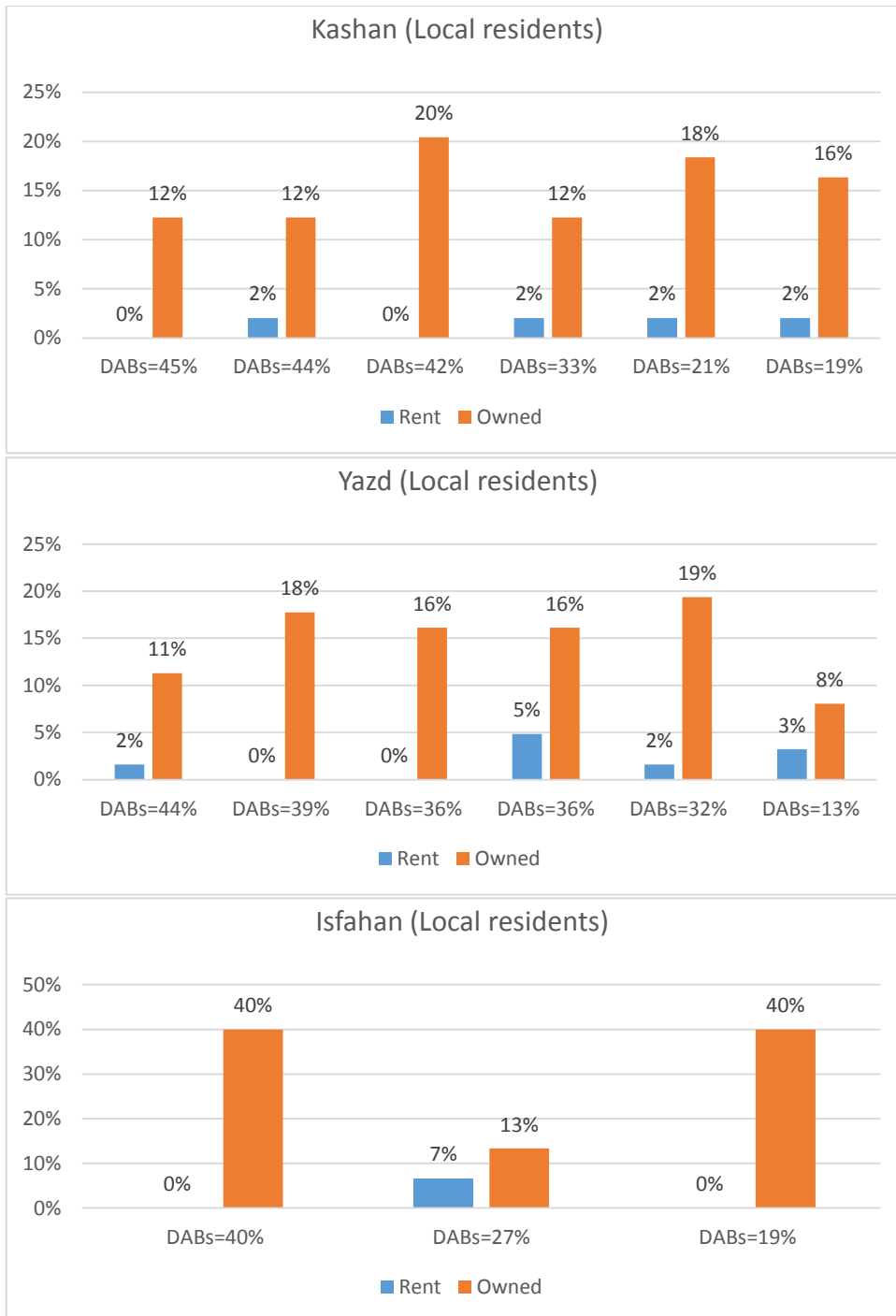


Figure 6.7: Comparing the distribution of housing tenure among local residents in three historic cities (Appendix C-2-4)

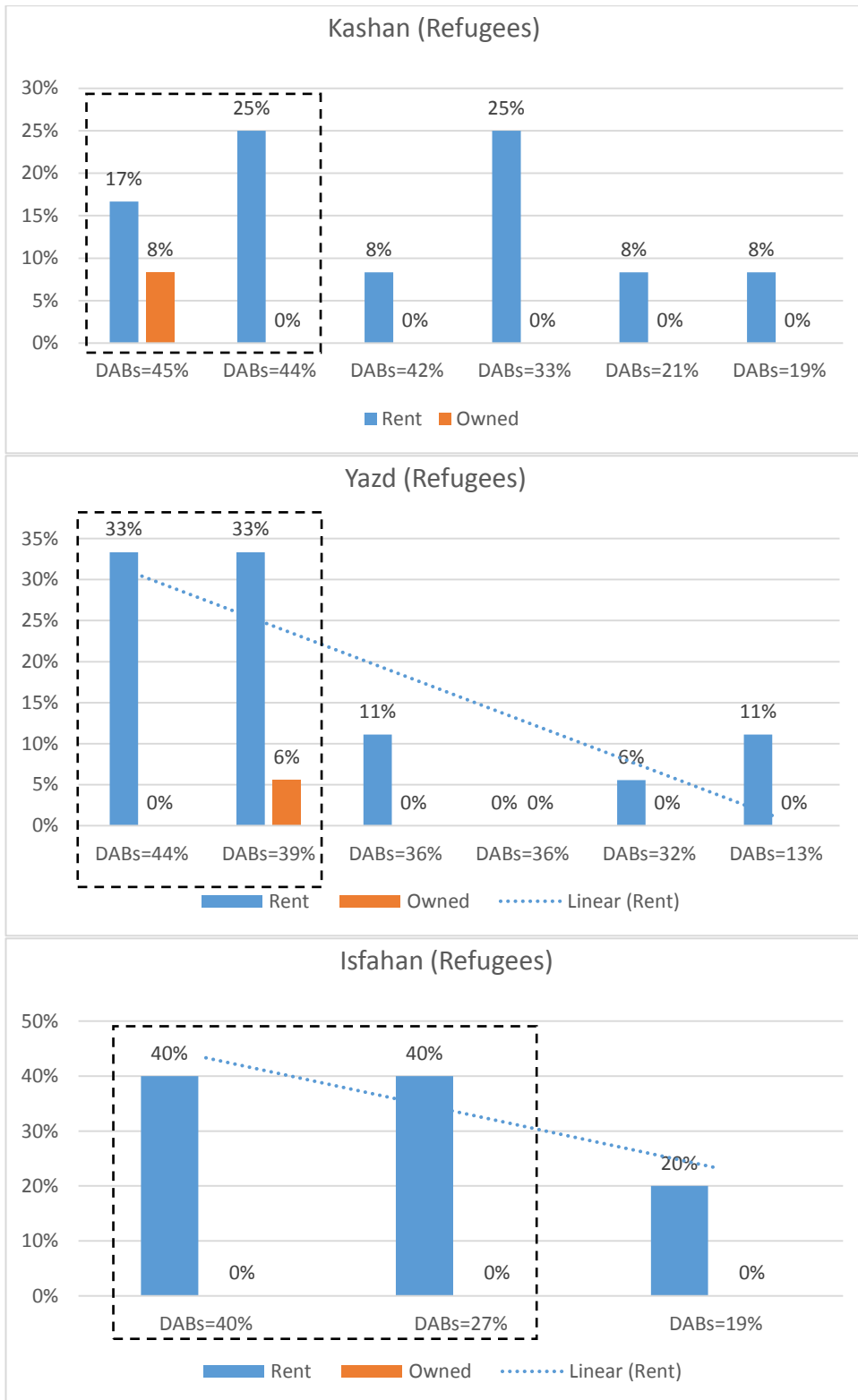


Figure 6.8: Comparing the distribution of housing tenure among refugee residents in three historic cities (Appendix C-2-5)

6.4. Comparing the ratio of building deterioration inside historic cities

Among 161 respondents, a question was asked in order to understand the percentage of deteriorated residences (as a possible indicator of liminality-vulnerability of residents) per block in historic cities (see section 4.7.3, Chapter 4). The relevant answers may include one of the two following options: (1) the house needs urgent repairs, or (2) the house does not need urgent repairs (see Appendix C-3).

The results from surveys and physical observations conducted by the researcher, showed that inside Yazd, Kashan and Isfahan, on average a substantial proportion (76%) of the surveyed houses needed urgent building maintenance. Nonetheless, about a quarter (24%) of the surveyed homes did not need building repairs (Appendix C-3-1). The surveys in Kashan, Yazd and Isfahan respectively indicated that 75%, 72% and 95% respectively of surveyed houses needed urgent maintenance (Appendix C-3-2).

Accordingly, it is quite probable that among this large percentage of deteriorated homes, many residents belong to low-income disadvantaged communities, so they cannot afford to pay for house maintenance (see section 7.2). Correspondingly, as the main inquiry in this research suggests, the following discussions aim to understand how the ratio of building deterioration (as an indicator of spatial liminality type-A) could be related to the percentage of DABs per block in the 15 surveyed case studies.

6.4.1. Correlation between DABs and the proportion of all deteriorated buildings

Among the case studies, urban blocks in historic Yazd and Kashan show a relationship between two variables, while in Isfahan, this connection could be considered even stronger. This liminal quality also needs to be discussed regarding the impact of government heritage policies, where they exist. Thus, in historic cities, such deteriorated buildings directly are connected to the impact of preservation laws, combined with high cost and low availability of expertise for the renovation of historic buildings, as will be discussed in Chapter 8 (sections 8.2 and 8.4).

In Kashan and Yazd, among 50% of cases, a direct relationship can be seen between the proportion of houses in need of urgent repairs and the percentage of DABs per block. Accordingly, with several exceptions (B-15, B-3, and B-5 in Kashan and B-43, B-9, and B-47 in Yazd), in other sample blocks the percentage of deteriorated houses shows a statistically significant reduction where the percentage of DABs has decreased per block (Figure 6.9).

Additionally, in Chapter 4 (section 4.8), B-15 in Kashan and B-28 in Yazd were considered as universal outliers. If B-15 and B-28 are deducted from the current analysis, then the correlation

between the two variables will become significant, and increase to over 60% among all residents in both historic cities.

Nevertheless, in Isfahan, a perfect relationship between the percentage of homes which need urgent repair and the proportion of DABs per block could be detected, where 100%⁶ of houses located in largely dilapidated areas are surveyed as deteriorated (Figure 6.9).

⁶ 100% in this inquiry seems unrealistic. Consequently, larger numbers of participants need to be employed for providing reliable outcomes.

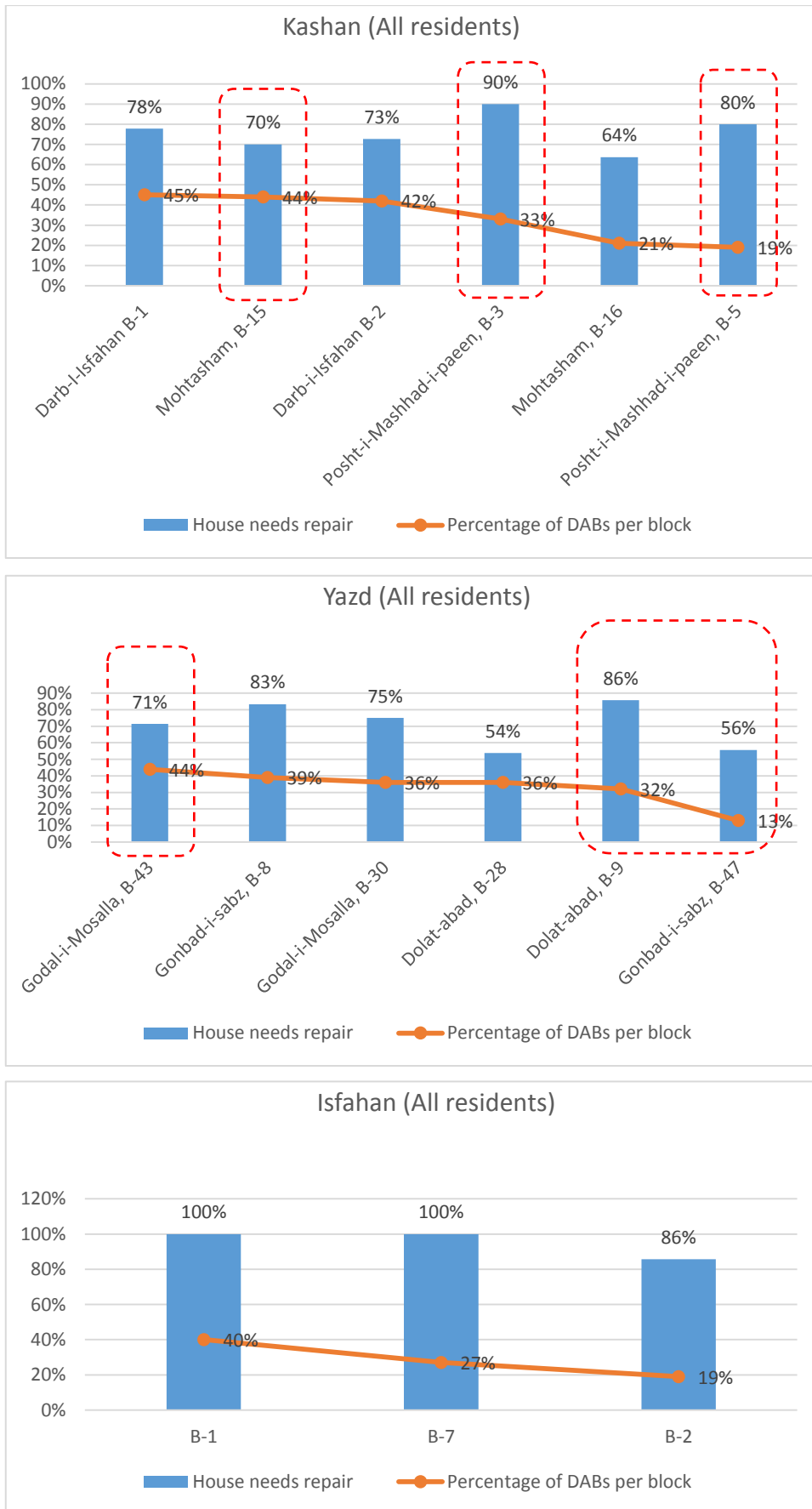


Figure 6.9: Analysing the percentage of all deteriorated housings in historic cities in 2018 (Appendix C-3-3)

6.4.2. Correlation between DABs and the overall distribution of deteriorated houses

As a result of running a crosstab analysis among local Iranian residents in 15 case studies, the percentage of homes which require urgent repair generally represent no identifiable relationship with that of DABs per block (Figure 6.10).

On the other hand, the outcome of crosstab analysis among non-Iranian disadvantaged immigrants in three historic cities indicate a clear trend, namely refugee dwellings which are located in highly dilapidated-abandoned areas are more likely to need urgent repair, compared to those located in areas with a lower percentage of DABs.

In Kashan about half of highly deteriorated refugee residences are accumulated in one-third of urban blocks which have yielded the largest proportion of DABs (i.e. DABs=44% and 45%), while the rest (about 50%) are dispersed in two-thirds of urban blocks with a lower percentage of DABs (Figure 6.11).

In Yazd, this correlation between the two variables becomes more substantial. In this case, 67% of all extremely deteriorated refugee residences cover one-third of sample blocks that have yielded the most extensive levels of DABs (i.e. DABs=44% and 39%).

In Isfahan, this trend is also observable where 100%⁷ of all highly deteriorated refugee dwellings are located in the two most dilapidated-abandoned sample blocks (i.e. DABs=40% and 27%). In this case, the sample block with the lowest percentage of DABs contains no refugee dwellings which need urgent repair (Figure 6.11).

⁷ See footnote 6.

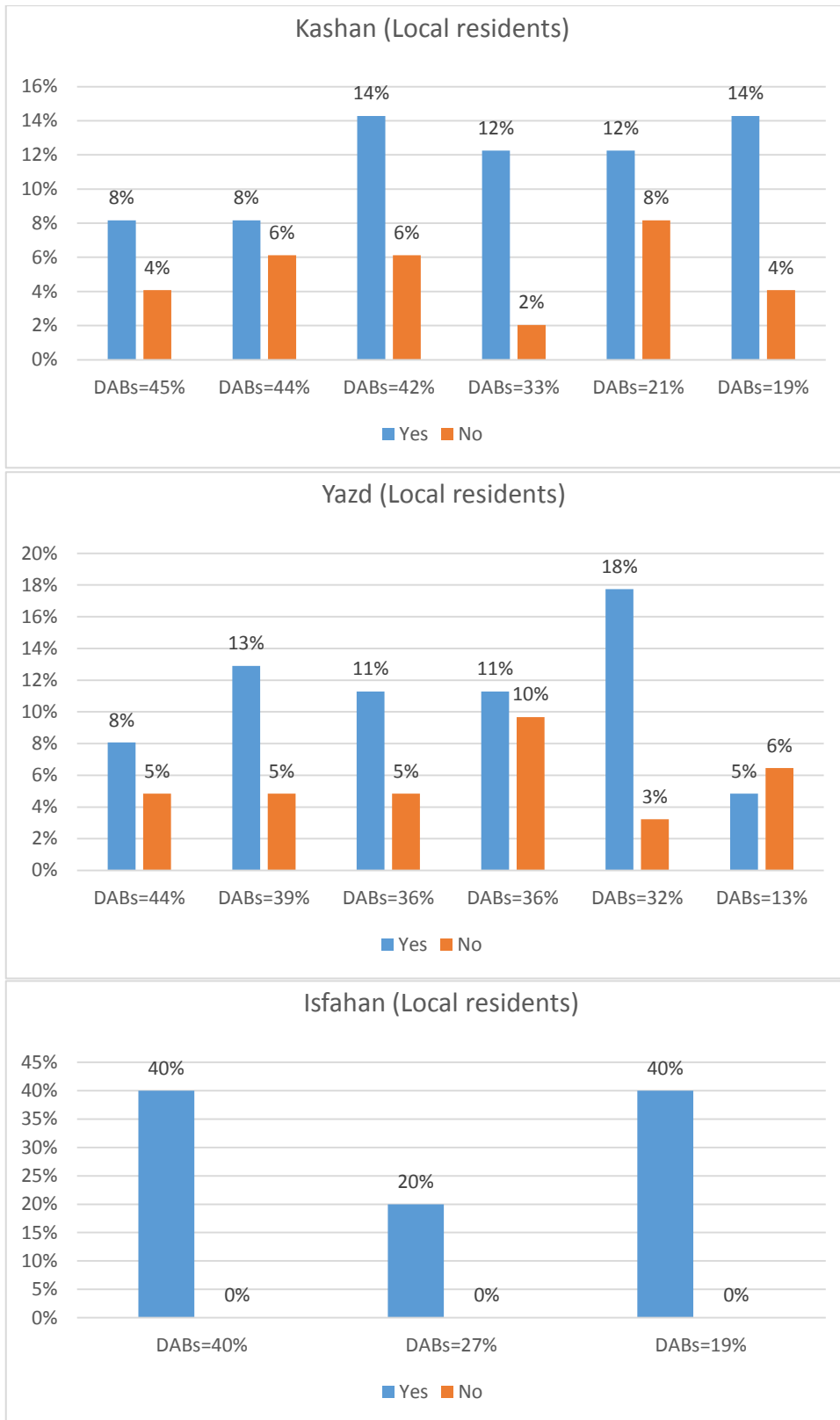


Figure 6.10: Comparing the distribution of deteriorated dwellings among local residents in three historic cities (Appendix C-3-4)

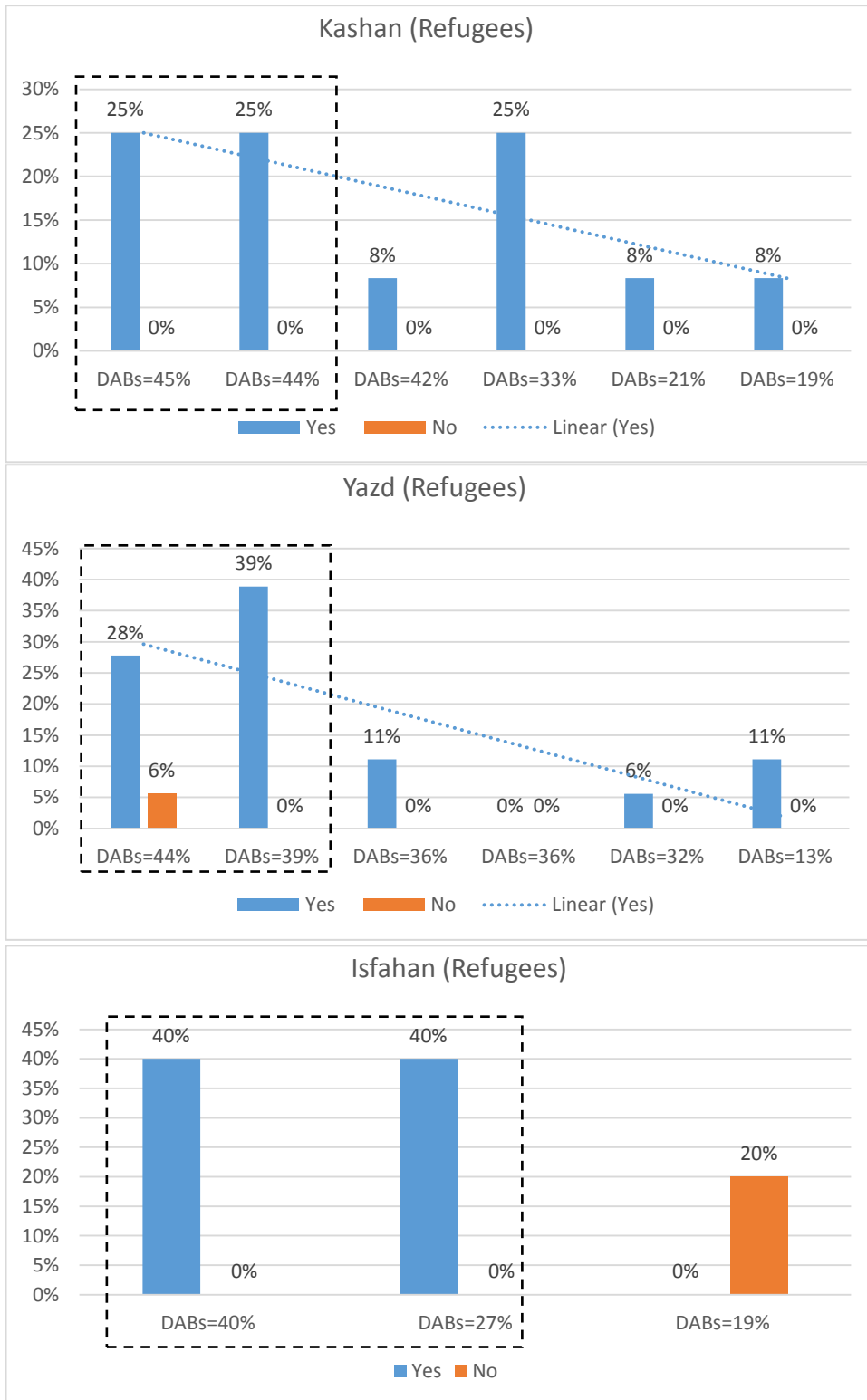


Figure 6.11: Comparing the distribution of deteriorated refugee dwellings in three historic cities (Appendix C-3-5)

6.5. Comparing types of employment per block

Among 161 respondents, a question was asked about measuring demographic conditions of liminality, regarding the ratio of low-income disadvantaged families in 15 urban blocks.⁸ The relevant answers to this question include six options, namely: (1) I am a retired labourer, (2) I am a casual labourer, (3) I am a retiree from a clerical job, (4) I have a clerical job, (5) I am unemployed, and (6) I am self-employed (see Appendix C-4).

The survey results show that inside the three historic cities of Yazd, Kashan and Isfahan, 17% of heads of households are retired labourers, while a significant proportion (35%) are casual labourers. Nonetheless, in about 8% of cases, the heads of households are retirees from clerical jobs, while 6% currently have a clerical job. Furthermore, it is disclosed that among all participants, approximately 6% of heads of households are unemployed and 28% are self-employed (Appendix C-4-1).

Accordingly, by examining the proportion of heads of families who are retired labourers, casual labourers or unemployed (as representatives of low-income disadvantaged families in Iran), clearly a significant proportion of participants (58%) belong to low-income disadvantaged communities who may have chosen historic cities as cheap housing options (see section 7.2).

Inside Kashan about 25% of surveys heads of households are retired labourers, while a significant proportion (41%) are casual labourers. Nonetheless, only 5% of heads of households are retirees from clerical jobs, while a tiny proportion (3%) currently have a clerical job. It was disclosed that among respondent families, 5% of heads of households are unemployed, and 21% are self-employed (Appendix C-4-2). Accordingly, by examining the proportion of heads of families who are retired labourers, casual labourers or unemployed⁹, clearly a significant proportion of participating communities (71%) are low-income disadvantaged families.

Inside sample blocks of Yazd in 10% of cases, the heads of households are retired labourers while at the same time a substantial proportion (about 34%) are casual labourers. Nonetheless, in 11% of cases the heads of households are retirees from clerical jobs, while about 8% of residents currently have a clerical job. Furthermore, it was revealed that among participating families about 6% of heads of households are unemployed, while approximately 31% are self-employed (Appendix C-4-2). Accordingly, by examining the proportion of heads of families

⁸ Low-income disadvantaged communities in this research are defined as households in which the head of the family is either unemployed or a retired/casual laborer, as defined in section 4.7.3 (Chapter 4).

⁹ See footnote 8.

who are retired labourers, casual labourers or unemployed (as an indicator of disadvantaged families in Iranian cities) this became obvious that slightly more than half of participating communities in historic Yazd are low-income disadvantaged families.

In three sample blocks of historic Isfahan, in 20% of cases heads of households are retired labourers, while 25% are casual labourers. Nonetheless, it is clarified that only in 5% of cases the heads of households are retirees from clerical jobs, while another portion of 5% currently have a clerical job. Furthermore, it was discovered that among participating families in 10% of cases heads of households are unemployed, while 35% are self-employed (Appendix C-4-2).

Accordingly, by examining the proportion of heads of families who are retired labourers, casual labourers or unemployed (low-income families in Iranian cities) one can perceive that in more than half of the cases (55%) residents are disadvantaged and/or possibly liminal households. Nonetheless, section 5.2.3 (Figure 5.14) suggests that the stronger land economy in Isfahan does not allow too many non-Iranian refugees to settle in historic urban areas. Therefore, such a huge proportion of low-income disadvantaged families could considerably overlap with local Iranian and/or original residents.

6.5.1. Correlation between DABs and the percentage of disadvantaged residents

This section analyses the correlation between the percentage of (possibly liminal) low-income communities¹⁰ and the proportion of DABs per block. In the sample blocks surveyed in Kashan, Yazd and Isfahan, in a large proportion of cases, a strong relationship is observed between the two variables, amongst all residents:

In Kashan within the four highly dilapidated-abandoned urban blocks (B-1, B-15, B-2 and B3) the ratio of low-income disadvantaged communities is 73% and over (up to 80%). In comparison, the ratio of low-income disadvantaged communities in the two urban blocks with the lowest proportion of DABs does not exceed 60%.

In Yazd among 66% of cases (B-43, B-8, B-30 and B-28), a clear association could be understood between the ratio of low-income disadvantaged populations and the percentage of DABs per block (Figure 6.12).

In Isfahan, among all cases, a clear relationship could be seen between the proportion of low-income (possibly liminal) residents and the percentage of DABs per block (Figure 6.12).

¹⁰ See footnote 8.

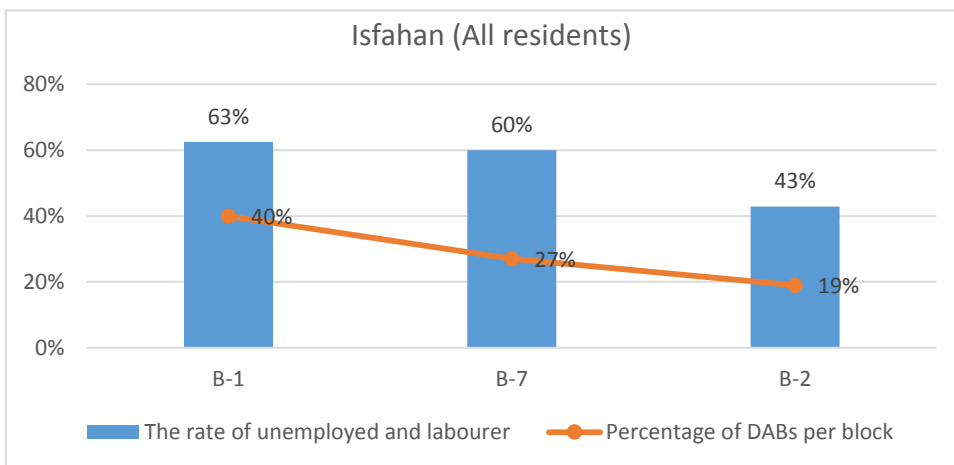
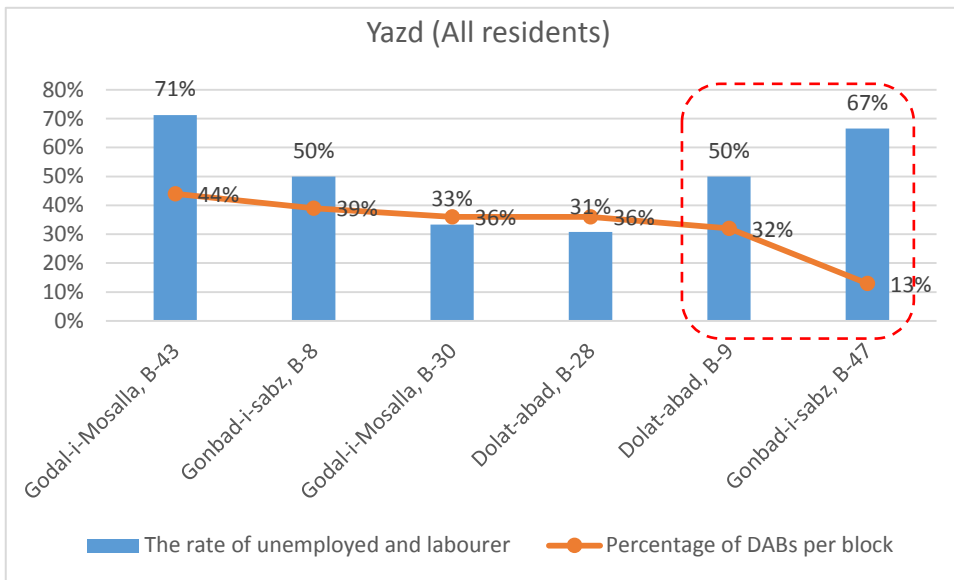
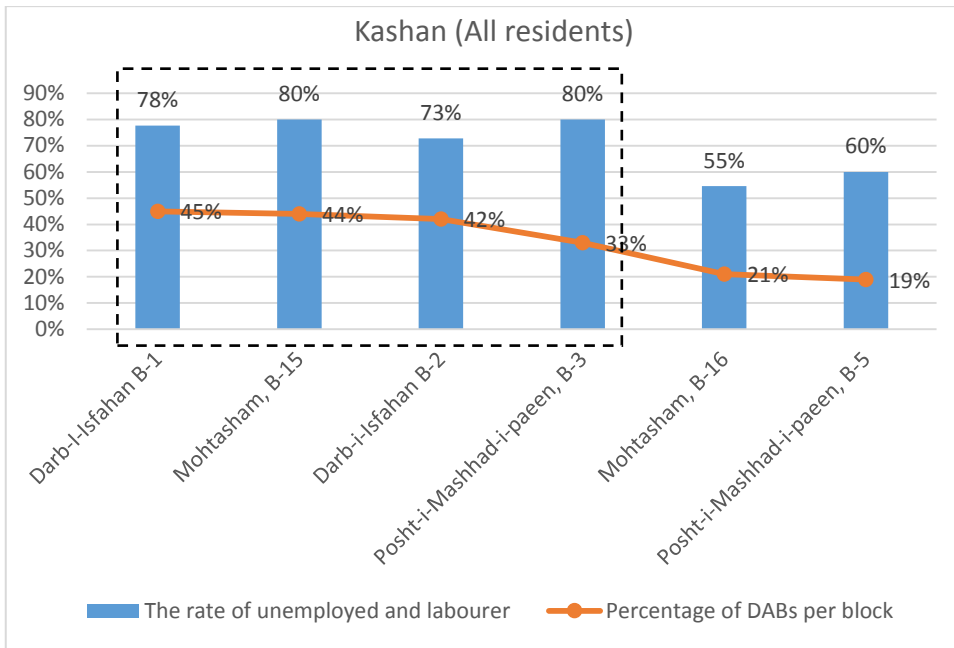


Figure 6.12: Analysing the percentage of all low-income disadvantaged communities in historic cities in 2018 (Appendix C-4-3)

6.5.2. Correlation between DABs and the overall distribution of disadvantaged residents

Previously in section 4.7.3 (Chapter 4), it was discussed how (retired) labourers and unemployed people in Iranian cities struggle to acquire basic needs such as food and accommodation. In this sense, it was clarified how such low-income disadvantaged communities could be considered the liminal population experiencing rites of passage in historic urban areas. Correspondingly, the following analysis aims to arrive at the association between the extent of DABs and overall distribution of low-income disadvantaged communities in historic urban areas in Kashan, Yazd and Isfahan.

Accordingly, a crosstab analysis was conducted among local and refugee residents. It was observed that 62%, 35% and 57% of participating local residents respectively in Kashan, Yazd and Isfahan were low-income disadvantaged communities. However, a significant link between the extent of DABs and accumulation of such (local Iranians) low-income disadvantaged participants cannot be observed (Figure 6.13).

On the contrary, among refugee participants in Kashan, Yazd and Isfahan a significant correlation between the extent of DABs and the accumulation of low-income disadvantaged communities can be established.

In Kashan about half of all low-income disadvantaged communities have settled in one-third of sample blocks which have yielded the largest proportion of DABs (i.e. DABs=44% and 45%), while the other poor refugees are living in two-thirds of urban blocks with a lower percentage of DABs (Figure 6.14).

In Yazd, a similar trend is significantly observed where 72% of vulnerable/low-income refugees are living in one-third of all urban blocks which have yielded the largest proportion of DABs (DABs=44% and 39%).

In Isfahan, the same trend is observable where 80% of the refugee population, either labourers or unemployed persons, are living in two-thirds of urban blocks with the highest percentage of DABs, while self-employed refugees have settled in an urban area with the lowest percentage of DABs.

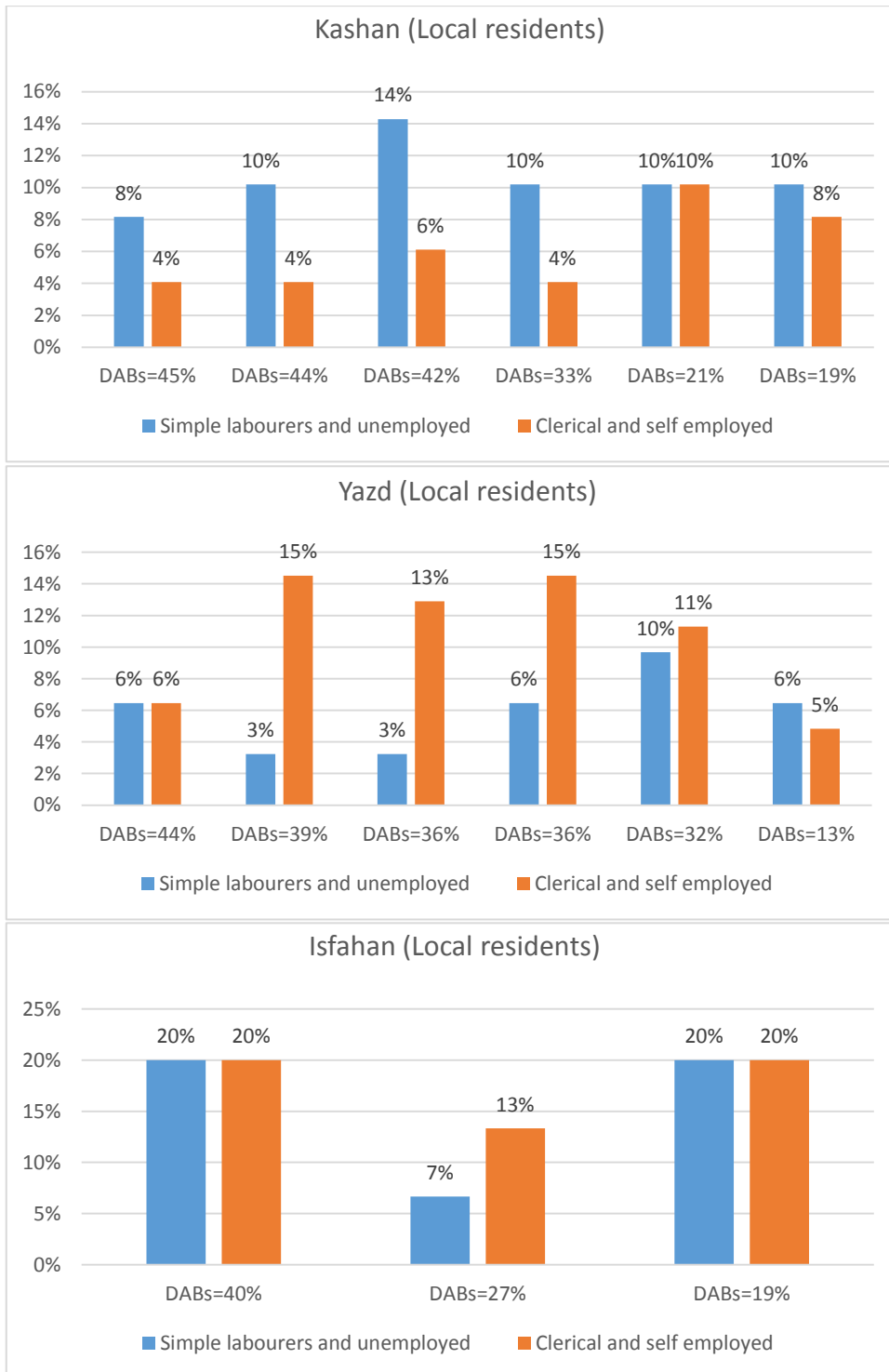


Figure 6.13: Comparing the distribution of low-income local residents in three historic cities (Appendix C-4-4)

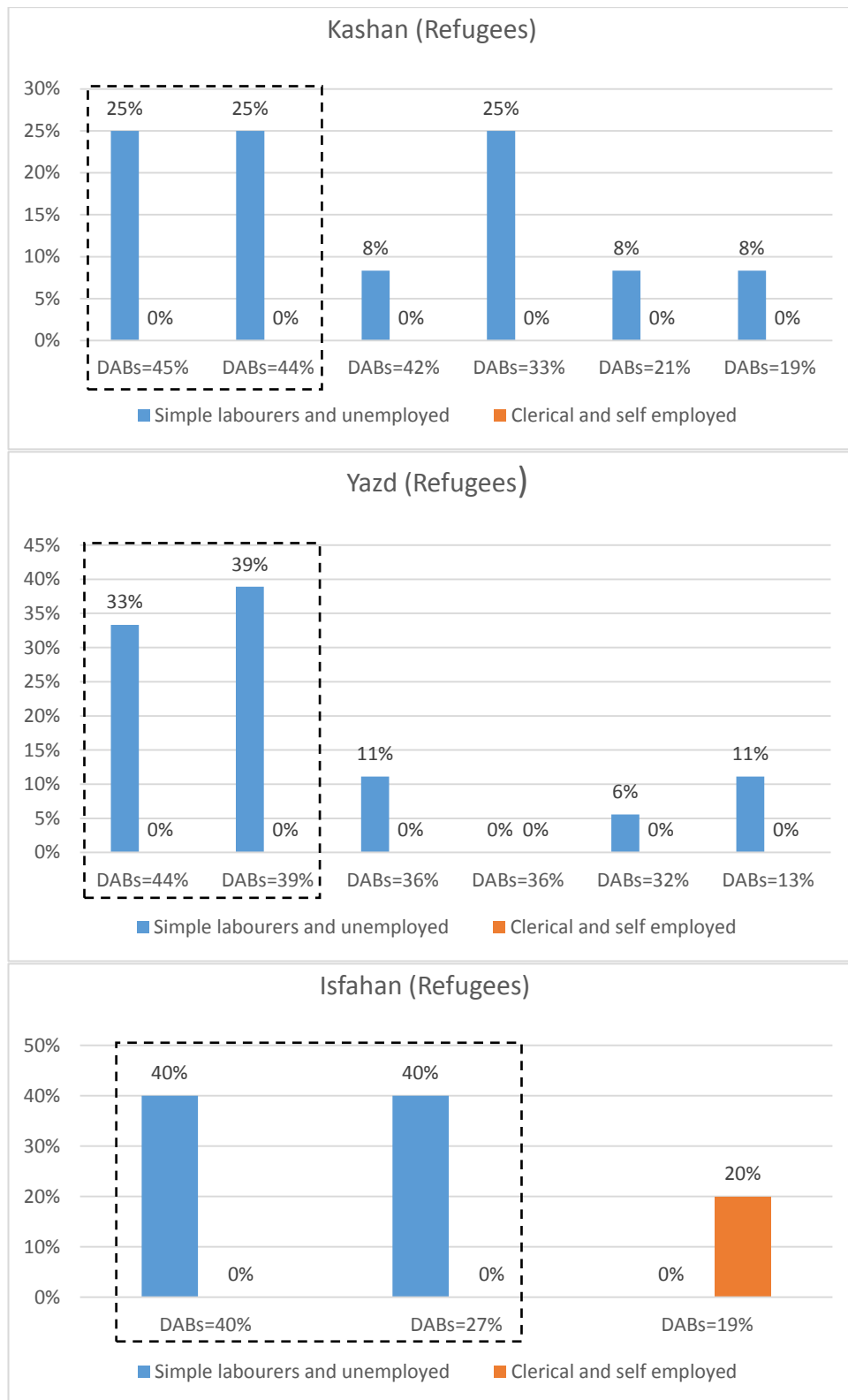


Figure 6.14: Comparing the distribution of low-income refugee residents in three historic cities (Appendix C-4-5)

6.6. Comparing the ratio of refugees per block

This question was designed to measure the demographic conditions of liminal refugees in seven urban tissues (see section 4.7.3, Chapter 4). The relevant answers correspond to one of the two following options, namely: (1) I am a local resident, and (2) I am a foreign refugee or non-

Iranian immigrant (see Appendix C-5). The survey results indicate that inside the three historic cities of Yazd, Kashan and Isfahan, more than 78% of households are local residents, while a significant proportion (about 22%) are foreign refugees or non-Iranian migrants (Appendix C-5-1).

In Kashan, 80% of households could be considered as local Iranian residents while a significant proportion (nearly 20%) of participating families are foreign refugees or non-Iranian migrants. In Yazd, nearly 77% of households are local Iranian residents while a notable proportion (23%) can be identified as foreign refugees or non-Iranian migrants. Inside sample blocks of historic Isfahan, nearly 75% of households are local residents, while an outstanding proportion (25%) are foreign refugees or non-Iranian migrants (Appendix C-5-2).

This could prove the existence of liminal conditions inside selected sample blocks of Kashan, Yazd and Isfahan, not unlike conditions in a refugee camp (see section 3.3, Chapter 3). Accordingly, the following discussion aims to disclose how the ratio of DABs per block can be relevant to the accumulation of refugees or non-Iranian migrants, which subsequently confirms the formation of spatial liminality type-A in Iranian historic cities.

6.6.1. Correlation between DABs and the ratio of non-Iranian disadvantaged communities

Among three cases (Kashan, Yazd and Isfahan) the greater percentage of refugee residents shows a direct relationship with the higher extent of DABs in urban blocks.

Accordingly, in Kashan within the two highly dilapidated-abandoned urban blocks (B-1, B-15) the ratio of refugee and/or immigrant communities reaches 30% and over. In comparison, the ratio of refugee populations in the remaining urban blocks with a lower proportion of DABs (except in B-3) does not exceed 10% (Figure 6.15).

In Yazd, also within the two highly dilapidated-abandoned urban blocks (B-43, B-8), the proportion of refugees reaches 39% and over. Nevertheless, the accumulation of refugees per block within less dilapidated-abandoned urban blocks (B-30, B-28, B-9 and B-47) does not exceed 22%.

In a similar pattern, in Isfahan, the refugee population within two highly dilapidated-abandoned urban blocks (B-1 and B-7) exceeds 25%, while in the block with the lowest percentage of DABs this proportion is only 14%.

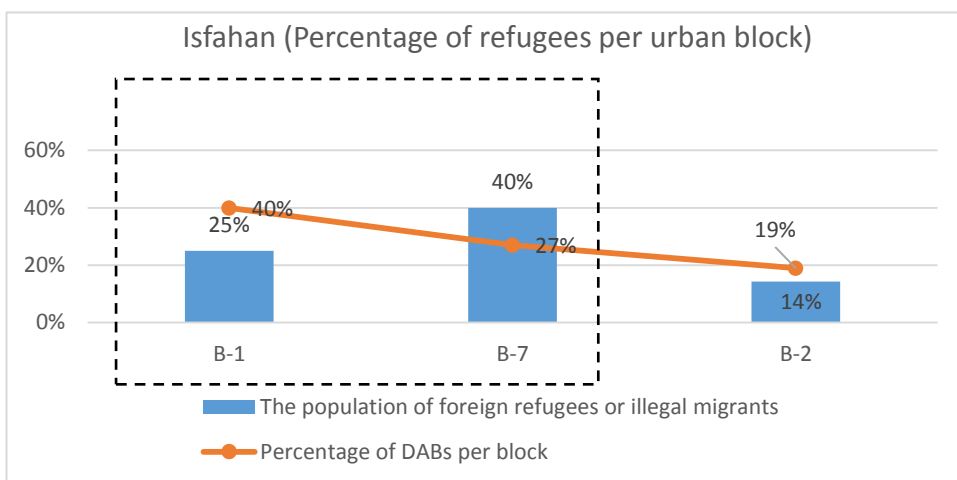
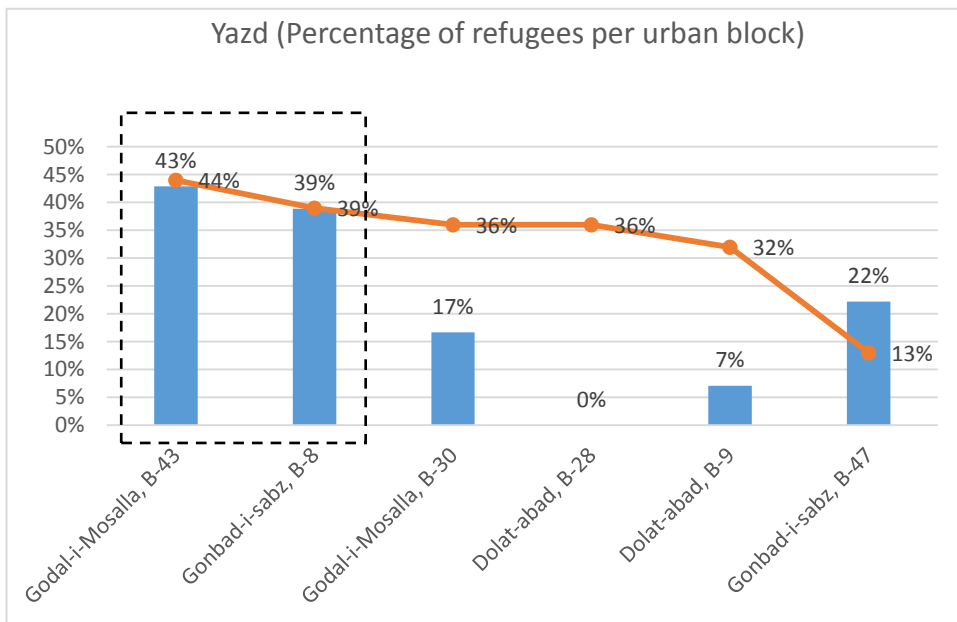
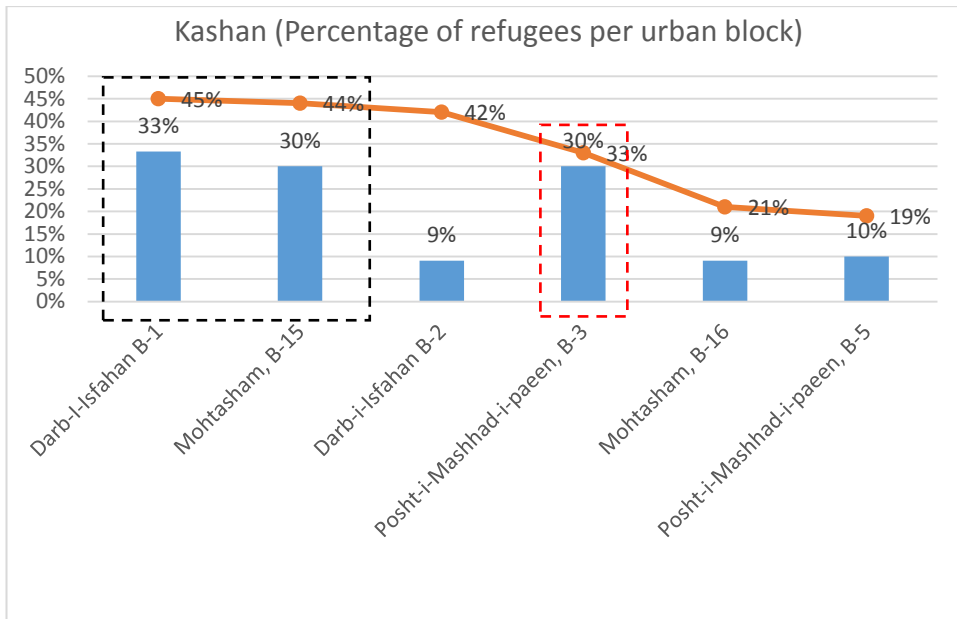


Figure 6.15: Analysing the percentage of refugee residents per urban block in historic cities 2018 (Appendix C-5-3)

6.6.2. Correlation between DABs and the overall distribution of refugees

A crosstab analysis was performed separately in each sample block, including cases in Kashan, Yazd and Isfahan. The results of the analysis represent no significant relationship between the overall distribution of local residents and the percentage of DABs (Figure 6.16).

On the other hand, a clear association is observed between the overall distribution of non-Iranian migrants and the extent of DABs in all three historic cities.

In Kashan about half of the liminal residents are accumulated in one-third of urban blocks with the highest proportion of DABs (i.e. 45% and 44%), while the remaining refugees have settled in two-thirds of urban blocks with a smaller proportion of DABs (Figure 6.16).

In Yazd, a stronger association between the refugee population and the percentage of DABs could be reconfirmed, where 72% of all refugees have gathered in one-third of urban blocks with the largest proportion of DABs (i.e. DABs=44% and 39%), and the remaining liminal population are living in two-thirds of urban blocks with a smaller percentage of DABs.

Additionally, in Isfahan, about 80% of the refugee population is living in two-thirds of urban blocks with the highest percentage of DABs, while only 20% of liminal residents have settled in the building block with the lowest percentage of DABs.

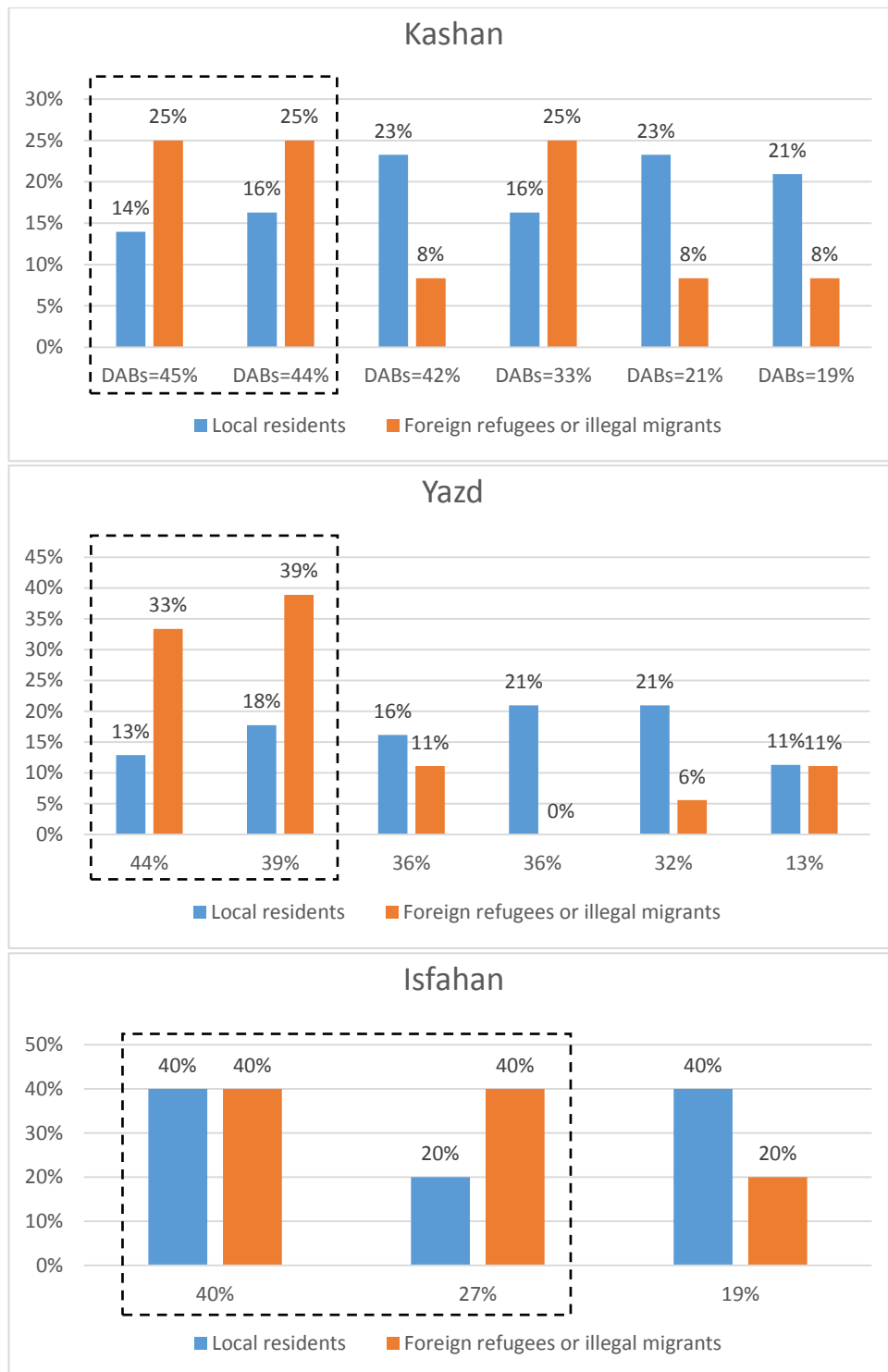


Figure 6.16: Comparing the overall distribution of refugees and local residents in three historic cities (Appendix C-5-4)

6.7. Summary

In this chapter, the relationships between several demographic aspects of spatial liminality (as theorised in sections 3.3 and 4.7.3) against the proportion of DABs in 15 case studies were discussed. The analysis of results facilitates a systematic understating and verified several types of relationships between spatial liminality type-A and the proportion of DABs in three historic Iranian cities, measured via street surveys.

This chapter utilised three layers of analytical approach. First, the chapter managed to measure the correlations between DABs and the proportion of liminal population among all residents in each sample block. The results indicated that the magnitude of spatial liminality type-A and the physical extent of DABs are significantly correlated.

At second and third levels, an advanced crosstab analysis was conducted in order to understand the correlation between overall distribution of liminal populations and the percentage of DABs, separately among local Iranian occupants as well as non-Iranian disadvantaged residents. The results and analysis suggested no clear correlation between the percentage of DABs and overall distribution of (possibly liminal) local Iranian residents. However, a clear connection between the percentage of DABs and overall distribution/accumulation of refugees was identified almost in all case studies.

It was discussed that the magnitude of associations between demographic aspects of spatial liminality type-A and the extent of DABs could be essentially related to population size and higher land value in broader urban contexts.

In this sense, a more significant correlation trend was discovered (between the two variables) in low-populated historic areas (i.e. Kashan). The quality of such liminal associations in cases with a larger amount of population (i.e. Isfahan) could diminish, possibly as a result of higher land and property values.

Chapter 7: Attitudinal Results and Analysis



Dilapidated abandoned houses in historic Yazd, 2018 (Source: author)

7.1. Introduction

In section 5.7 (see Chapter 5) it was discussed how spatial liminality can be understood in correlation with the extent of DABs in three historic Iranian cities. Correspondingly, in this chapter, the attitudinal aspects of spatial liminality type-B are further investigated in conjunction with more empirical references in 15 case-study urban blocks.

To do so, this chapter refers to sections 3.4.5 to 3.4.8 (see Chapter 3) about how the existence of spatial liminality type-B can be seen as a positive quality in the scale of neighbourhoods in historic cities. In this sense, spatial liminality type-B is used to form identity groups, generate social inclusion among residents as members of a community and/or neighbourhood, enhance social life and allow residents to meet personal needs through collective experience. It is explained here how such progressive qualities frequently occurred before modern movements transformed historic cities, which in most circumstances have weakened or do not exist at the present time. In this sense, spatial liminality type-B can be seen as a socio-spatial quality that facilitates public participation, social capital, a sense of spatial security, a sense of resident's satisfaction, and a sense of belonging to place among communities in historic neighbourhoods.

This chapter thus aims to discover possible relationships between such attitudinal aspects of spatial liminality type-B and the extent of DABs in case-study blocks within three historic Iranian cities. To obtain a reliable level of demographic information, several questions were asked of participants (see section 4.6.3, Chapter 4) to evaluate: (1) a sense of belonging to place (2) a sense of place satisfaction; (3) social capital among residents; (4) a sense of social safety among participants; (5) the perception of residents regarding proximity to DABs, and (6) a sense of place-based identity among residents.

Accordingly, this chapter represents the results and analysis of attitudinal inquiry implemented via street surveys in 15 urban blocks. It uses descriptive analysis on three levels. At the first level, the state of spatial liminality is measured among all residents in each urban block. At second and third levels, the overall distribution of residents is analysed separately among local Iranian and non-Iranian disadvantaged residents.

At second and third levels data clustering and segmentation techniques are used to analyse relevant outcomes that involve the grouping of data points. In both Yazd and Kashan, each group of six surveyed urban blocks are clustered in three groups, each containing a couple of case studies that have shown similar or closer yields of DABs, represented by the highest, medium and lowest percentage of DABs.

7.2. Individual motivations for immigrating to historic areas among all residents

Among 161 respondents, a question was asked about evaluating a sense of belonging to place (see 4.6.3, Chapter 4). The relevant answers included one or more of the following options: I have immigrated to historic areas (1) for cheaper housing options, (2) for closer proximity to work or family members, (3) to have better accessibility to other urban districts, and (4) other factors such as personal interest in historic cities (see Appendix D-1).

Consequently, the ratio of responses received from residents was 77%, while 23% of had no answer regarding this question. On average, inside the three cities of Yazd, Kashan and Isfahan, slightly more than half of the respondents (50.3%) verified that they moved to historic cities to access inexpensive accommodation. This means that a large proportion of these residents come from low-income disadvantaged communities (see section 6.5, Chapter 6). Such factors mean that residents develop no or little sense of belonging to place. Additionally, only 25% confirmed they settled inside the historic city to be closer to work, friends or other family members. Nonetheless, accessibility to other urban districts and other less important reasons respectively form about 14% and 7% of responses among 124 actual participants (Appendix D-1-1).

Inside sample blocks of historic Kashan, Yazd and Isfahan the ratio of responses respectively reached 77%, 77.5% and 75% while other participants did not answer the question. Among participants, in Kashan, Yazd and Isfahan respectively 66%, 44% and 30% of residents specified that cheaper housing options was the most significant reason for their immigration (Appendix D-1-2).

In Kashan, Yazd and Isfahan respectively 23%, 22.5% and 40% of participants verified that they had settled in these historic cities for strategic positioning, to be closer to work, friends or family members. Nonetheless, better accessibility to other urban districts respectively formed about 8%, 19% and 10% respectively of the responses in Kashan, Yazd and Isfahan. Other less important reasons correspondingly formed about 3%, 10% and 5% of respective responses in Kashan, Yazd and Isfahan, which could be considered insignificant (Appendix D-1-3).

In line with section 6.5 (Chapter 6), the results clearly show how historic Kashan has largely become a place of interest for low-income disadvantaged communities, and/or people who live in social transition, such as foreign refugees (see section 6.6). Not unlike historic Kashan, in Yazd, more than half of the residents (56.2%) have moved into historic areas for reasons other than cheaper housing options. Nonetheless, this comparison demonstrates that a sense of

belonging to place among participants in Yazd can be considerably stronger compared to residents in Kashan (Figure 7.1).

Unlike Kashan and Yazd, in historic Isfahan, reaching for cheaper housing options is no longer the main reason for immigration of outsiders to historic areas. Accordingly, the primary reason for immigrating to historic areas in the sample blocks of Isfahan has shifted from the cheapest housing options to strategic positioning. This swing can correspond to a better sense of belonging to place among all residents compared to Yazd and Kashan, that might also be related to the higher value of land and greater building investments in historic Isfahan (see Table 4.4 and section 5.6.1).

Interestingly, strategic positioning¹ of the historic city of Isfahan as the major factor for immigration of non-Iranian disadvantaged residents is reversely correlated to the ratio of DABs per block (Figure 7.1). Correspondingly, B-1 (the block with a higher ratio [40%] of DABs) has become home for only 25% of the population who have moved in regarding strategic positioning. However, B-7 (the block with a medium ratio [27%] of DABs) and B-2 (the block with the lowest ratio [19%] of DABs) have attracted respectively, 40% and about 57% of all residents, who have immigrated due to historic contexts and superior urban positioning. Thus, it is observable that in the sample blocks of Isfahan, whenever the ratio of DABs increases the proportion of residents who choose to live within an historic context (as a strategic location) drops significantly.

¹ For example, closeness to the grand bazaar, as the centre of trade in metropolitan Isfahan.

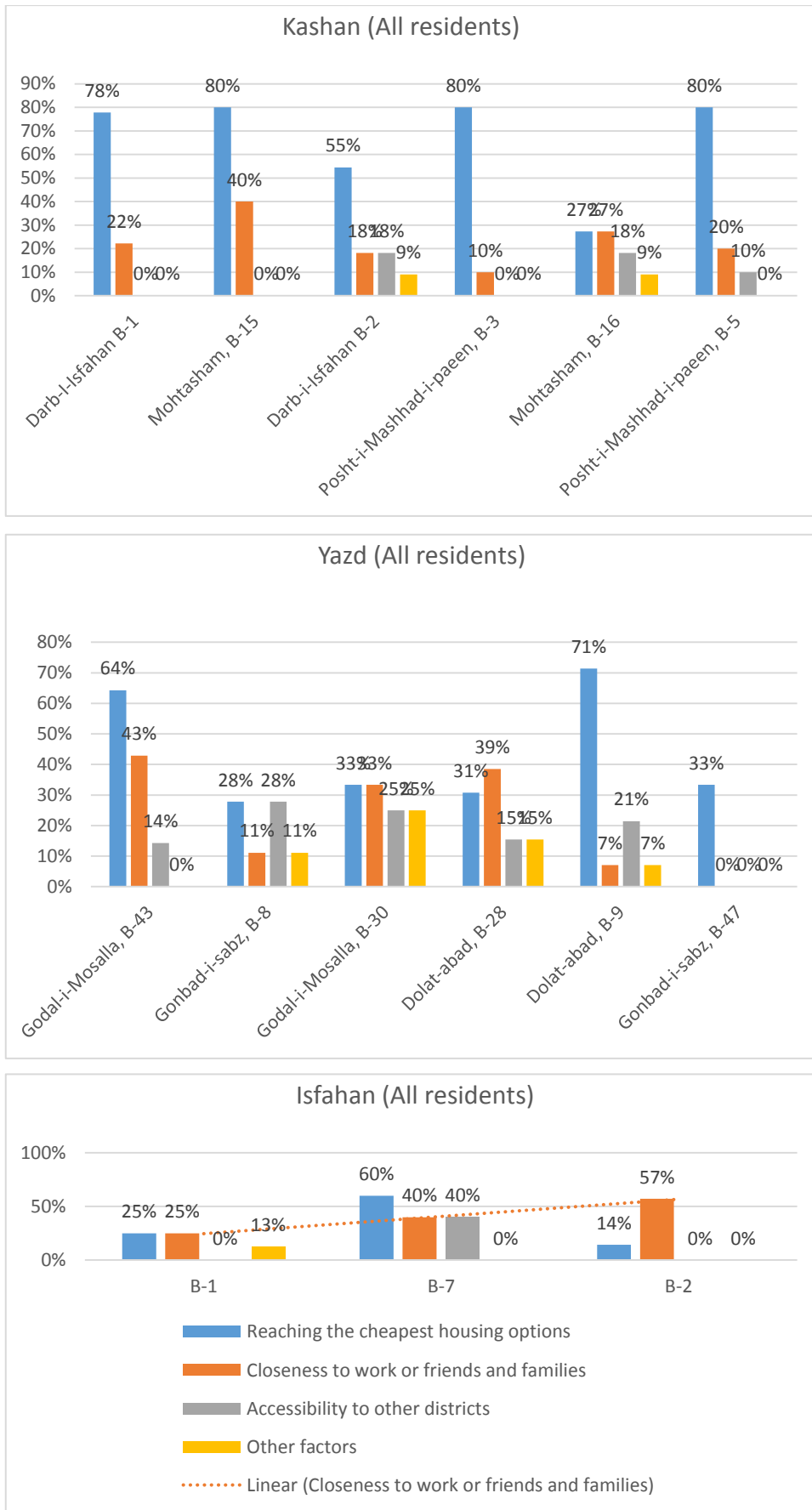


Figure 7.1: Motivations for immigrating to three historic cities among all residents in 2018 (Appendix D-1-3)

7.2.1. DABs and a sense of belonging to place

A crosstab analysis was conducted to understand residents' motivation for immigrating to historic areas. Respectively, on average 60%, 34% and 17% of local Iranian residents in Kashan, Yazd and Isfahan have indicated that they moved to historic areas to access cheaper housing options (Appendix D-1-4).

Additionally, on average 27%, 18% and 50% of all local residents respectively in Kashan, Yazd and Isfahan have indicated they have moved to historic areas for closeness to work or family members. Moreover, better strategic positioning respectively attracted 9%, 15% and 22% of residents to settle in Kashan, Yazd and Isfahan.

These qualities single out historic Kashan as the least preferred urban area which can generate a minor sense of belonging to place amongst local Iranian residents. Correspondingly, a direct correlation between the larger extent of DABs and weaker sense of belonging to place² can also be verified in Kashan (Figure 7.2).

² As discussed in section 3.4.8 (Chapter 3), a lack of sense of belonging to place corresponds to the lower scale of spatial liminality type-B in historic cities.

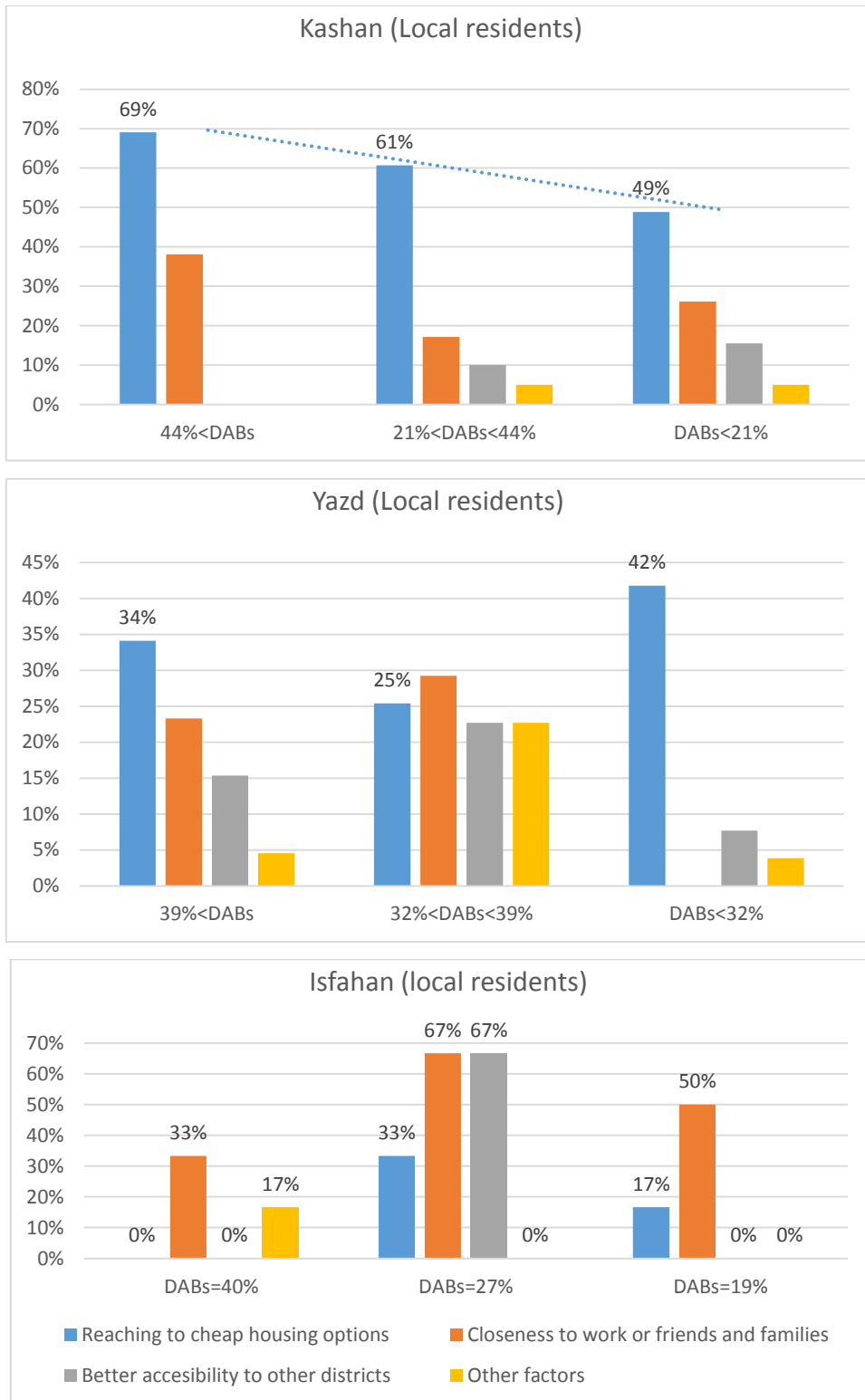


Figure 7.2: A cluster analysis of the percentages of reasons stated by local residents for immigrating to historic areas, in three cities (Appendix D-1-4)

Among refugees, the prevalent factor for immigration can be largely disclosed as accessing cheaper housing options. On average, respectively 100%³, 71% and 67% of refugee residents in Kashan, Yazd and Isfahan confirmed that they immigrated to historic fabrics for this reason. Respectively, in Kashan, Yazd and Isfahan, 6%, 44% and 33% of refugees indicated they had moved to historic areas to be closer to work or family members. Nevertheless, on average only 27% and 2% of refugees in Yazd respectively indicated they had moved to historic areas for strategic positioning and other less-known reasons (Figure 7.3).

The analysis greatly discloses that among both refugees and local Iranian residents of Kashan, the main reason for immigrating to historic areas can be seen as cheaper housing opportunities. However, in Yazd and Isfahan, other reasons have taken precedence among both refugee and local Iranian residents.

The above discussion indicates a lack of spatial liminality type-B, as a result of a deficient level of sense of belonging to place among residents in Kashan, which can be correlated to the larger extent of DABs. The analysis suggests a medium and/or higher level of spatial liminality type-B (as a result of a stronger sense of belonging to place) among residents respectively in historic Yazd and Isfahan, which can be correlated to higher population (see Table 4.1) and greater land value of in these historic areas (see section 5.6.1 and Table 4.4).

³ In urban blocks in historic cities, as discussed in section 4.6.1 (Chapter 4), on average about 10 respondents were asked to answer each question. The proportion of 100% that occasionally has been obtained as an attitudinal result in this inquiry can be considered unrealistic, which can possibly be improved by involving a larger number of participants.

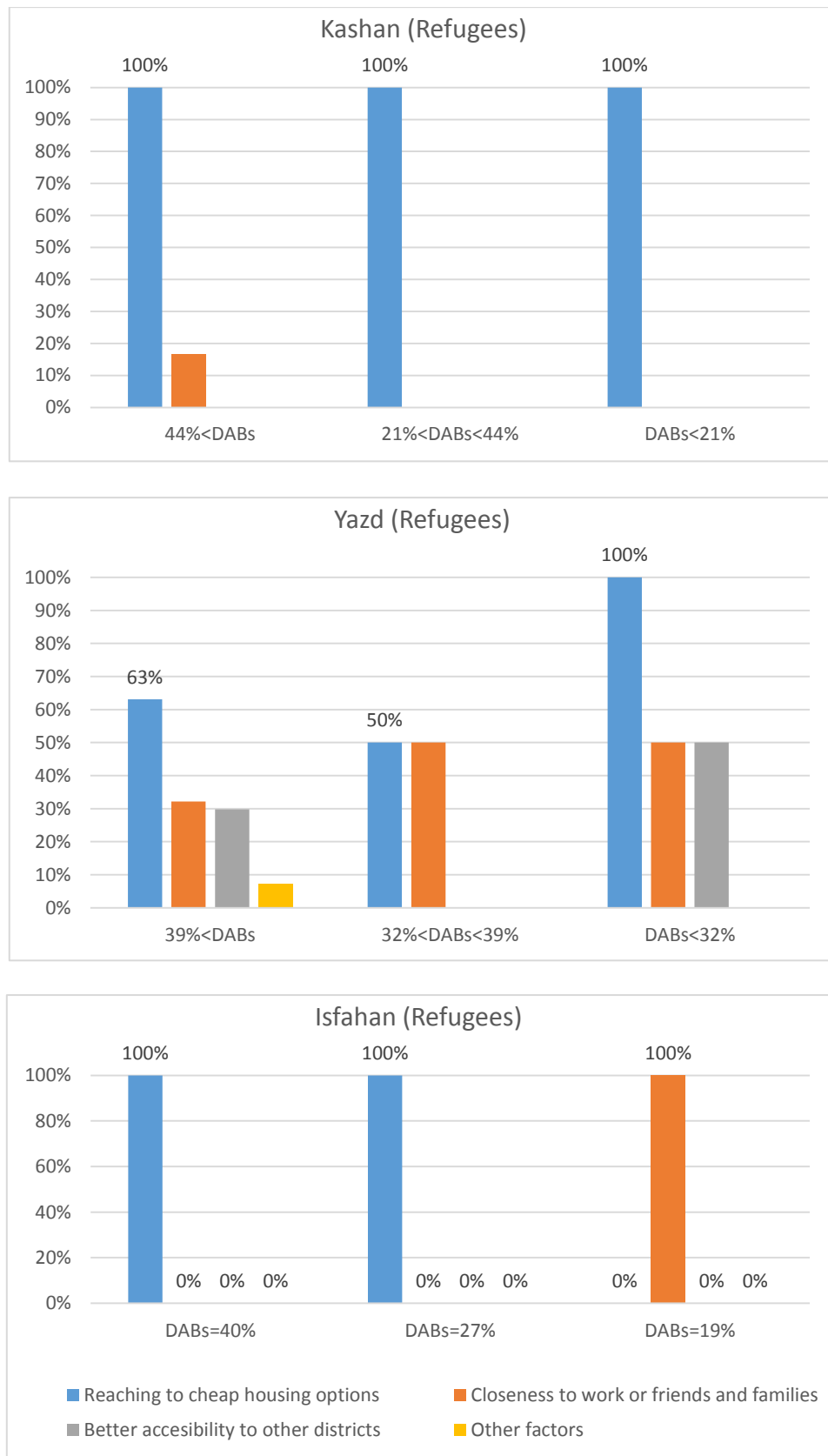


Figure 7.3: Reasons stated by non-Iranian and/or refugee residents for immigrating to historic areas in three cities (Appendix E-1-5)

7.3. The most imperative problems in larger historic areas

Among 161 respondents, a question was asked about evaluating a sense of place satisfaction among residents on a larger scale (see section 4.6.3). Relevant answers include one or more of the following options: (1) lack of vehicular accessibility, (2) the existence of dilapidated-abandoned or deteriorated buildings, (3) lack of public safety, and (4) other less significant reasons (see Appendix D-2).

The ratio of responses received from residents was 91.3%, while 8.7% did not respond to this question. Inside Yazd, Kashan and Isfahan, the majority of respondents (77%) verified that a lack of vehicular accessibility is the most serious problem. Additionally, a considerable proportion of residents (about 68%) verified that the existence of dilapidated, abandoned or deteriorated buildings had become a severe problem. Nonetheless, slightly more than a quarter (25.5%) believed that historic areas are generally unsafe, while about 6% of the population expressed other concerns (such as observation of rats) that seem insignificant (see Appendix D-2-1).

Inside sample blocks of Kashan, Yazd and Isfahan the ratio of responses received from residents were respectively 83.6%, 93.6%, 95%, while other residents presented no answer to the question. Among all participants, in Kashan, Yazd and Isfahan respectively about 71%, 80% and 85% indicated a lack of vehicular accessibility as being the most significant problem in historic urban fabrics.

Additionally, about 69%, 70% and 55% of respondents respectively in Kashan, Yazd and Isfahan verified the existence of DABs or deteriorated buildings as another crucial problem in historic cities. Nonetheless, lack of public security formed about 16%, 35% and 15% of respective responses in Kashan Yazd and Isfahan, which could be considered a significant proportion. Furthermore, on average only 5%, 7.5% and 5% of all residents in Kashan, Yazd and Isfahan believed that other more significant problems exist in historic cities (Appendix D-2-3).

Accordingly, lack of vehicular accessibility and the existence of DABs can be seen as the two most crucial problems in these three historic cities, specifically in historic Kashan and Yazd. Nonetheless, unlike Isfahan and Kashan lack of public safety in Yazd also appears to be another crucial problem (Figure 7.4).

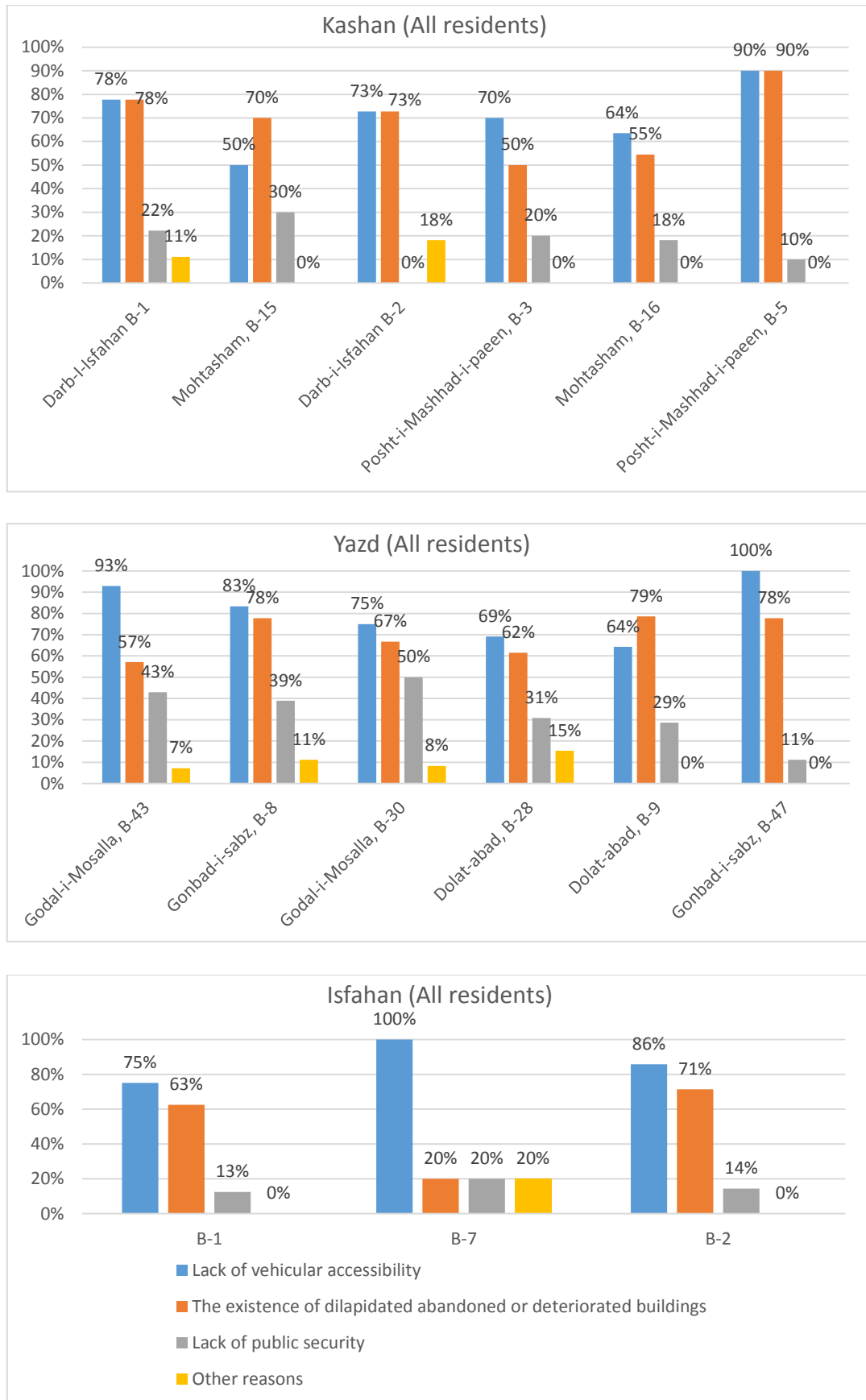


Figure 7.4: Comparing the frequency of responses regarding large-scale problems in three historic cities (Appendix E-2-3)

7.3.1. DABs and sense of place satisfaction in the historic city

This question has targeted the general perception of local Iranian residents regarding historic cities. At first glance, it becomes evident that lack of vehicular accessibility can be seen as the most crucial problem, while on average respectively 76%, 80% and 83% of respondents in Kashan, Yazd and Isfahan have raised this issue. Moreover, on average 73%, 76% and 45% of residents in Kashan, Yazd and Isfahan have indicated that the existence of DABs is the second most crucial problem. Furthermore, on average 19%, 44% and 22% of local respondents believe that lack of public safety in historic areas is a serious problem, in Kashan, Yazd and Isfahan respectively (Appendix D-2-4).

In addition, this trend shows that lack of a sense of public safety in Kashan and Yazd is correlated to the larger extent of DABs per block, as expressed by local residents in those two historic cities (Figure 7.5)

Additionally, other less important problems such as the existence of pests and vermin were expressed by 6%, 9% and 11% of local residents respectively in Kashan, Yazd and Isfahan (Appendix D-2-4). It can be observed that such problems are more significant in urban blocks with a relatively higher percentage of DABs in historic Yazd and Kashan (Figure 7.5).

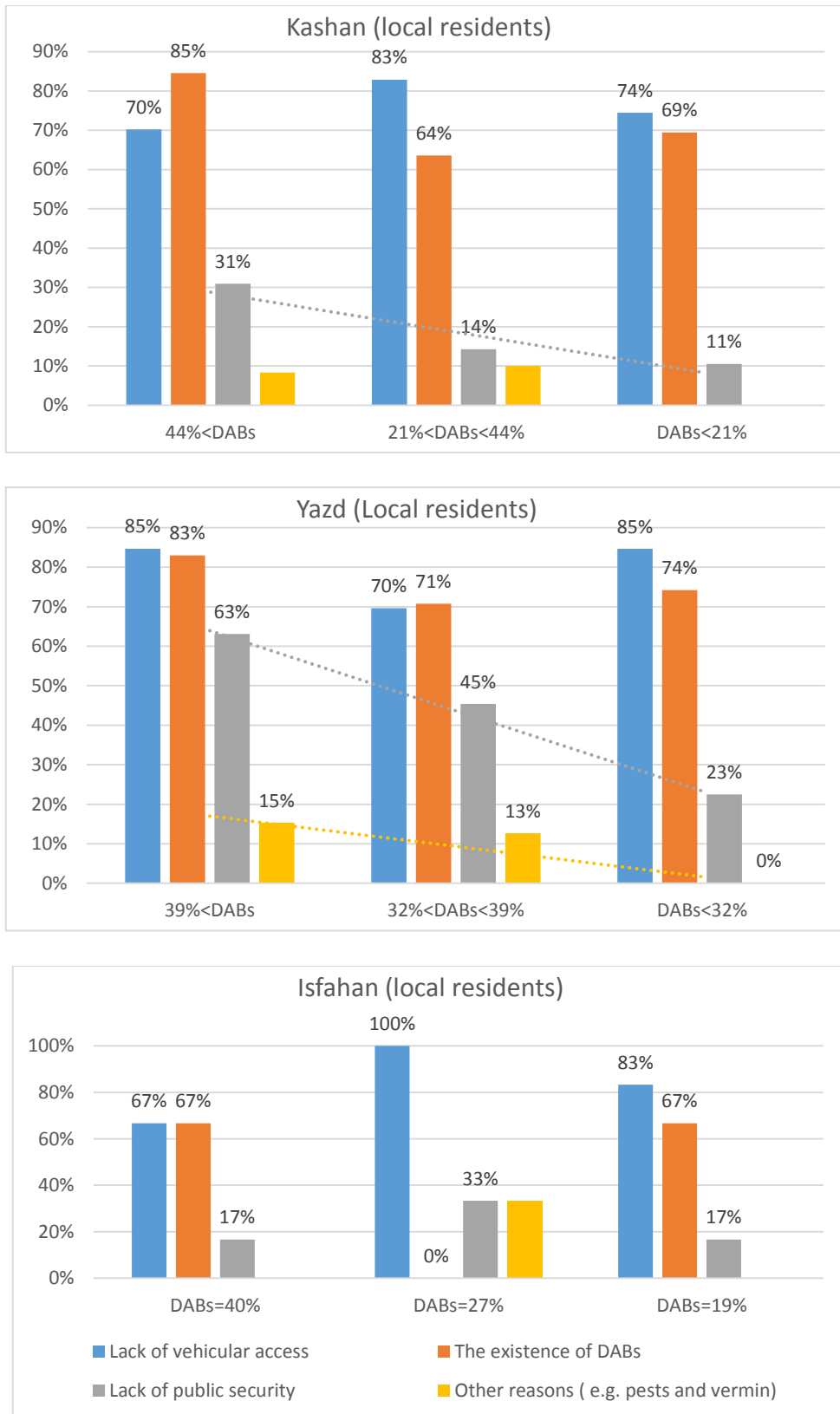


Figure 7.5: A cluster analysis of socio-spatial problems in larger urban contexts, as stated by local Iranian residents in three historic cities (Appendix D-2-4)

Among non-Iranian migrants and/or refugee residents, on average 56%, 64% and 100%⁴ of respondents respectively in Kashan, Yazd and Isfahan believed that lack of vehicular accessibility is one of the most crucial problems in historic areas.

Moreover, 72%, 48% and 67% of refugees correspondingly in Kashan, Yazd and Isfahan have indicated DABs as a severe problem. Furthermore, on average 22%, 3% and 0%⁵ of refugees in Kashan, Yazd and Isfahan believe that lack of public safety in historic areas is a serious problem, while none of the refugee respondents specified other less critical problems such as the existence of rats and vermin in three historic cities (Appendix D-2-5).

The results clearly suggest that among both refugee and local residents two key urban problems perceived are lack of vehicular accessibility and existence of DABs. Nonetheless, lack of public safety among local residents can be seen as the third major problem in historic cities. The magnitude of lack of social safety as indicated by local residents also shows a significant correlation with the percentage of DABs per block in historic Yazd and Kashan (Figure 7.5).

Such low levels of spatial liminality type-B (as a result of lower levels of sense of place-satisfaction and a feeling of insecurity) can be clearly correlated to the emigration of local residents from historic areas (see section 5.7, Chapter 5). Nonetheless, refugees are less likely to be concerned about lack of public safety or other problems, possibly because of their liminal conditions (Figure 7.6).

⁴ The results of 100% or 0% in case studies seem to be unrealistic statistics, since they are definitely biased either by methods, limited sampling and data segregation. As such, a larger number of surveys need to be conducted among refugee residents.

⁵ See footnote 4.

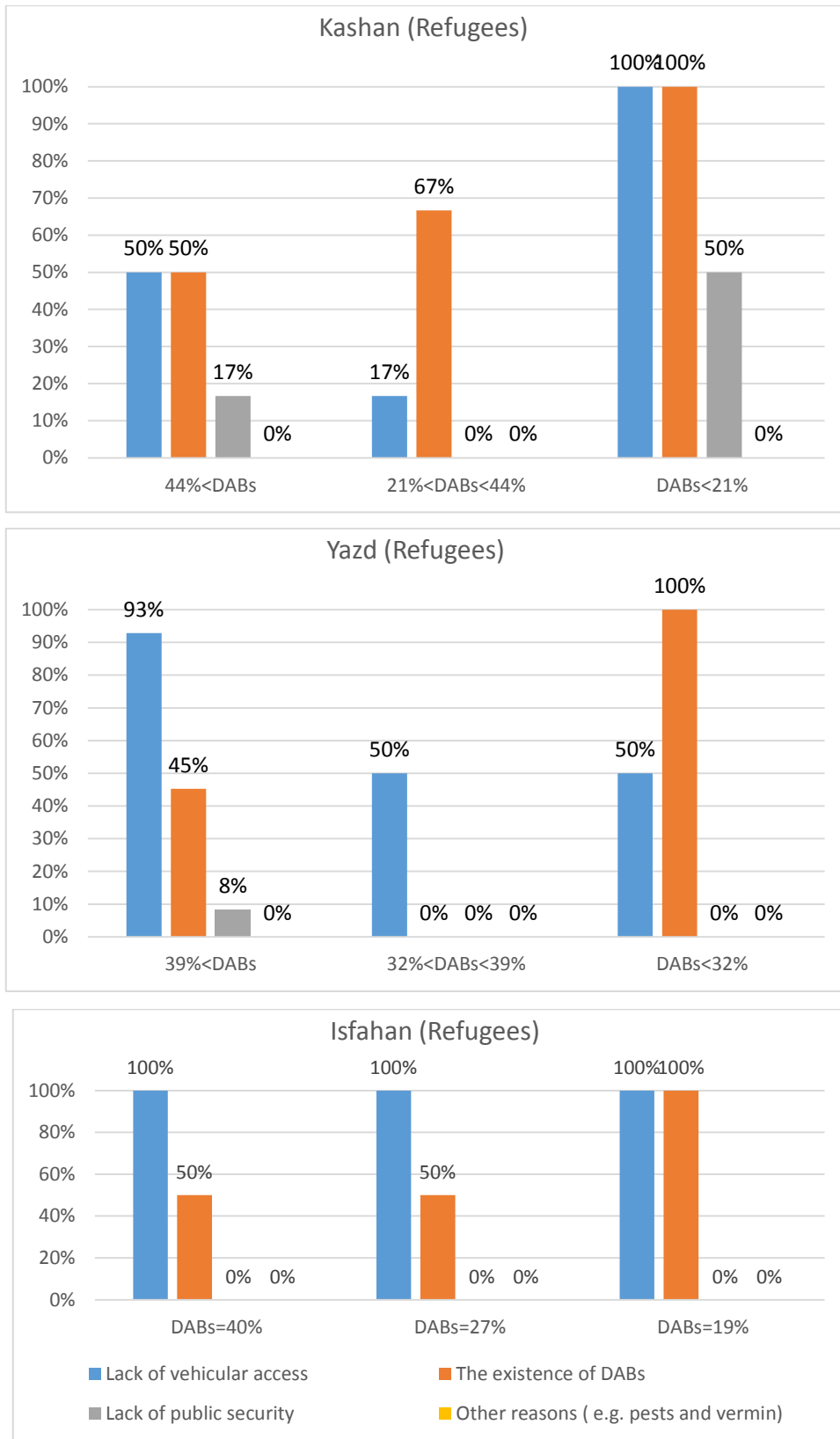


Figure 7.6: A cluster analysis of socio-spatial problems in larger urban contexts, as stated by refugees in three historic cities (Appendix D-2-5)

7.4. The most imperative local problems in case study neighbourhoods

Among 161 respondents, this question was designed to evaluate a sense of place satisfaction among residents on the local scale (see section 4.6.3, Chapter 4). Relevant responses to this inquiry include one or more of the following options: (1) an enduring feeling regarding lack of safety, (2) existence of local deterioration-abandoned and dilapidated buildings, (3) cultural-hygienic problems, (4) lack of civic or service infrastructure, and (5) other less significant problems (see Appendix D-3).

The ratio of responses received from residents was 84.5%, while 15.5% did not reply to this question. Inside Yazd, Kashan and Isfahan, a significant proportion of respondents (31%) indicated they felt unsafe in their neighbourhoods. Additionally, more than half of the participating residents (56%) specified that the existence of DABs has become a serious local problem. About 34% believe that cultural or hygienic problems have become crucial in their local neighbourhoods. Nevertheless, 27% expressed lack of civic and service infrastructure as another major local problem, while a considerable proportion (62%) indicated that narrow roads (which can equate to lack of vehicular access) was perceived as another significant local problem (Appendix D-3-1).

Inside sample blocks in Kashan, Yazd and Isfahan respectively 77%, 86% and 100% responded to the question. In Kashan, Yazd and Isfahan correspondingly 20%, 40% and 30% of all participants indicated they felt unsafe in their neighbourhoods. Additionally, in Kashan Yazd and Isfahan respectively 46%, 59% and 75% of all residents specified that the existence of DABs has become a serious local problem. Nonetheless, 25%, 35% and 55% correspondingly in Kashan, Yazd and Isfahan believed that cultural and/or hygienic problems are prevailing in their local neighbourhood. Besides, in Kashan, Yazd and Isfahan respectively 20%, 40% and 40% of the participating population expressed a lack of civic services and infrastructure as another major local problem. Nonetheless, an excessive proportion of 59%, 64% and 60% in Kashan, Yazd and Isfahan verified that narrow roads (which can equate to lack of vehicular access) are a significant local problem (see Appendix D-3-2).

In line with section 7.3, again lack of vehicular access and the existence of DABs can be seen as the most crucial local problems in these three historic cities, as specified by residents. Nevertheless, other problems such as lack of public safety in Yazd and cultural or hygienic problems in Isfahan can also be perceived as significant problems (Figure 7.7).

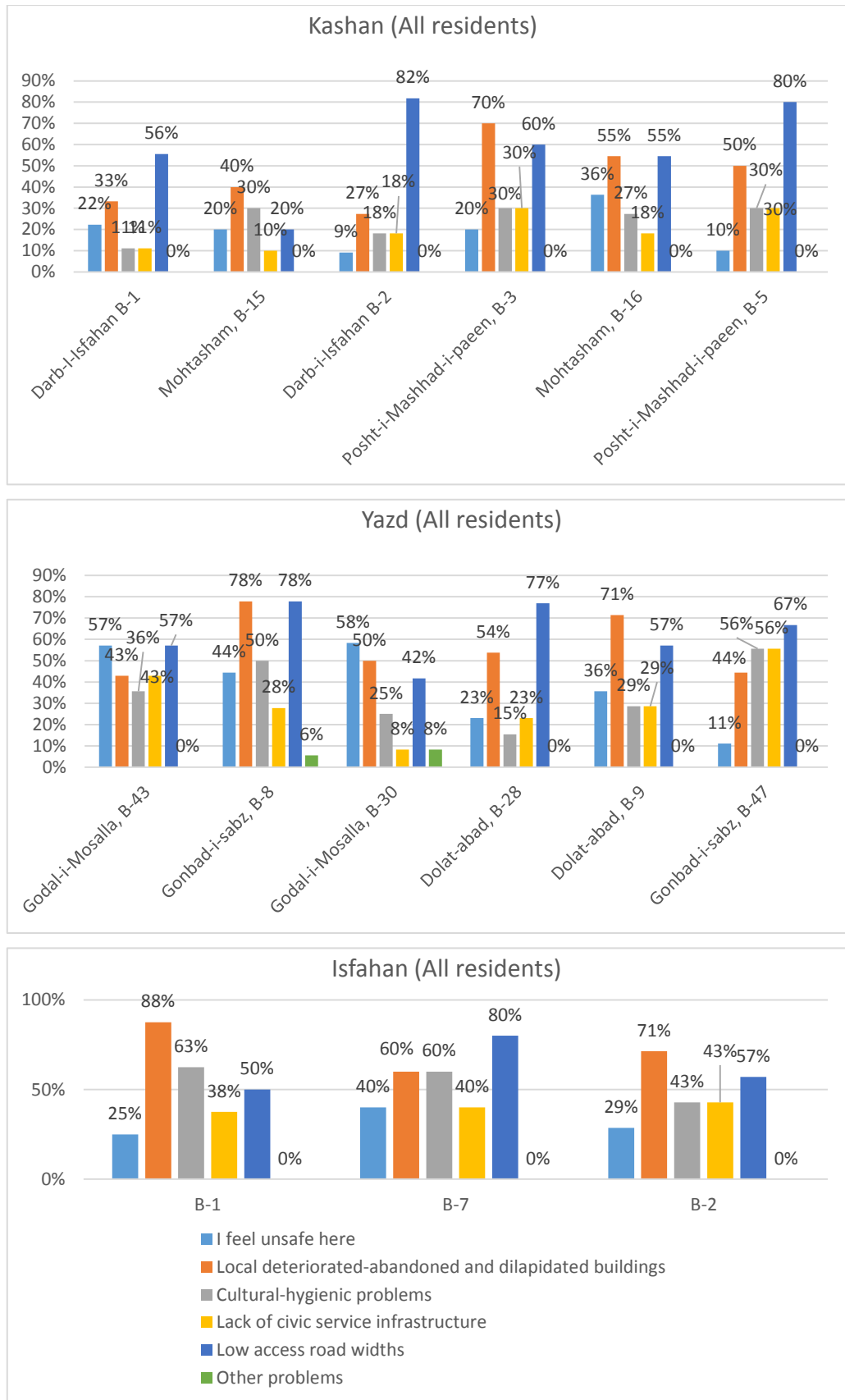


Figure 7.7: Comparing local problems in three historic cities (Appendix D-3-3)

7.4.1. DABs and sense of place satisfaction in neighbourhoods

In line with the attitudinal inquiry in section 7.3.1, this section focuses on socio-spatial problems regarding sense of place satisfaction among non-Iranian refugees and local Iranian residents, however on the scale of an urban block where participants closely reside.

Accordingly, it becomes evident that lack of vehicular accessibility can again be seen as the most critical concern, while on average respectively 63%, 64% and 72% of local Iranian respondents in Kashan, Yazd and Isfahan have restated this issue. Moreover, on average 57%, 59% and 61% of local residents in all historic cities in this study indicated the existence of DABs as the second most critical problem (Appendix D-3-4).

Nevertheless, on average 27%, 37% and 56% of local residents considered cultural-hygienic problems in historic areas as a serious problem respectively in Kashan, Yazd and Isfahan. Additionally, lack of civic services and infrastructure were expressed by 20%, 33% and 39% of local residents respectively in Kashan, Yazd and Isfahan. In addition, lack of public safety was expressed on average by 25%, 49% and 44% of local residents in Kashan, Yazd and Isfahan (Appendix D-3-4).

Furthermore, the ratio of expressed concerns by local Iranian residents regarding lack of social safety and the existence of DABs in historic Yazd can be seen as expressively correlated to the percentage of DABs per block (Figure 7.8).

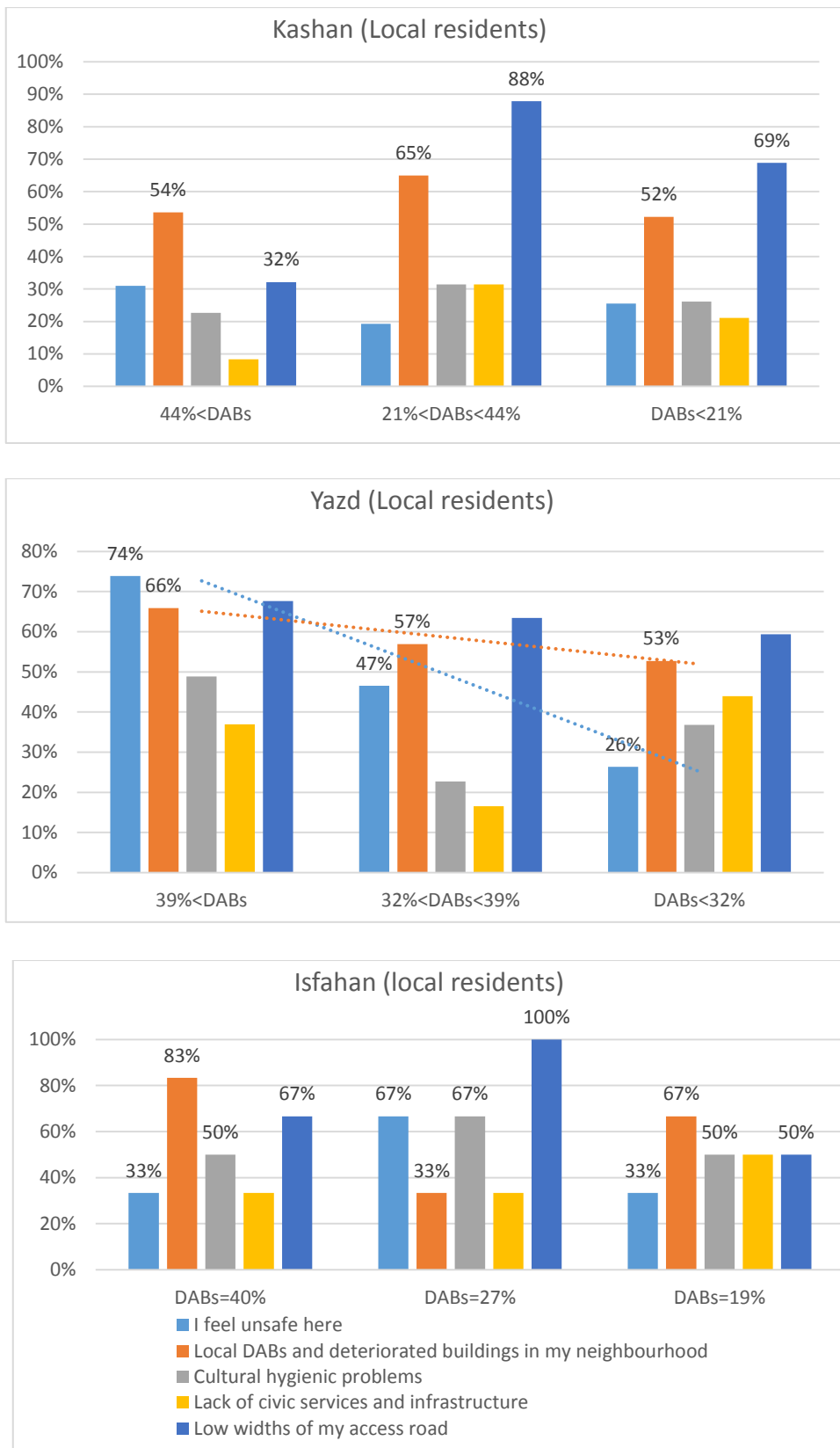


Figure 7.8: A cluster analysis of socio-spatial problems in case-study blocks, as stated by local Iranian residents in three historic cities (Appendix D-3-4)

Among refugee residents, on average 33%, 39% and 50% of respondents in Kashan, Yazd and Isfahan believed that lack of vehicular accessibility was the most crucial problem in historic areas. Moreover, 17%, 34% and 100%⁶ of refugees respectively in Kashan, Yazd and Isfahan indicated DABs as a serious problem.

Furthermore, on average 22%, 27% and 50% of refugees in Kashan, Yazd and Isfahan believed that cultural-hygienic shortcomings in historic areas have become a severe problem. Furthermore, lack of civic services and infrastructure was expressed as problematic, on average by 22%, 19% and 33% of refugee and/or non-Iranian residents respectively. In addition, lack of public safety was expressed on average as 0%, 6% and 0%⁷ of non-Iranian residents in Kashan, Yazd and Isfahan (Appendix D-3-5).

The analysis clearly backs up the previous discussion in section 7.3.1 and reiterates that among both non-Iranian and local Iranian residents, two key urban problems are lack of vehicular accessibility and the existence of DABs.

While lack of public safety among local Iranian residents (in Yazd) shows a strong correlation with the percentage of DABs per block (Figure 7.8), it seems that refugees are less likely to be concerned about lack of public safety, possibly due to liminal socio-spatial conditions (Figure 7.9).

⁶ The result of 100% and 0% in the case of Isfahan seemed unrealistic, and in this case further street surveys need to be conducted among respondents to improve results.

⁷ See footnote 6.

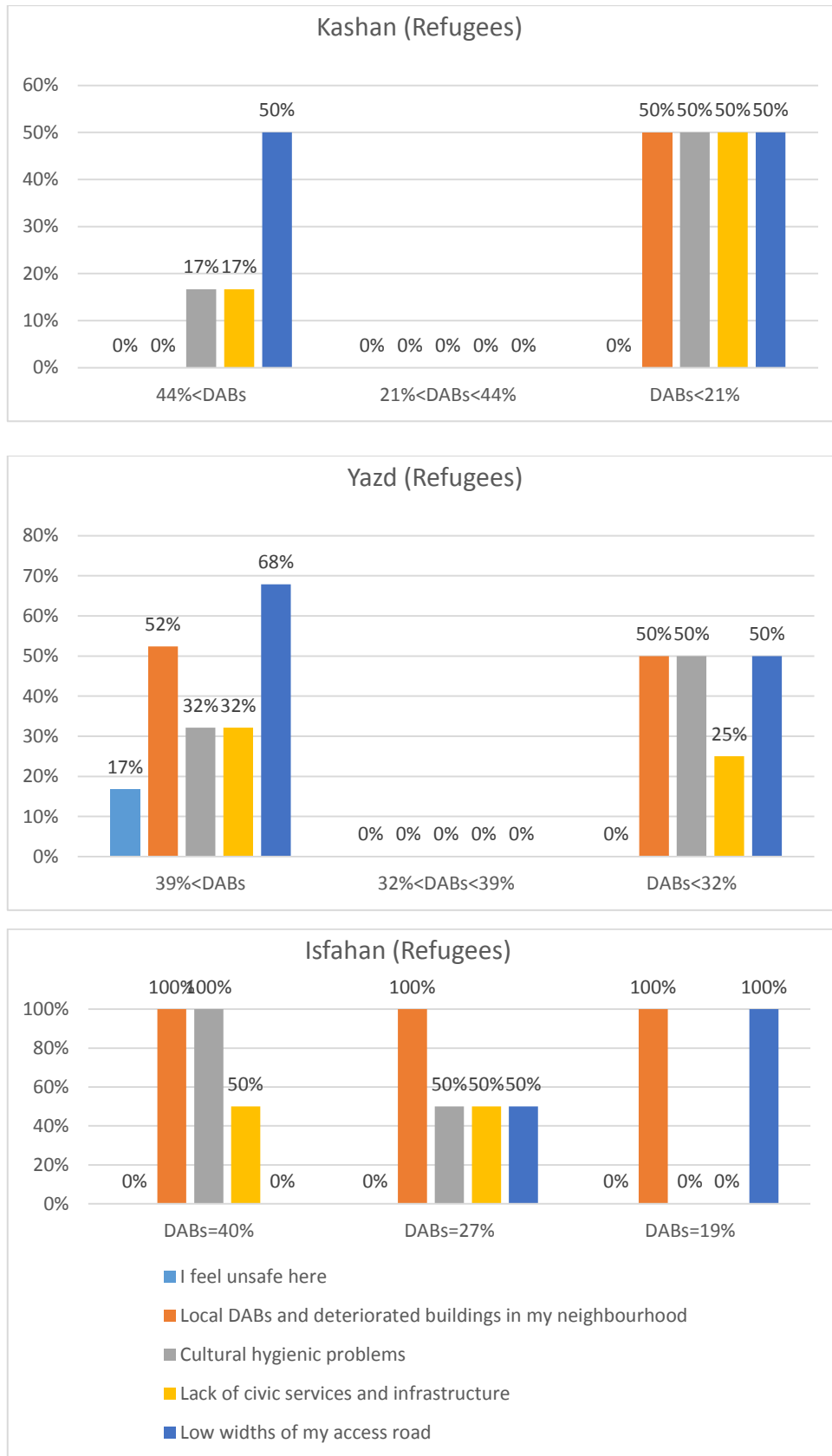


Figure 7.9: A cluster analysis of socio-spatial problems in the surveyed urban blocks, as stated by non-Iranian residents in three historic cities (Appendix D-3-5)

7.5. Preferred methods of participation for revitalising historic areas

Among 161 respondents, a question was asked in order to evaluate the sense of social capital among residents (section 4.6.3, Chapter 4). The relevant answers include one or more of the following options: (1) implementation by personal private funds, (2) implementation by mutual funding via local trusts, (3) exchanging my property with external land or apartments (of equal value), (4) not interested in participation, and (5) I will sell my property (see Appendix D-4).

The ratio of responses received from participating residents was 72%, while 28% did not respond to this question. Accordingly, inside the three cities of Yazd, Kashan and Isfahan, only an insignificant proportion of respondents (7.5%) verified that they can afford to contribute to restoration of the city, by spending personal funds/loans. Additionally, a considerable proportion of residents (20.5%) confirmed that they are interested in contributing to revitalisation of these historic cities, by providing mutual funds via local trusts.

About 8% of respondents are also interested in exchanging their properties, with external land or apartments (of equal value), while nearly 21% are not interested in participating at all. Moreover, nearly a quarter of participating residents are interested in selling their properties and leaving the historic city as soon as possible (Appendix D-4-1).

Consequently, 52.8% of respondents either are hoping to move out of the historic city by selling-exchanging their properties or they are not interested in participation. This means that on average slightly more than half of the participating residents indicate lower levels of social-capital in the historic urban fabrics of Iran (Appendix D-4-1).

Inside sample blocks in Kashan, Yazd and Isfahan the ratio of responses received from residents were respectively 72%, 70% and 80%, while the remainder presented no answer to the question. Inside historic Kashan, Yazd and Isfahan, on average respectively, 5%, 10% and 5% of all residents verified that they could afford to contribute to regenerating the neighbourhood, and by spending personal funds on their homes (Appendix D-4-2).

Additionally, on average only 10%, 30% and 15% of residents respectively in Kashan, Yazd and Isfahan confirmed they were interested in contributing to the revitalisation of these historic cities by providing mutual funds, via local trusts/NGOs. Nonetheless, 10%, 5% and 10% respectively in Kashan, Yazd and Isfahan are interested in exchanging their properties with

external land or apartments (of equal value), while respectively 20%, 20% and about 25% are not interested in participation.

Correspondingly, on average 35%, 11.3% and 50% of participating residents were interested in selling their properties and leaving the historic city, respectively in Kashan, Yazd and Isfahan (Appendix D-4-2).

Furthermore, about 64%, 36% and 85% of respondents respectively in Kashan, Yazd and Isfahan are either hoping to move out of the historic city by selling their homes, or exchanging their properties with external land or apartments (of equal value), or they are not interested in participation. The results clearly suggest that in the historic sample blocks of Yazd the levels of social capital among residents is significantly higher compared to historic Kashan, while Isfahan shows the lowest levels of social capital amongst all larger case studies (Figure 7.10).

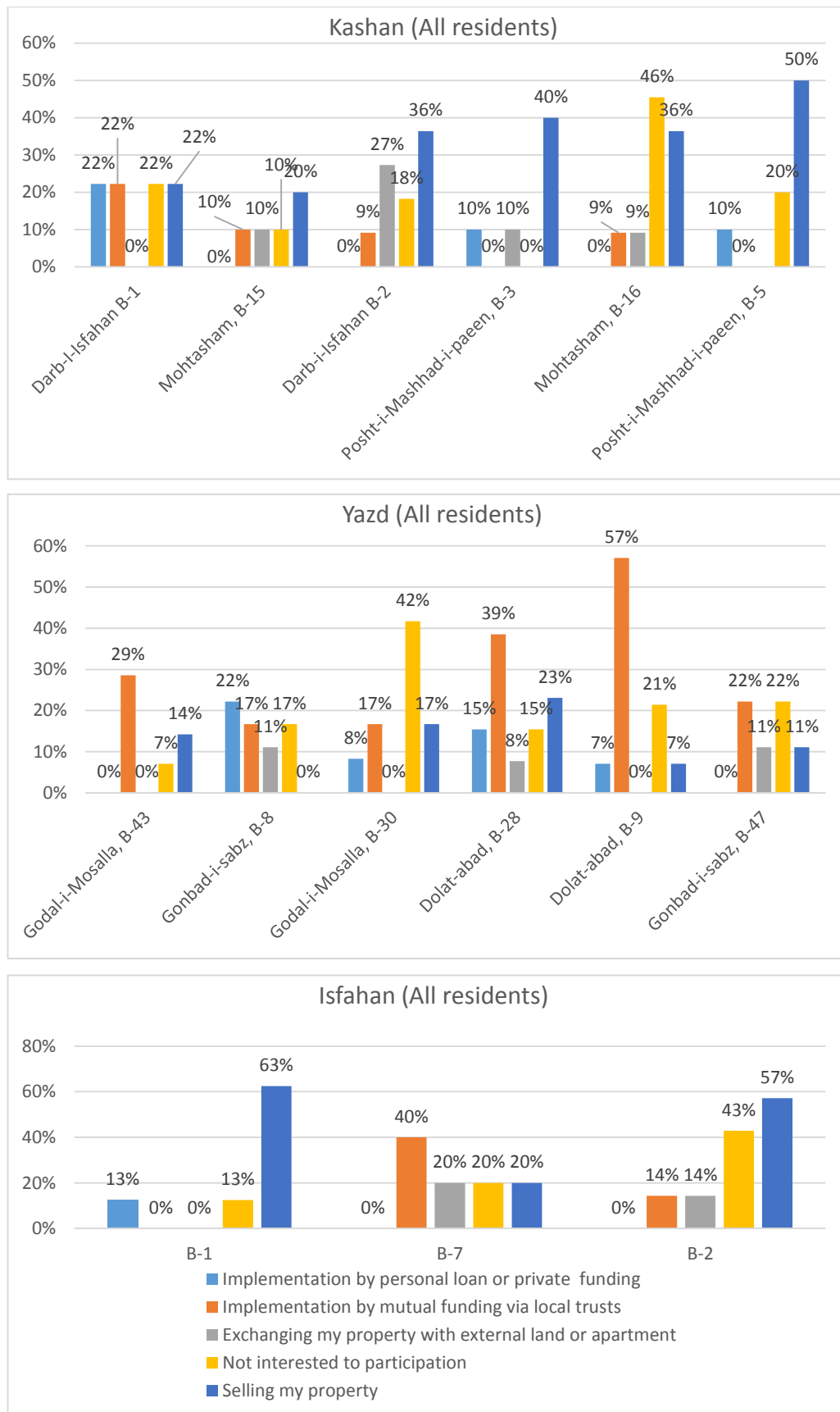


Figure 7.10: Comparing preferred methods of participation among all residents for revitalising three historic cities (Appendix D-4-3)

7.5.1. DABs and social-capital among refugees and local residents

A crosstab analysis amongst local Iranian residents in case studies shows a very low level of social capital in these historic cities in Iran.

In Kashan, Yazd and Isfahan, on average respectively 21%, 50% and 34% of local Iranian residents have expressed interest in repairing their homes either by using personal or mutual funds and/or by taking up loans via NGOs. Such low levels of public participation either can show that participants are extremely poor, or it can represent a lack of social capital among local residents in historic cities. Respectively, analysis represents the lowest levels of public participation in Kashan, which has yielded the largest areas of DABs (see section 5.4). Nevertheless, social-capital characterises its best levels in historic Yazd among all surveyed historic fabrics (Appendix D-4-4).

Correspondingly, in sample blocks in Kashan, Yazd and Isfahan, on average respectively 76%, 47% and almost 100%⁸ of local residents hope to move out of the historic city either by selling/exchanging their properties (with buildings/apartments of equal value outside historic areas) or they are not interested in participation. The analysis again represents a low level of social capital among residents in Kashan and Isfahan. Nevertheless, residents of historic Yazd show a higher degree of social-capital across all case studies (Figure 7.11).

The analysis suggests no direct correlations between lack of social capital and the larger extent of DABs in urban blocks. However, in the first layer of analysis (regarding the proportion of residents who are interested in participating) a correlation can be perceived: that historic Kashan with the highest level of DABs (compared to Yazd and Isfahan, see section 5.4, Chapter 5) has developed the lowest levels of social capital amongst all local Iranian residents.

Among non-Iranian or refugee residents, there is no inclination for public participation, which again reiterates that refugees can develop little or no sense of belonging to place and/or social capital regarding historic urban areas (Appendix D-4-5).

⁸ The 100% in this inquiry is generated as result of adding up the results of three variables including, I sell my property, I exchange my property and I am not interested in participating. Thus, this does not represent a statistical concept, but clearly reflects the extremely low levels of social capital among local residents in historic Isfahan.

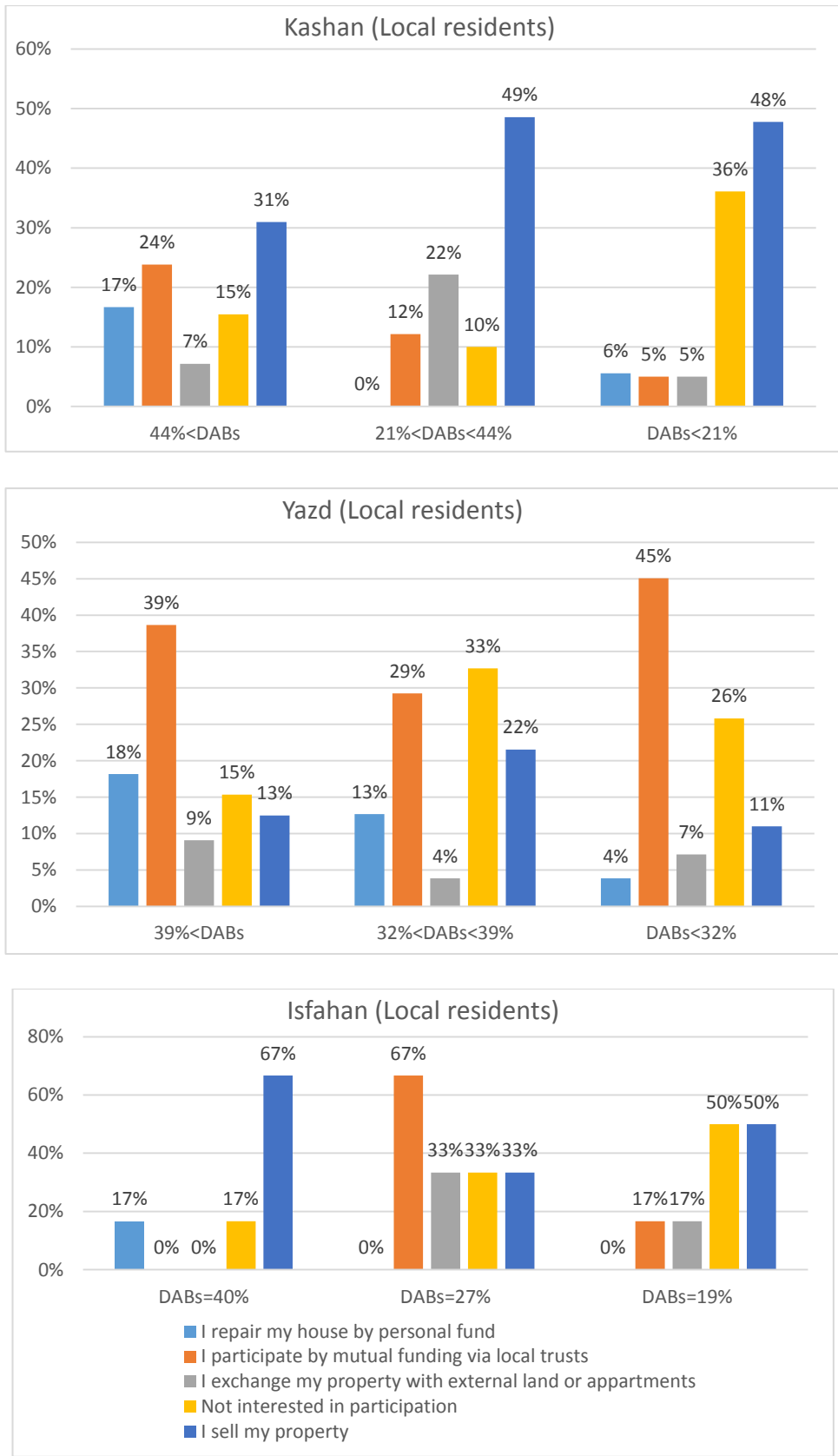


Figure 7.11: A cluster analysis for measuring social capital among local Iranian residents in three historic cities (Appendix D-4-4)

7.6. Neighbourhood safety and potential factors

Among 161 respondents, a question was designed to evaluate a sense of social-spatial safety among residents (section 4.6.3, Chapter 4). Relevant answers include one or more of the following options: I feel unsafe in historic areas because of the presence of (1) foreign refugees, (2) abandoned or dilapidated buildings (DABs), (3) narrow depopulated roads, (4) addicts or criminals, and (5) other less known factors (see Appendix D-5).

The ratio of responses received was about 58%, while 42% believed that a historic city is a safe place. Inside Yazd, Kashan and Isfahan, on average about 12% of the participants indicated that foreign refugees make historic cities unsafe. Nonetheless, almost 32% of respondents believe that abandoned or dilapidated buildings have made the historic city a dangerous place.

Moreover, a considerable proportion of participants (about 34%) indicated that narrow depopulated roads (which equate to lack of vehicular access) can make historic areas unsafe, whilst nearly 27% have stated that the presence of addicts or criminals generates lack of public safety in historic areas. Consequently, a real or perceived atmosphere regarding lack of public safety could be clearly observable in the three case studies, wherein about 58% of all respondents expressed their safety concerns in different ways (Appendix D-5-1).

Inside sample blocks in Kashan, Yazd and Isfahan, the average ratio of responses received from all residents is respectively about 51%, 64% and 55%, while the rest of the participants believed that a historic city is a safe place. Additionally, inside the sample blocks on average, 7%, 18% and 5% of all participants indicated that foreign refugees have made the historic city unsafe.

Nonetheless, approximately 26%, 39% and 25% of respondents in Kashan, Yazd and Isfahan believed that DABs made the historic city unsafe. Additionally, about 38%, 29% and 40% indicated that narrow depopulated roads (which equate to lack of vehicular access) can make historic areas unsafe; whilst respectively around 15%, 40% and 15% of participants state that addicts or criminals created a lack of socio-spatial safety in historic areas (Appendix D-5-2).

Consequently, a real or perceived atmosphere regarding lack of socio-spatial safety could be clearly observable inside the three case studies, wherein more than half of all participants expressed their concerns regarding public safety in different ways.

Accordingly, in historic Kashan and Isfahan, the most crucial reasons for lack of public safety (as stated by all residents) respectively related to lack of vehicular accessibility and the existence of DABs.

In historic Yazd, the most crucial reasons for lack of public safety among residents were related to the presence of addicts and criminals, the existence of DABs and lack of vehicular accessibility (Figure 7.12).

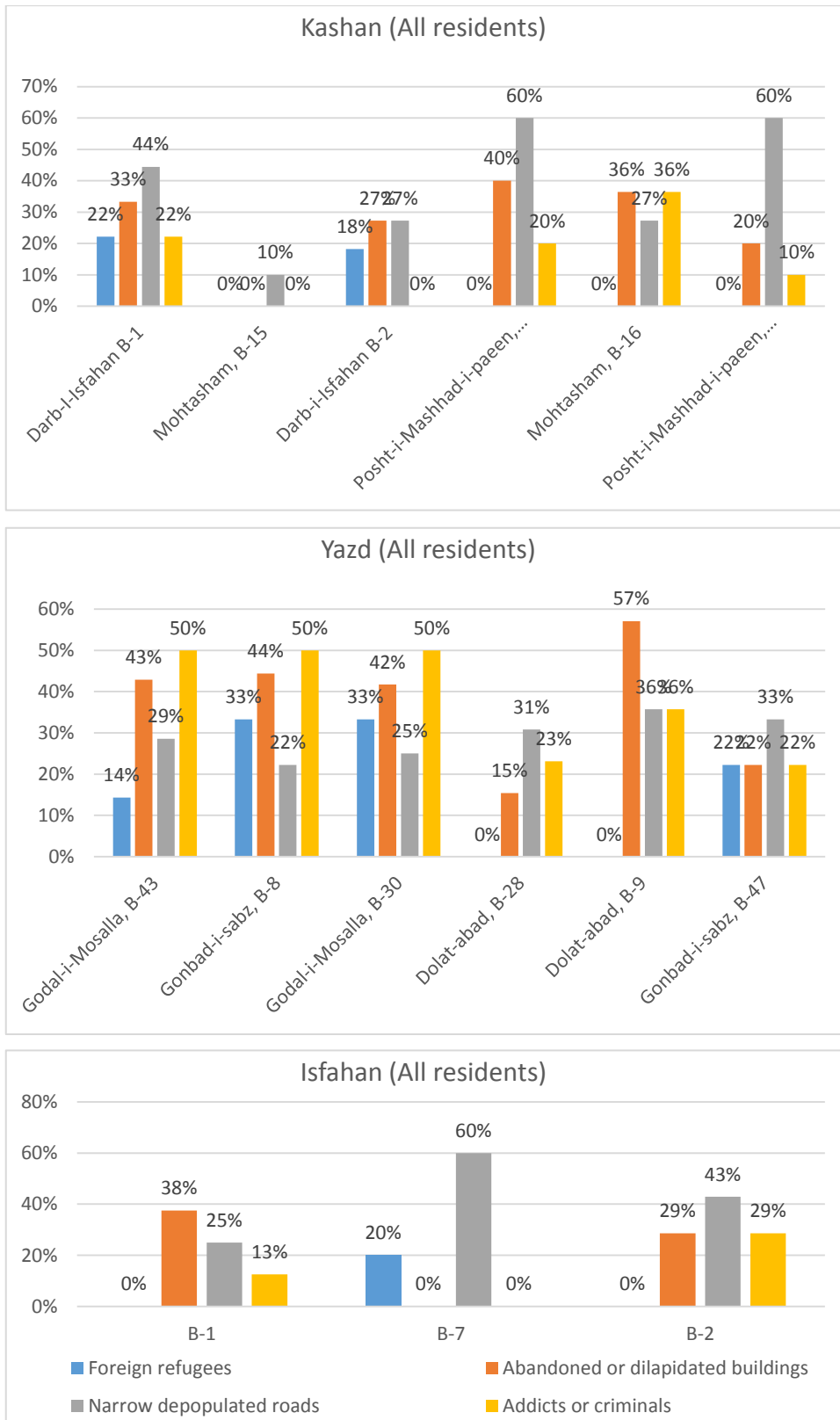


Figure 7.12: Comparing residents' viewpoints regarding the lack of public safety in historic Isfahan (Appendix D-5-3)

7.6.1. DABs and sense of social safety among refugees and local residents

A crosstab analysis amongst local residents in case studies indicated that essentially felt unsafe in their neighbourhoods (Appendix D-5-4).

In both Kashan and Isfahan, on average about 45% of local residents believed that the existence of narrow depopulated roads has turned historic areas into unsafe places. Moreover, among the local residents of Kashan and Isfahan respectively 32% and 28% indicated DABs as the second most important reason for lack of public safety.

In Yazd, 42% and 48% of local participants respectively suggested that the existence of DABs and presence of addicts or criminals were the most crucial reasons that resulted in a lack of sense of socio-spatial safety. Nevertheless, 29% of local residents in Yazd indicated lack of vehicular access as the third most important reason for the absence of public safety in historic areas (Appendix D-5-4).

Correspondingly, in urban blocks in historic Yazd, the presence of non-Iranian refugees, addicts or criminals were mostly indicated as a significant reason for lack of socio-spatial safety by local residents, that can be correlated to a larger extent of DABs. In historic Kashan, lack of public safety as a result of the existence of non-Iranian refugees can be closely correlated to the extent of DABs (Figure 7.13).

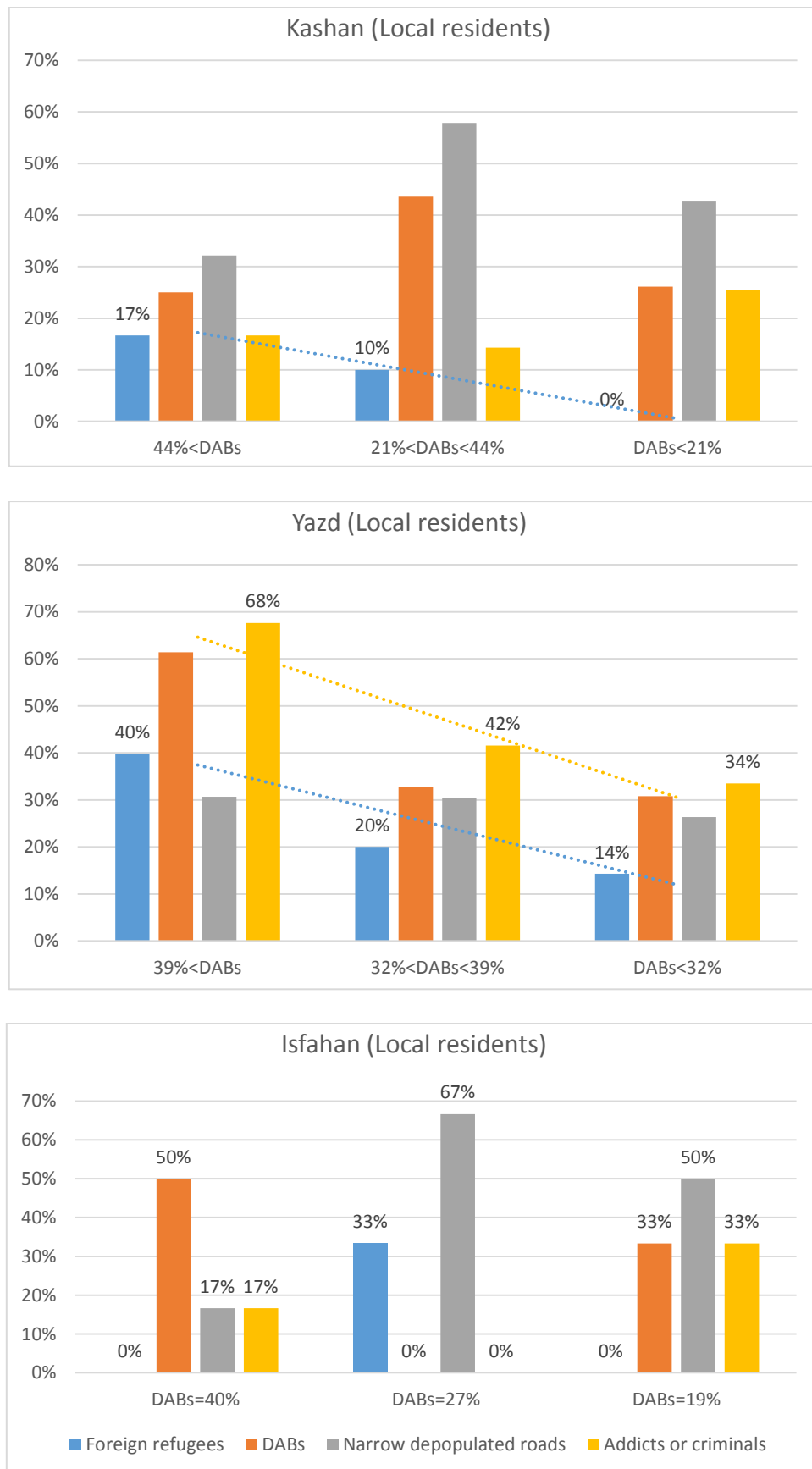


Figure 7.13: A cluster analysis indicating local Iranian residents’ reasons for feeling unsafe in three historic cities (Appendix E-5-4)

Among refugee populations in historic Kashan and Yazd, in half of the surveyed urban blocks respondents have not experienced lack of public safety at all⁹, while in some circumstances residents believed that DABs and narrow depopulated roads generate unsafe environments. In the highly dilapidated-abandoned urban blocks of Yazd, a small proportion of residents indicated that addicts and criminals can generate lack of public safety. Accordingly, the latter claim can be perceived as reasonable because the unsupervised condition of DABs could highly attract antisocial behaviour. Nevertheless, in Isfahan, refugees feel unsafe as a result of narrow depopulated roads (Figure 7.14).

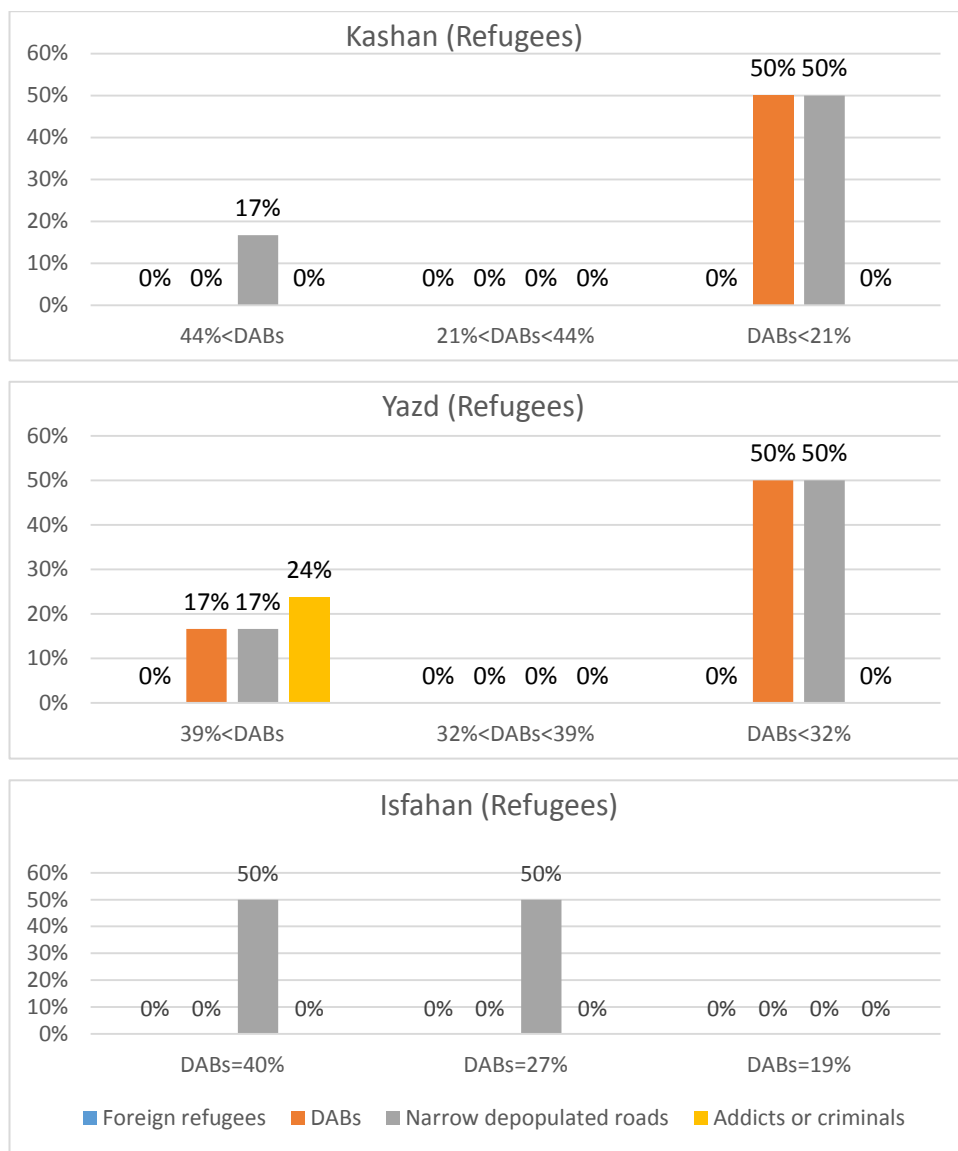


Figure 7.14: A cluster analysis indicating refugee residents’ reasons for feeling unsafe in three historic cities (Appendix E-5-5)

⁹ Another possibility is that refugees did not express such socio-spatial safety issues for other reasons that are outside the scope of this research.

7.7. Residents' attitudes about dilapidated-abandoned buildings

Among 161 respondents, a question was asked to determine the perception of residents regarding DABs (section 4.6.3). The relevant answers include one of the following options: (1) DABs are dangerous, (2) they must be reutilised or restored, (3) they are not causing a problem, and (4) I do not know (see Appendix E-6).

The ratio of responses received from residents was about 90%, while slightly less than 10% provided no answer. Inside the three cities of Yazd, Kashan and Isfahan, about 55% of the participants believed that DABs were dangerous. Nonetheless, about 55% of participants indicated that DABs must be somehow reutilised or restored. However, only 9% suggested that DABs posed no danger to residents while another 9% had no idea in that regard (Appendix D-6-1).

Inside sample blocks in historic Kashan, Yazd and Isfahan the ratio of responses received from participating residents was respectively 90%, 88% and 100%. Inside the sample blocks of Kashan, Yazd and Isfahan respectively 51%, 50% and 85% indicated that DABs were dangerous. Nonetheless, on average 49%, 58% and 65% respectively in Kashan, Yazd and Isfahan believed that DABs must somehow be reutilised or restored. Moreover, 15%, 6% and 5% in Kashan, Yazd and Isfahan indicated that DABs were not a problem while correspondingly 7%, 1% and 10% stated they had no idea in that regard (Appendix D-6-2).

Consequently, it could be disclosed that a large proportion of participating residents in historic areas have expressed a negative feeling, that DABs poses a danger to all occupants. In this case, lack of sense of place satisfaction can be evidently observed among all residents in the surveyed historic cities (Figure 7.15).

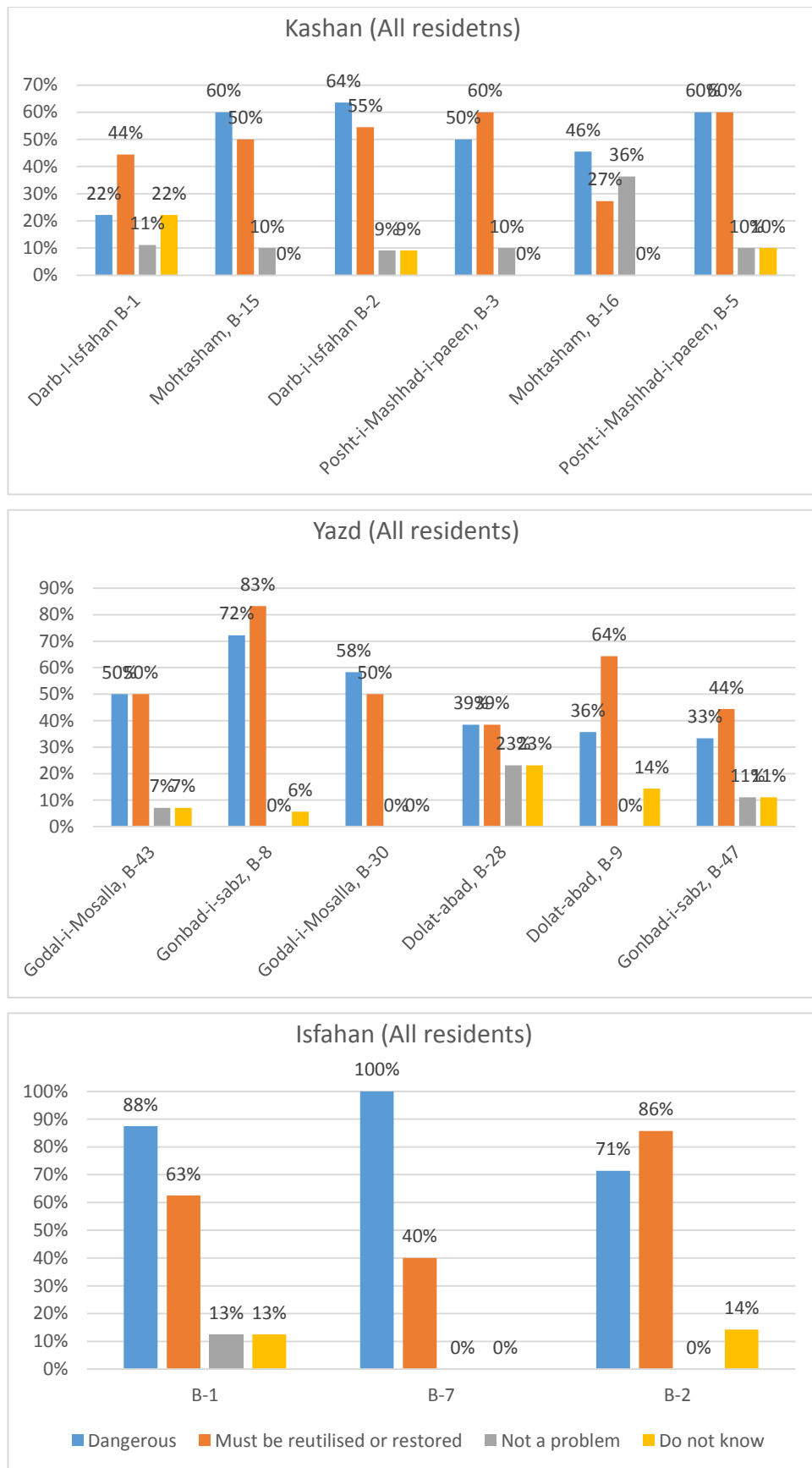


Figure 7.15: Comparing residents' viewpoints regarding dilapidated-abandoned buildings in three historic cities (Appendix D-6-3)

7.7.1. The perceptions of refugees and local residents regarding DABs

In three historic cities, a significant proportion of local residents believed that DABs was either dangerous or should be reutilised. Accordingly, on average 54%, 50% and 89% of local Iranian residents respectively in Kashan, Yazd and Isfahan were concerned with safety problems generated as a result of DABs.

Additionally, on average 62%, 56% and 78% of residents respectively in Kashan, Yazd and Isfahan were convinced that DABs should be reutilised. Only a few residents either believed DABs were not a problem or stated they did not know what to do regarding DABs. The analysis clearly reflects lack of sense of place satisfaction among residents, as a result of the existence of DABs in three historic cities (Appendix D-6-4).

In historic Yazd and Isfahan, a correlation can be observed between the proportion of DABs and the percentage of residents' concerns that perceive DABs as a dangerous space. It seems that the results of Kashan on 'DABs are dangerous' are contradictory to Yazd and Isfahan, that can be associated with limited sampling, inaccurate and/or erroneous patterns of answers (Figure 7.16).

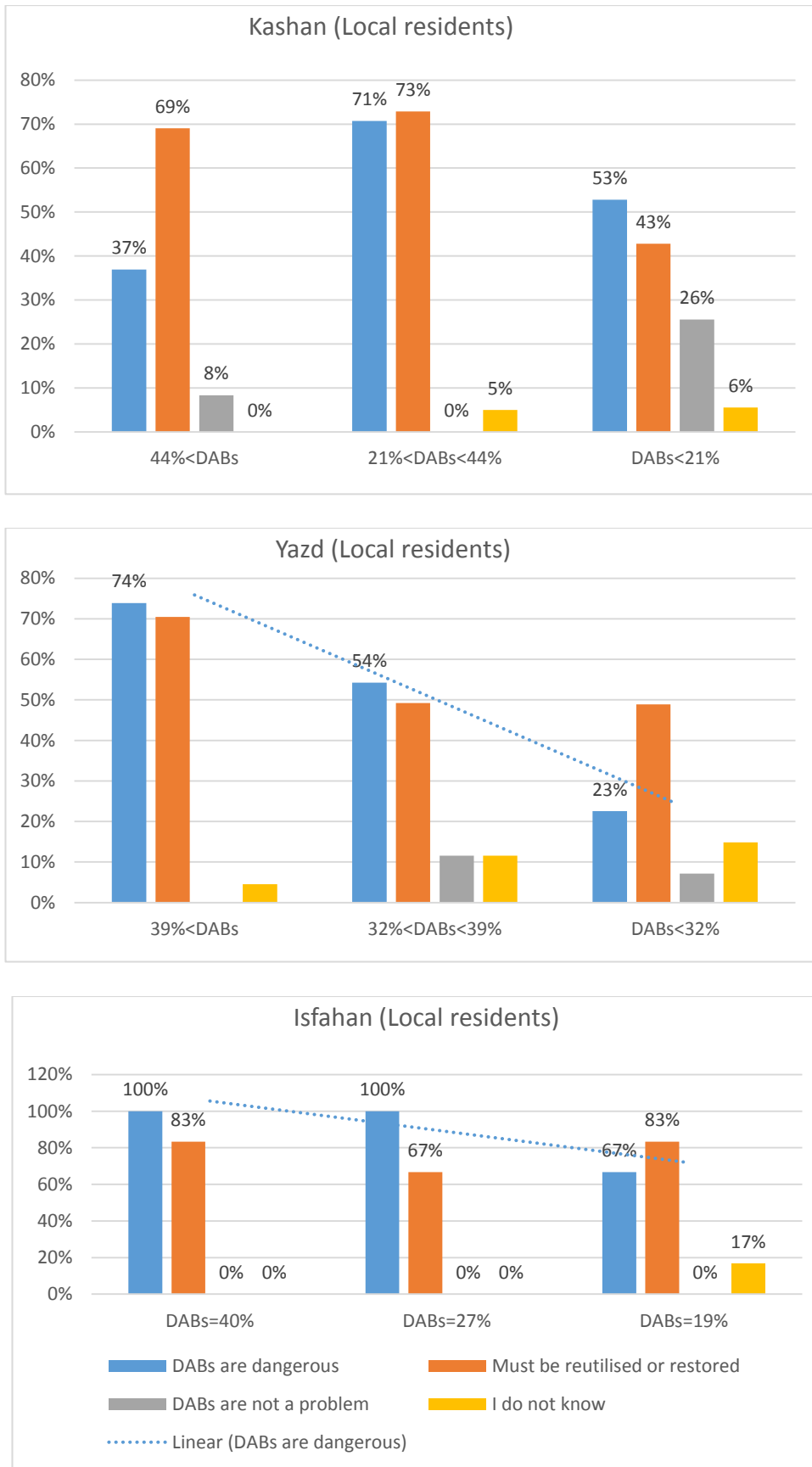


Figure 7.16: A cluster analysis of local Iranian residents' perceptions regarding DABs in three historic cities (Appendix D-6-4)

Among non-Iranian and/or refugee residents, a large proportion of respondents in highly dilapidated urban blocks in Kashan and Yazd either had no idea regarding DABs or believed that DABs were not a problem. Accordingly, in Kashan, Yazd and Isfahan on average 33%, 48% and 83% of refugees considered that DABs were dangerous. Besides, in Kashan, Yazd and Isfahan, respectively, on average 17%, 37% and 33% of refugees believed that DABs must be restored or reutilised (Appendix D-6-5).

Amongst non-Iranian residents who have stated DABs as a problem, most responses are received from inhabitants living in less dilapidated-abandoned areas, rather people who live in highly dilapidated-abandoned blocks.

Correspondingly, in Kashan, Yazd and Isfahan respectively 28%, 3% and 17% of refugee residents suggested that DABs were not dangerous, while a significant proportion of such expressions were received from residents who lived in highly dilapidated-abandoned areas.

Such contradictory qualities could reiterate the inaccurate and/or erroneous patterns of answers, generated as a result of liminality (type-A) of non-Iranian disadvantaged residents living in historic urban areas (Figure 7.17).

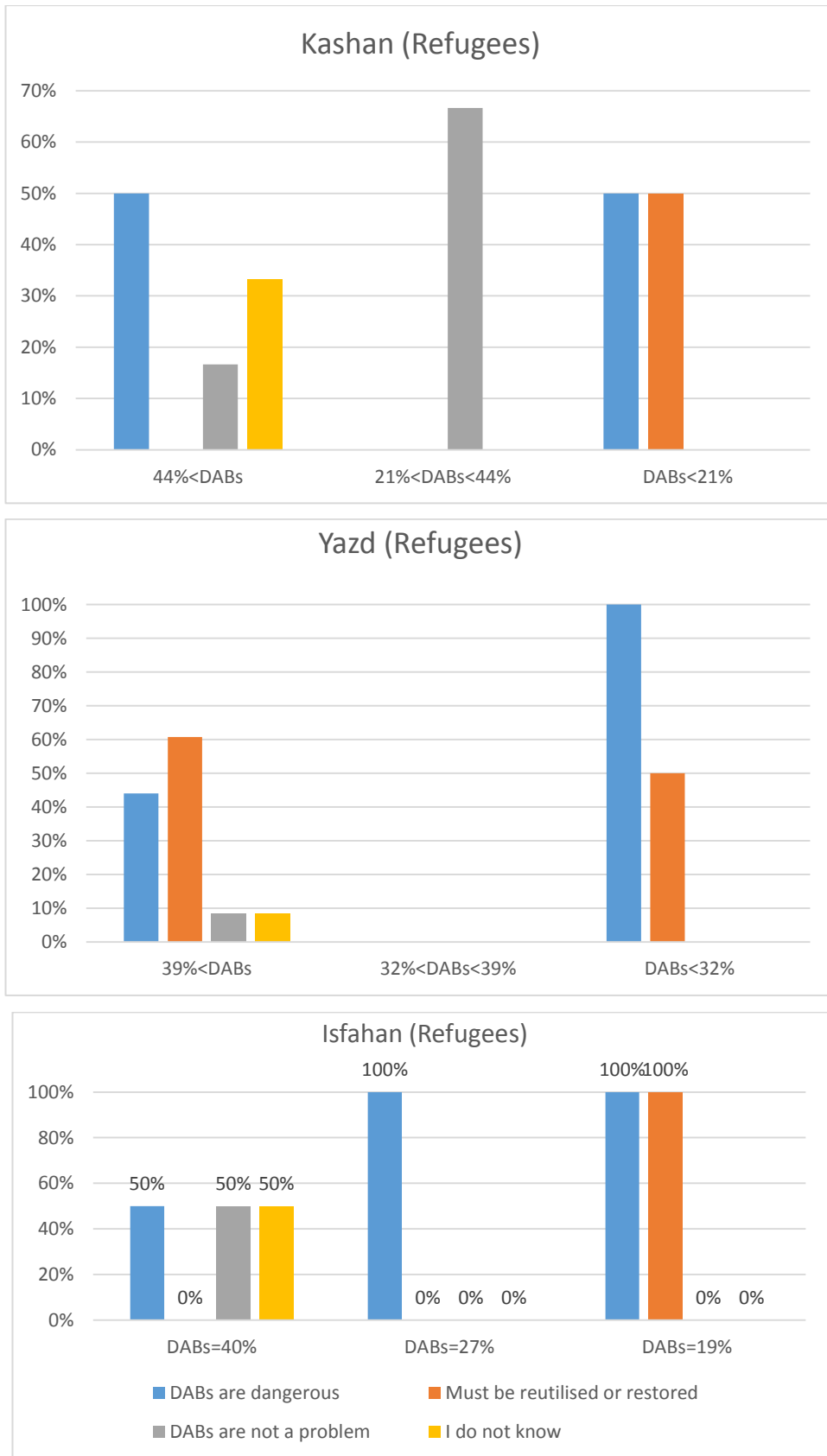


Figure 7.17: A cluster analysis of refugee residents' perceptions regarding DABs in three historic cities (Appendix D-6-5)

7.8. The willingness of residents to swap places

Among 161 respondents, a question was designed to evaluate the sense of place-identity among all residents (section 4.6.3, Chapter 4). The relevant answers include one of the following options: (1) yes I will leave my current place (if I could obtain a housing opportunity of equal value to my current property), (2) I will never leave this place (Appendix D-7).

Inside Yazd, Kashan and Isfahan, about 76% of participants indicated they were not emotionally attached to their places, and would leave historic areas as soon as they could obtain a better housing option outside historic areas. Nonetheless, only slightly less than a quarter (24.2%) indicated they would never leave their homes due to an inherited sense of identity which their homes had endowed. Thus, lack of sense of place-identity could be observable inside the three case studies, wherein about three-quarters of all participants expressed interest in leaving their traditional homes if they secured a reasonable place (of equal value) in city fringes (Appendix D-7-1).

Inside six sample blocks in historic Kashan, Yazd and Isfahan residents were asked to answer the above question. Respectively, around 84%, 71% and 70% indicated they were not emotionally attached to their places, and would leave historic areas as soon as they obtain housing options of equal/more value.

Nonetheless, on average 16%, 29% and 30% of participants respectively in Kashan, Yazd and Isfahan indicated that they would never leave their inherited homes due to a sense of family-identity, which the home has endowed. Consequently, lack of a sense of place-identity could be clearly observable inside the sample blocks in these three historic cities (Appendix D-7-2).

Accordingly, Kashan historic areas show the lowest level of a sense of place-identity, where on average only about 16% of participating residents stated they would never leave their inherited homes. Nonetheless, historic Yazd and Isfahan indicated the highest levels of sense of place-identity compared to Kashan, where it is demonstrated that respectively about 29% and 30% of residents were emotionally attached to their traditional dwellings (Figure 7.18).

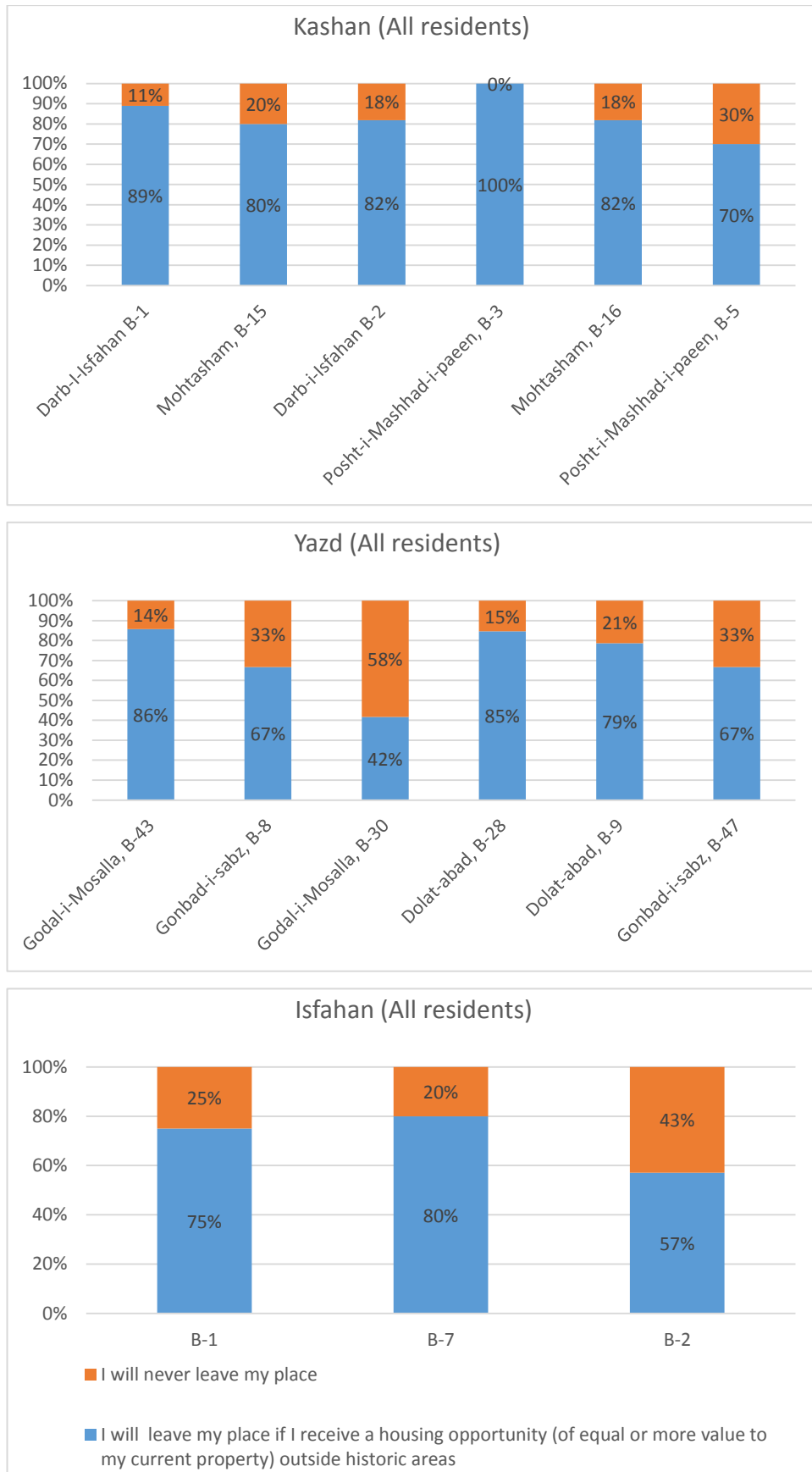


Figure 7.18: Comparing sense of place-identity in three historic cities (Appendix E-7-3)

7.8.1. DABs and sense of place-identity among refugees and local residents

This inquiry assesses sense of place-identity among local and refugee residents, which clearly can evaluate the state of spatial liminality type-B in historic cities, as discussed in section 3.4.8 (Chapter 3).

Inside urban blocks in historic Kashan, Yazd and Isfahan respectively on average 80%, 63% and 61% of local Iranian residents were willing to swap their houses with housing opportunities (of equal or more value) outside historic areas. Respectively, 20%, 37% and 39% of residents in Kashan, Yazd and Isfahan showed a strong sense of place-identity (Appendix D-7-4).

Accordingly, along with section 7.2 in this chapter, this section reiterates that levels of sense of place-identity (which equates to a sense of belonging to place) among local residents in historic sample blocks of Isfahan and Yazd were extremely higher compared to those in Kashan. This quality could strike a chord with the lower value of land in Kashan and higher urban population in both Yazd and Isfahan (see section 5.6 and Table 4.4).

The analysis would suggest that in historic areas (where a strong sense of place-identity once existed amongst neighbourhoods), today on average between 73% to 90% of local residents in Kashan, 57% to 67% in Yazd and 50% to 67% in Isfahan respectively indicate they have no sense of place-identity regarding their traditional houses.

This quality can be seen as a real socio-spatial crisis amongst residents, in such irreplaceable urban built-environments, which can clearly equate to lack of spatial liminality type-B, and in many cases has proved to be independent of the extent of DABs (Figure 7.19).

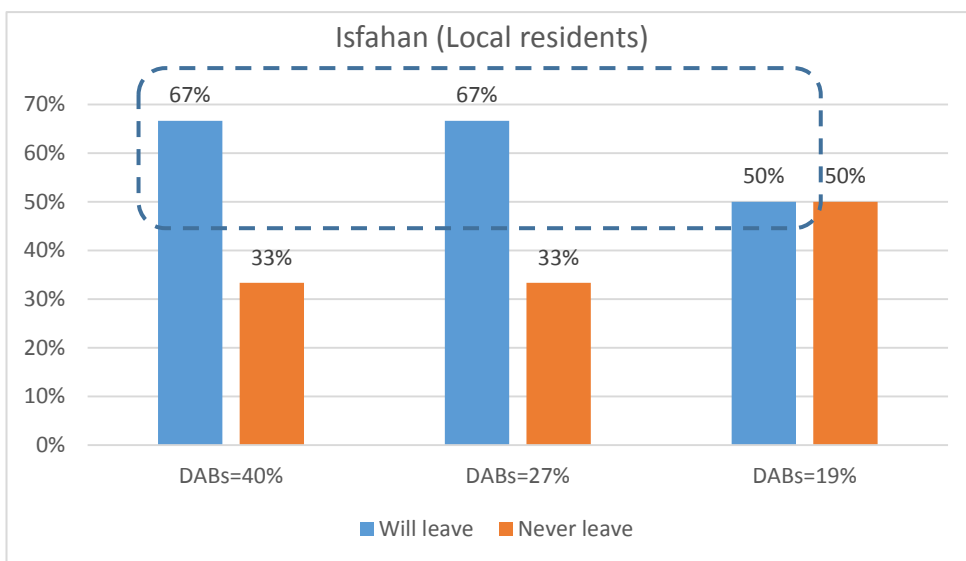
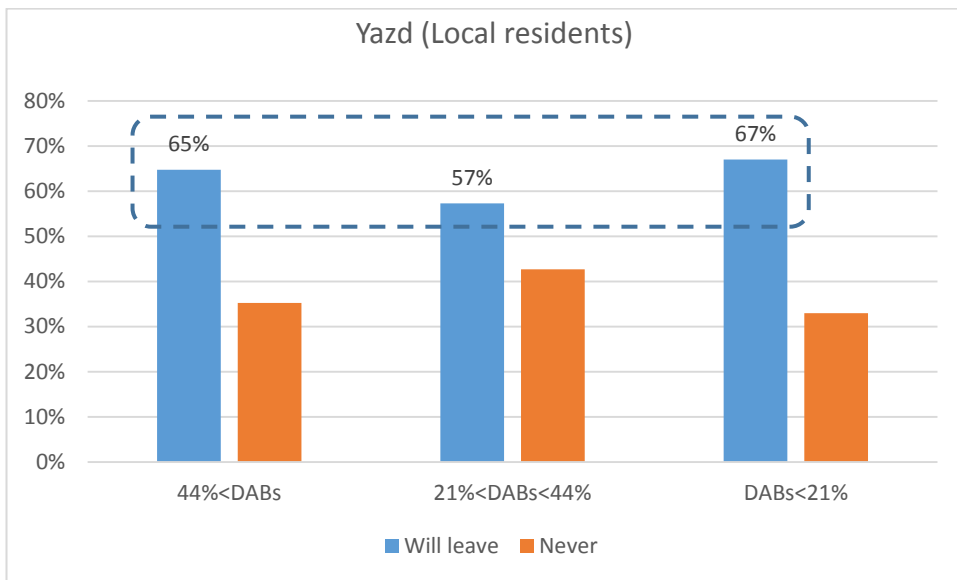
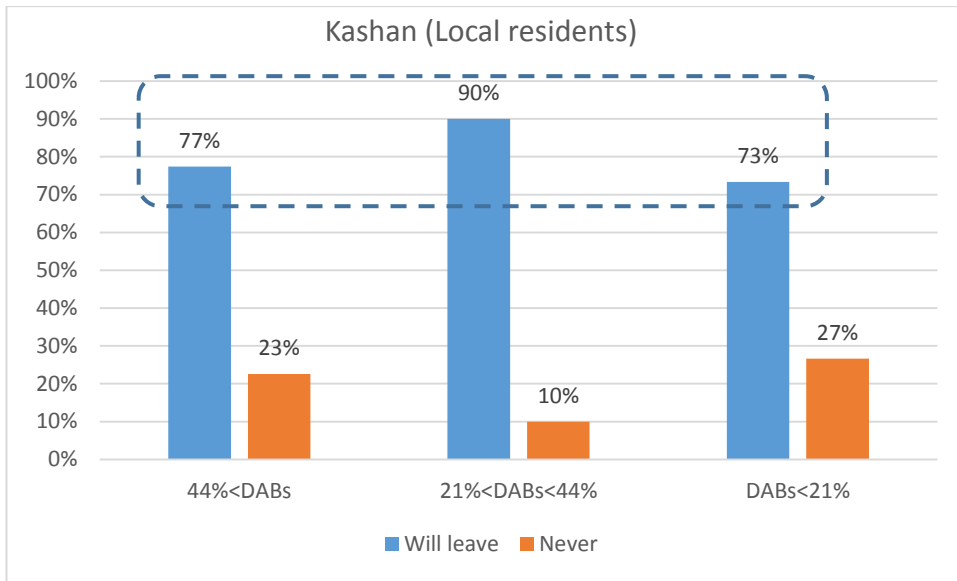


Figure 7.19: A cluster analysis regarding the sense of place-identity among local residents in three historic cities (Appendix E-7-4)

Among non-Iranian residents in three historic urban areas, no sense of place-identity can be observed where almost all residents are interested in receiving housing opportunities (of equal value) outside historic areas (Figure 7.20).

The results suggest that even positive intergroup relationships (if they exist) among refugees can be seen as ineffective, and in this sense is unable to endow a significant sense of place-identity on refugee residents. In historic Yazd, refugees did not respond to the question. No answer in those cases can be interpreted as a skeptical reaction, rather than a real answer to the question (Figure 7.20).

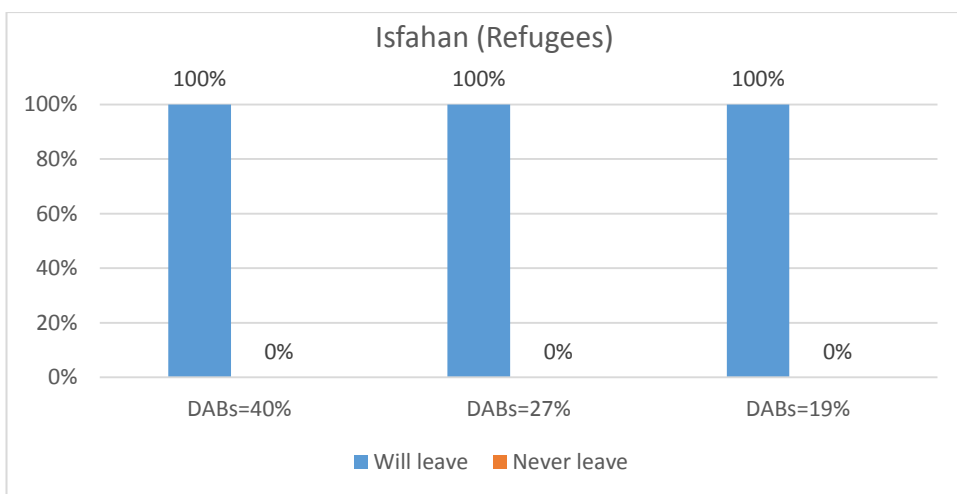
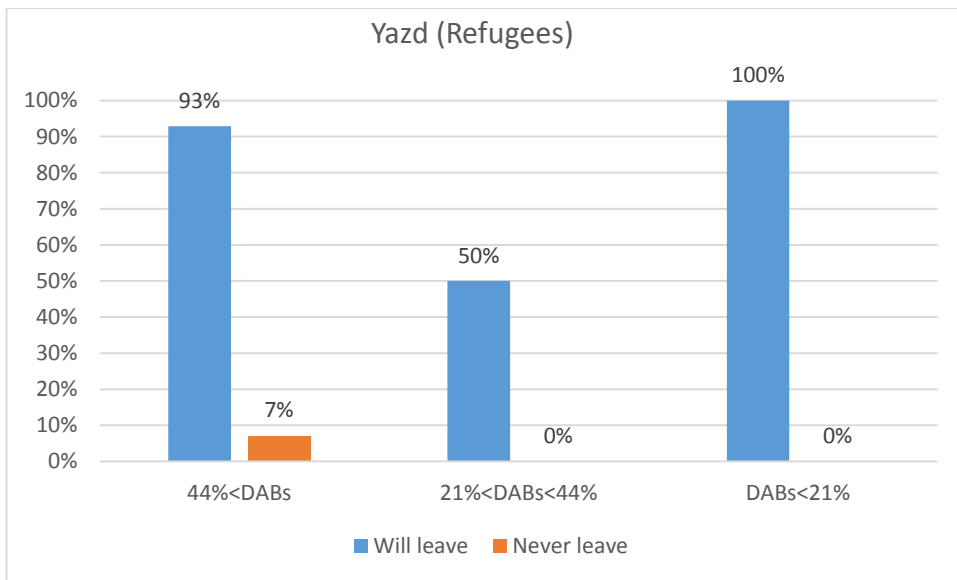
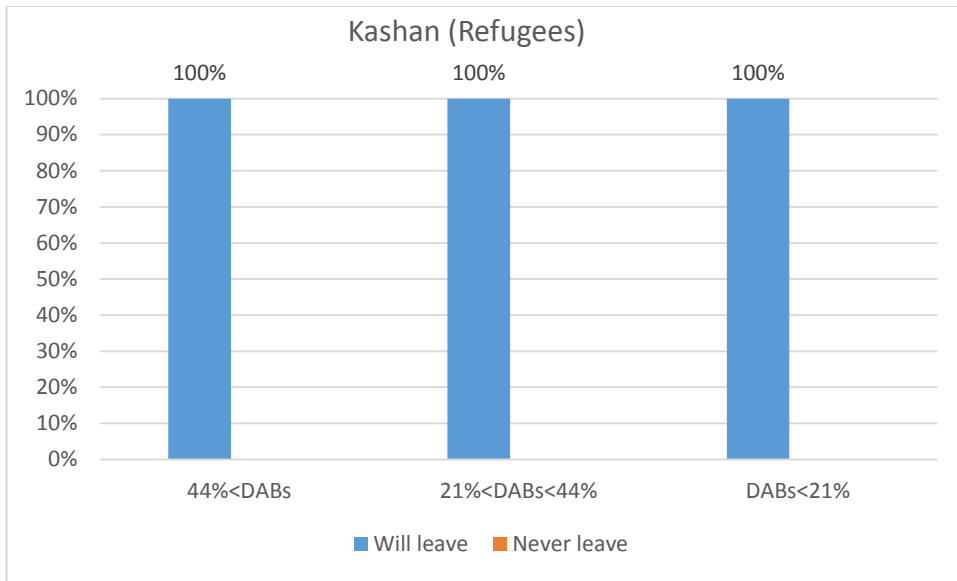


Figure 7.20: A cluster analysis regarding the sense of place-identity among non-Iranian residents in three historic cities (Appendix E-7-5)

7.9. Summary

This chapter has measured the correlation between the extent of DABs and spatial liminality type-B including the sense of belonging to place, place satisfaction, social-capital, sense of social safety, the perceptions of residents regarding DABs and sense of place-identity among residents of 15 selected urban blocks in three historic Iranian cities. Section 7.2 suggested that a sense of belonging to place indicates its lowest, medium and highest levels respectively in Kashan, Yazd and Isfahan, which can relate to lower population and land value in Kashan. In this case, it was also demonstrated how the extent of DABs was related to a lack of sense of belonging to place amongst local Iranian residents in historic Kashan.

Sections 7.3 and 7.4 demonstrated that lack of vehicular accessibility and the existence of DABs could be seen as the two most crucial reasons for lack of sense of place satisfaction among residents. Those sections both demonstrated substantial grounds to support the notion that higher extent of DABs is correlated to a decreased sense of (socio-spatial) safety amongst local residents in Yazd and Kashan. Section 7.5 represented a low level of social capital among residents in Kashan which yielded the largest extent of DABs compared to Yazd and Isfahan. Nevertheless, residents of historic Isfahan and Yazd are respectively showing a higher degree of community engagement.

Section 7.6 demonstrated how in both Kashan and Isfahan, local residents believe that the lack of vehicular accessibility and existence of DABs are two reasons for turning historic areas into unsafe places. In historic Kashan lack of public safety as a result of the existence of refugees can be seen to be correlated in relation to the extent of DABs. In Yazd, it was suggested that the presence of addicts or criminals and existence of DABs were the two most crucial reasons for the absence of socio-spatial safety among local residents. In this case, concerns regarding the presence of refugees, addicts or criminals (as significant reasons for lack of socio-spatial safety amongst residents) can be seen as correlated in relation to the larger extent of DABs.

Section 7.7 suggested that local residents feel extremely unsafe around DABs in all three historic cities, and such a feeling can be directly related to the actual extent of DABs in Yazd and Isfahan. Nonetheless, refugee residents were not largely concerned with the existence of DABs, and this could be relevant to their liminal statuses. Section 7.8 indicated that levels of sense of place-identity among local residents in historic sample blocks in Isfahan and Yazd are extremely higher compared to Kashan, which can relate to the larger extent of DABs in Kashan. This quality can be seen as a real socio-spatial crisis amongst residents, which can clearly be

associated with lack of spatial liminality type-B, and has been shown to be independent of the extent of DABs.

Chapter 8: Socio-Spatial Planning Context Analysis



A dilapidated abandoned heritage building in Isfahan, 2018 (Source: author)

8.1. Introduction

Section 2.4.6 (see Chapter 2) previously discussed that inside historic Iranian cities, three government agencies are directly in charge of protecting, regulating and revitalising urban fabrics. Moreover, section 4.6.4 (see Chapter 4) has demonstrated that for attaining a better understanding on spatial liminality, researchers need to scrutinise the socio-spatial planning/regulatory arrangements as well as the roles that policymakers, developers and practitioners could play in historic Iranian cities.

Correspondingly, Chapter 8 is based on 19 in-depth interviews, conducted among a wide range of practitioners, designers, planners, developers, policymakers, representatives of the three government agencies and academicians in the three historic cities of Kashan, Yazd and Isfahan (see Appendix F for coding criteria and interview references).

The interviews are conducted around the basic questions (designed in section 4.6.4, Chapter 4) investigating the impact of policies on the formation of dilapidated-abandoned buildings (DABs) in three historic cities (see Appendices E-7-2 and E-7-3). Due to the open nature of the inquiry, in some circumstances respondents did not provide relevant answers (see section 4.3, sub-questions 1-b and 2-c in Chapter 4).

In this chapter, NVivo 11 software is used for sorting, coding and thematic analysis. It is crucial to comprehend that the current research is not conducting an inquiry into current urban design/planning regulations. On the contrary, this chapter aims to understand the processes and consequences of such regulations that have been in practice since 1979.

8.2. Cause and effect of DABs in regulatory practice

DABs in historic cities could be considered a serious, multi-aspect and problematic phenomenon genuinely experienced by local residents (D-GC, KH-SS). Nonetheless, dilapidation is a natural occurrence in all physical structures including buildings in historic areas (H-HDRID). DABs have devaluated land and reduced the quality of life in historic urban areas by attracting disadvantaged communities (such as illegal refugees) inside heritage contexts, which has generated a lack of sense of belonging to place among residents inside historic cities. Therefore, DABs may cause further emigration of original residents, and this consequently causes immigration of disadvantaged communities (D-GC). DABs may also generate visual, environmental and social problems in historic cities.

The most crucial impact of DABs could be a socio-spatial assumption for the layman, that historic areas are inappropriate for living. Such an inferior reputation could later affect adjacent areas so they become depopulated too (Z-HPRD). Thus, DABs undoubtedly cause some parts of the city to become dysfunctional, and in this case, can be a serious socio-spatial issue. DABs in historic urban fabrics can also discourage tourism in the sense that historic sites remain isolated and surrounded by disused buildings or squatters (M-UP, KH-HPRD).

Currently, DABs in these historic contexts can be perceived as a deleterious phenomenon which can negatively impact the city and urban landscape, and may affect urban functionality and mobility. However, there are types of land use that may not be suitable to implement inside old tissues of cities (e.g. in DABs). For instance, these could include modern urban facilities such as educational institutions, colleges and government departments, science and technology parks, and so on. This situation can further devalue land resources inside historic cities and redirect investment towards city fringe developments (B-UP, N-HRC).

DABs can generate two types of problems; firstly, they become a centre for social-spatial issues such as antisocial behaviour, criminality and lack of public security, which may attract drug abusers and create a non-defensible city. On the other hand, DABs can create environmental and/or health issues, such as the accumulation of garbage and generation of pests and vermin (F-DM, S-SS). DABs can be seen as a total waste of land resources in historic cities, while such socio-spatial damage has been largely ignored by government agencies (N-SS, T-HD).

The problems associated with DABs can be best observed when we study residential blocks adjacent to disused buildings. Based on our inter-departmental research many residents become discontent or feel unsafe when their homes are adjacent to DABs. In other words, DABs can be seen as large-scale loss in urban areas, which cannot be estimated by the market economy, and until today we have not been able to develop an actual tool for measuring damages associated with DABs (H-SS). Currently DABs are a serious problem for strategic governing of existing urban land resources. This dysfunctionality is serious, and will sooner or later disseminate substantial negative impacts on the economy (i.e. land) in urban districts, which in turn could generate further local and national problems (H-SS).

On the other hand, DABs can be perceived as a wider opportunity to meet the needs of residents, accommodate new urban developments such as public services, open space or new vehicular roads, and revitalise peripheral urban areas, when properly managed (B-UP, N-HRC, F-DM).

8.2.1. City fringe developments versus historic urban areas

In the modern era, financial and economic trade-offs at national levels have principally caused historic fabrics to lose their (socio-spatial) strategic dominance in Iranian cities. Iran has a mono-product economy which significantly relies on the production of oil. Accordingly, expending oil money is much more convenient when urban developments are located outside old cities, where infrastructure can be fixed from scratch. In this sense, city fringe developments guarantee ease of construction, greater building density, lower building costs, reliable vehicular accessibility and significantly meet market demands. That is why today building investment is largely directed toward the city fringe, while central areas in historic fabrics remain considerably underdeveloped (B-PUDP).

Besides, due to the high rate of urban population growth in Iran (Table 4.3), there is an emergent public competition for accessing urban business services and appropriation of contemporary lifestyles among Iranians. Nevertheless, old urban fabrics are unable to compete with urban fringe developments in terms of vehicular accessibility and provision of public services. Such competition, in many cases, leads to devaluation of land in historic areas (B-UP, N-HRC).

For example, if one looks at the map of metropolitan Isfahan, it is evident that in recent years the city has experienced unprecedented urban growth (Figure 8.1). This phenomenon shows how urban management systems have been unable to transfer or contain such excessive urban sprawl; which arguably has partially controlled outward growth of the city. This urban sprawl has devaluated land inside central historic areas, which in turn has attracted low-income disadvantaged communities towards cheaper housing options (M-UP, KH-HPRD).

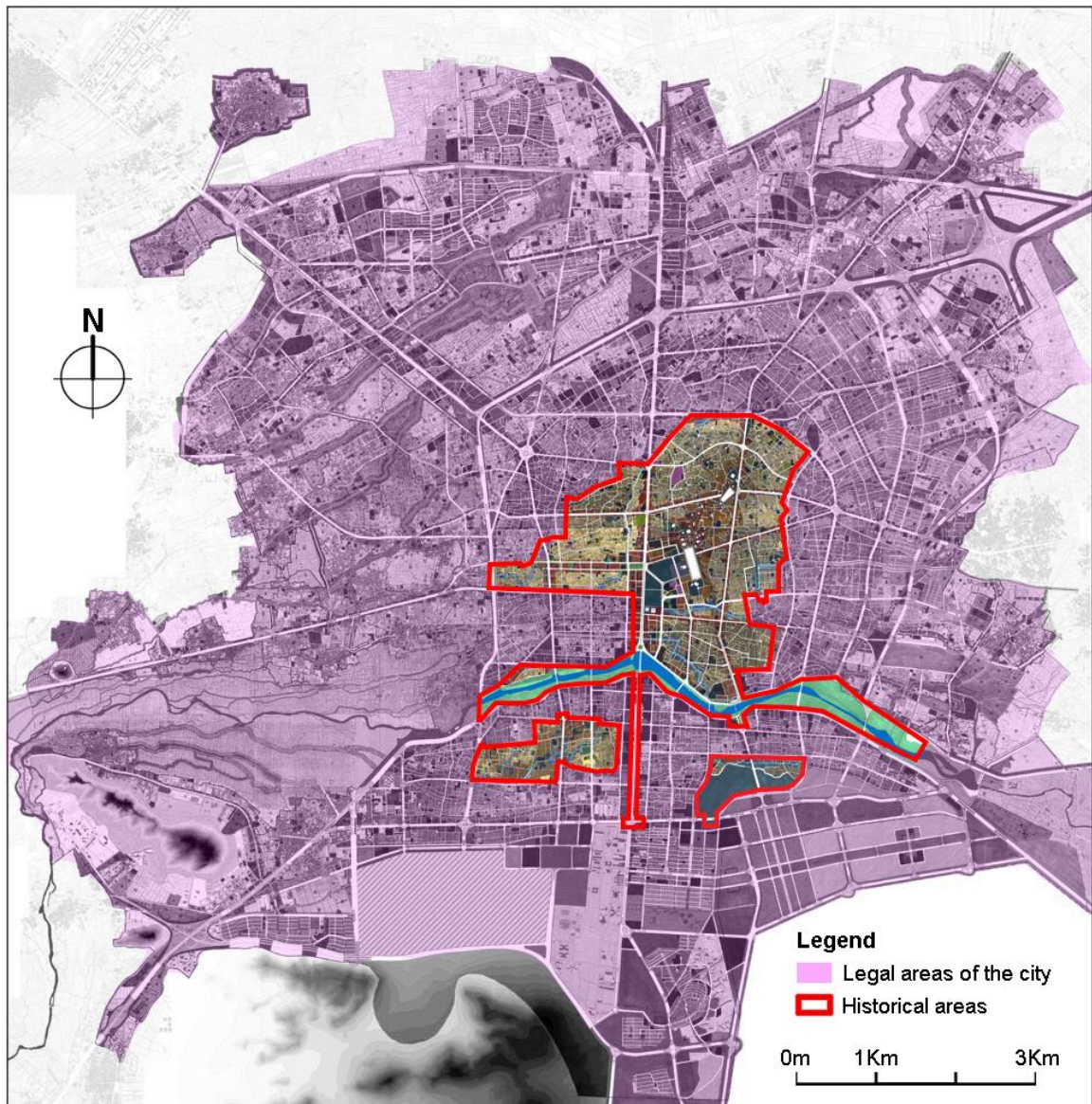


Figure 8.1: Strategic plan of Isfahan proposed in 1996. The historic core is demarcated by a solid red line in the centre (map developed based on the strategic plan of Isfahan by NJP Consultants, 1996)

Therefore, there is a need to provide tools for estimating such significant urban losses, while today it has become evident that the underutilisation of land resources can generate further outward growth of the city (M-UP). Such external growth may cause further urban development which imposes a massive cost on establishing new infrastructure. Hence, existing DABs create spatial gap that further devalue land resources inside historic cities and thus contribute to further fringe developments (H-SS)

In recent years improper strategic planning has also unrealistically broadened city boundaries and indirectly devaluated land inside central historic areas of the city. In this case, major urban developments have been implemented in city fringe zones. For instance, over the past 60 years,

the city of Yazd has become 18 times larger compared to its original size in 1958, while today's strategic plans have considered an area of 24 hectares for accommodating about 600,000 residents resulting in very low residential density (i.e. about 40 heads per hectare). Such urban density is not suitable for the extremely hot climatic conditions in Yazd, and this can significantly waste national energy resources. Such low population density has diminished further over the years, while today many large residential projects tend to be implemented on the city fringe (B-PUDP).

Today, sustainable urban regeneration laws and regulations (approved in 2013) mean that government agencies have confirmed that urban sprawl must be stopped, while there is a need to preserve legal areas of the cities (section 8.3). Accordingly, the Department for Roads and Urban Development strongly believe that population density in Yazd could increase by 150 persons per hectare, almost four times more compared to existing density (KH-SS).

8.2.2. Strategic plans, urban sprawl and formation of DABs inside the historic core

During the past 40 years, DABs have become problematic in historic Kashan, Yazd and Isfahan. This problem has been initiated by tough outward-looking perspectives on city management in Iranian cities that encourage modern city fringe developments, and consequently devalue land and depopulate central historic areas (M-PTA, B-PUD).

In contemporary Iranian cities, the formation of DABs is perceived as a very complex process. However, government agencies play a major role in generating DABs. For instance, after the Islamic revolution, inappropriate governmental land provision outside the usual boundaries of the city created uncontrolled urban expansion, whilst management perspectives mainly generated outward urban growth, rather than encouraging internal urban growth. As a result, today the provision of cheap governmental land parcels outside conventional city areas (i.e. the city fringe), can be understood as one of the most crucial reasons as to why DABs have formed inside historic cities. Therefore, DABs could be seen as relevant to outbound expansion policies of government agencies (H-SS).

In addition, between the 1960s and 1970s, historic areas of Iran were inappropriately treated and/or misunderstood. During that time a Western housing pattern (building on one side of the land, against traditional courtyard structures) was proposed in Iran, was implemented for large-scale city fringe developments, and mainly depopulated central historic contexts (GH-HUDD, H-HDRID). Since that time, the formation of outward urban growth is clearly relevant regarding the formation of DABs in historic cities (B-PUDP).

Accordingly, this situation has caused further land devaluation inside historic cities. Specifically, during the two presidential terms of Mr. Ahmadinejad, we have experienced the largest urban sprawl ever, by implementing ‘Maskan-i-Mehr’ (i.e. medium to high-rise affordable housing projects) far beyond established city boundaries. Hence, these spontaneous projects have largely left central areas of the city unattended (S-SS). Maskan-i-Mehr (large-scale housing projects) was basically funded by oil money, and generally implemented on the city fringe, that radically expanded many Iranian cities and thus DABs inside historic cores (M-PTA, B-PUD).

Today, urban management systems are unable to transfer such excessive urban sprawl to DABs; which could have partially controlled the outward growth of cities (Figure 8.2). In this sense, the existence of DABs may also contribute to massive costs for facilitating new infrastructure in city fringe developments (N-SS, T-HD). Such urban sprawl has devaluated land inside central historic areas, which in turn has attracted low-income disadvantaged communities (M-UP, KH-HPRD).

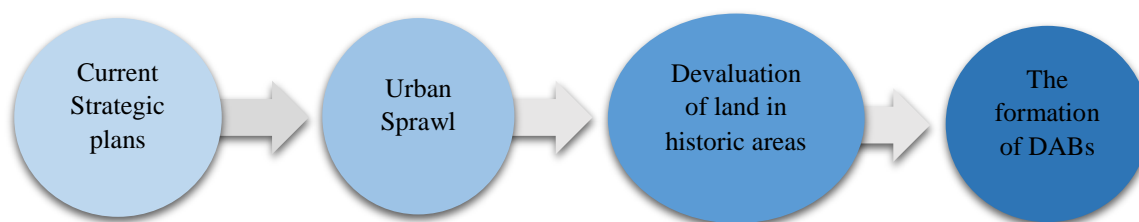


Figure 8.2: The process of generating DABs as a result of current strategic plans in historic Iranian cities

8.2.3. Governance ambiguity and formation of DABs

Today the shortage of sufficient incentives regarding current planning/design contexts discourages residents from building/restoring their properties. Government incentives/programs already exist, but unfortunately, they are not sufficient and sometimes become a burden. For instance, revitalisation projects in historic Kashan today have contributed to dilapidation of a large number of historic sites (Z-HPRD).

Besides, today no effective method has been forthcoming for facilitating investment, rejuvenation and provision of necessary infrastructure in historic urban contexts, and this trend has become a recurring process and generated further DABs (B-UP, N-HRC). In other instances, dysfunctional acts, laws and legal obligations, property ownership and inheritance rules and regulations also contribute to the materialisation of more DABs (H-SS). Some other

reasons for the formation of DABs are inappropriate large scale urban planning/management procedures, which have been delivered by relevant government agencies (GH-HUDD, H-HDRID).

Government agencies should be blamed, because they cannot meet the contemporary urban needs of residents. This failure by government has forced people to leave historic areas. The three relevant government agencies have not provided proper urban planning/design, thus historic city areas have not been able to keep up with contemporary lifestyle (such as vehicular accessibility), and this has caused new generations to leave the central core of the historic city, which in turn generates more DABs (S-SS). Over the past 40 years, the influx of low-income societies in historic areas is arguably an unprecedented phenomenon, which is undoubtedly relevant to top-down planning and design processes yet to be implemented by government agencies (M-UP, KH-HPRD)

8.2.4. Lack of public services and the morphology of historic cities

Currently, constant change in (social-spatial) public attitude and the prevalence of modern lifestyles have forced people to live in modern housing facilities. Accordingly, today it is publicly known that a historic house cannot satisfy contemporary human needs, while at the same time the maintenance of traditional houses can be time consuming and expensive, while these factors together may generate further DABs (Z-HPRD).

In brief, the main reason for the formation of DABs has been that traditional cities could not facilitate contemporary lifestyles, and specifically cannot work in conjunction with their surrounding modern vehicular grids, both in terms of materiality and functionality. Along with the scarcity of other public services, this lack of vehicular accessibility has devaluated land and encouraged emigration of younger generations over past decades. In fact, an analogy for modern vehicular grids today is blood vessels in a living body. When vehicular accessibility cannot reach historic urban tissues, the lifeblood of the old city no longer exists (B-PUD).

Thus, the lack of public services can be seen as a major reason for the formation of further DABs. Accordingly, historic urban fabrics are deprived of public facilities, such as vehicular roads, medical centres, fire brigades, recreation/sporting facilities, and so on (Z-HPRD).

This lack of civic infrastructure (e.g. serviceability of natural gas domestic piping), also devalues local land, further attracts disadvantaged communities and encourages emigration of original residents, which in turn generates lack of sense of belonging to place. In the past, the

hierarchical and narrow disposition of traditional roads generated public security; today excessive depopulation of such areas has attracted crime in historic cities. This trend arguably creates a wide range of urban, social and financial problems (M-UP, KH-HPRD).

8.2.5. The high rate of building restoration and formation of DABs

In historic cities, the rate of building restoration can be very high, which is another significant reason for the formation of DABs (Z-HPRD). Accordingly, many original residents abandon their historic homes due to extremely high restoration fees (B-UP, N-HRC). Additionally, inside historic areas, disadvantaged residents generally cannot afford to pay for building maintenance, and this factor causes further building deterioration, dilapidation and abandonment (D-GC).

8.2.6. The existence of DABs and the value of land in historic cities

Today, land resources have become a valuable commodity in the context of tourist attractions, thanks to an influx of international tourists. Currently, it cannot be proved that DABs are a permanent problem in Isfahan or largely populated historic cities (H-ED). Correspondingly, if an urban context is located in a historic zone and attracts tourists, then its properties become an expensive commodity. While one can spot disused buildings in such areas, it does not necessarily mean that those DABs or undeveloped land are not needed. Accordingly, today, many properties in the historic context of Isfahan are either used as warehouses (because of their proximity to the bazaar) or as a safe investment by affluent business persons (H-ED). It is crucial to understand that DABs is problematic in small historic cities such as Kashan, while in larger cities (such as Isfahan) land value dominates, and possibly DABs could not exist as a substantial urban problem (N-SS, T-HD).

8.2.7. Lack of sense of belonging to place and formation of further DABs in historic cities

Nowadays, lack of vehicular accessibility (as a result of restricted regulations of heritage authority against road widening projects) has diminished land value and discouraged building investment in DABs (M-PTA, B-PUD, GH-HUDD, H-HDRID).

Consequently, the current depopulation of historic areas has attracted antisocial behaviour and marginalised communities, such as illegal migrants or refugees. This trend has exacerbated social-spatial issues and stigmatised historic areas and their residents. Thus, such socio-spatial problems have indeed contributed to further devaluation of land, emigration of original residents and immigration of low-income and disadvantaged communities (e.g. foreign refugees) (N-SS, T-HD).

Accordingly, the presence of disadvantaged communities may harm historic fabrics, directly and indirectly. For instance, low-income communities cannot afford to repair their homes, and this directly causes further dilapidation. Nonetheless, among new arrivals the lack of sense of belonging to place (or place identity) indirectly threatens urban heritage fabrics (M-UP, KH-HPRD), and consequently increases emigration of original residents (B-UP, N-HRC), which results in further DABs (F-DM). Nevertheless, the presence of non-locals can trigger social tension, racism, criminality, and lack of a sense of belonging to place in such urban areas (D-GC).

8.2.8. Emigration of original residents and immigration of non-Iranian communities

In historic cities, it is generally observed that emigration of original residents is perceived as the main reason for formation of DABs and devaluation of land in historic cities. This could attract foreign refugees or disadvantaged communities to move into devaluated-deteriorated fabrics (F-DM, KH-SS, S-SS). Nonetheless, the problem started when government agencies could not facilitate the necessities of modern life for historic houses, which has encouraged local owners to sell or abandon their homes. This absence of life then has further caused the deterioration/devaluation of physical structures in the city (H-HDRID).

In historic urban areas, a correlation can be perceived between the immigration of disadvantaged communities and the formation of further DABs, in such a way that disused buildings can devalue adjacent housing/urban areas, and attract low-income disadvantaged communities. At the same time, the presence of disadvantaged community settlements also reduces the price of adjacent housing and land resources.

Accordingly, disadvantaged and low-income communities who reside in deteriorated historic fabrics cannot afford to restore their dilapidated homes, so they start to subdivide traditional properties and this attracts larger low-income populations. Consequently, government agencies cannot keep up with the provision of public infrastructure for new residents, and this creates further DABs inside historic areas (N-SS, T-HD).

It is crucial to understand that no single organisation or government agency is directly responsible for the formation of DABs, and this is a far broader phenomenon that one can imagine. However, land devaluation encourages disadvantaged communities to settle in historic areas, and this potentially generates more DABs (Figure 8.3). That is why, today, refugees are considered as a threat to the preservation of historic areas (GH-HUDD, H-HDRID).

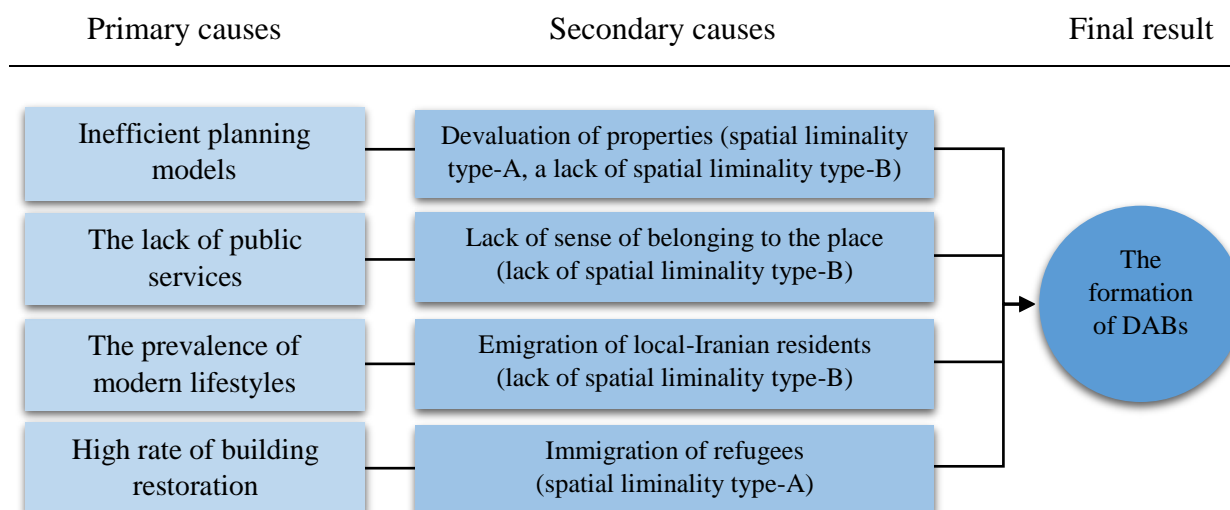


Figure 8.3: The process of generating DABs as a result of the socio-spatial problems in historic Iranian cities as deliberated in Section 8.2.1 and 8.2.8

8.2.9. Lack of cultural awareness and formation of DABs

In recent years the formation of new developments on the city fringe of Yazd has generated some public negative cultural-psychological perceptions about historic cities, which have exacerbated problems relevant to DABs (B-UP, N-HRC).

Today in Isfahan, a lack of sense of belonging to place could be seen as a crucial reason for dilapidation-abandonment of historic urban fabrics. In recent decades, it is clearly observable that many residents/owners have demolished their traditional homes (e.g. by discharging water into building foundations), hoping to avoid the heritage authority and its restrictive regulations, to be able to sell their properties freely. Hence, among original residents, it is generally believed that demolished building can be sold or developed quickly, compared to properties that contain historic buildings (M-UP).

On the other hand, buyers are mostly interested in building two- to three-storey apartments, which can ruin the desired character of historic areas. Thus, today, owners remain unaware of the tremendous cultural-financial potentialities that the preservation of their old houses may generate, for instance, by the adaptive reuse of buildings to hotels, museums and so on (M-UP, KH-HPRD). Such socio-cultural stigmatisation of historic areas has generated further immigration of refugees and the formation of DABs to a larger extent (D-GC). Therefore, public prejudice about historic areas can be seen as worse than financial devaluation. Today, for an Iranian layman, historic areas become equal to problematic/inferior districts, which demonstrate that cultural denial exists (M-PTA, B-PUD).

8.2.10. Generational change and the formation of DABs in historic cities

A large number of inheritors in a single building can also attribute to the formation of DABs. The number of inheritors can accumulate over time and lead to land/property division, as well as disagreement, abandonment and the generation of further DABs in historic contexts (M-UP, KH-HPRD).

After a few hundred years, traditional homes can be inherited by many heirs, which later may leave. Thus, the immigration of local residents causes deterioration and further DABs. Nonetheless, a large number of heirs who have shares in a single house may generate further ownership problems; for example, the disagreement or death of individual shareholders can cause further ownership complications and dilapidation (Z-HPRD).

In other words, other reasons for the generation of DABs can be considered including legal-ownership problems (e.g. problematic certificates of titles), or a large number of shareholders (heirs) for a single property, which can generate disagreements, abandonment and further dilapidation (GH-HUDD, H-HDRID)

Based on studies in historic Kashan and Yazd, the emigration of original residents (at least after two generations) becomes inevitable. Thus, property owners are mainly individual inheritors, currently living outside historic areas, who have a feeble sense of place-identity towards their traditional homes (Figure 8.4). Based on further studies, a large proportion of descendants of original residents in Yazd and Kashan are not interested in resettling in their traditional homes, inside historic fabrics (M-PTA, B-PUD). Ownership problems may occur over decades, when a large number of inheritors have small shares in a single property, while multiple opinions among inheritors can delay the re-utilisation of DABs for a long time (B-UP, N-HRC)

In many circumstances, government agencies do not know the owners of a dilapidated property, and cannot legally encroach (GH-HUDD, H-HDRID). Thus, new legal tools need to be considered/approved for resolving ownership problems, such as the facilitation of fair trade with unknown or multiple owners/shareholders in historic cities (B-UP, N-HRC).

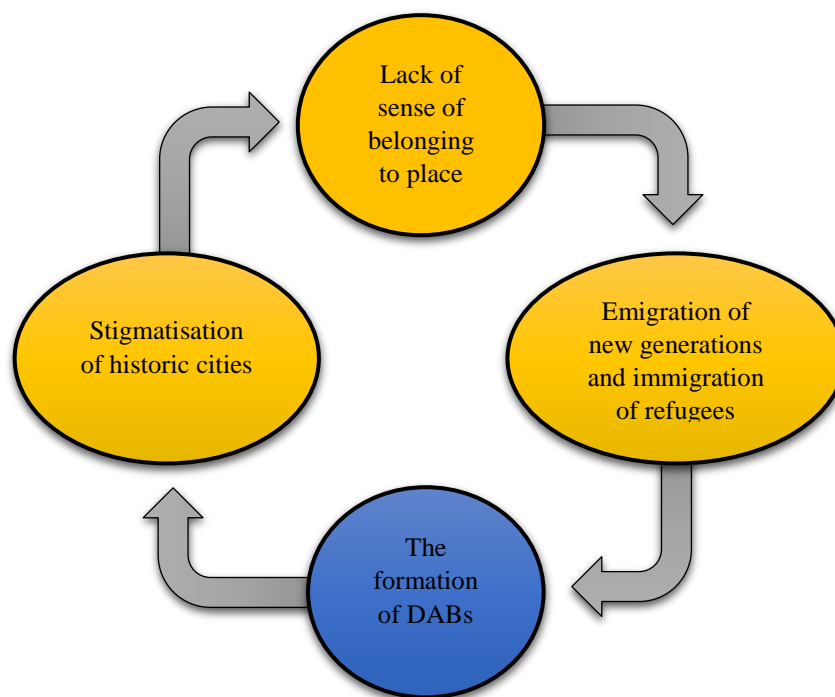


Figure 8.4: A faulty circular phenomenon may occur as a result of spatial-cultural problems and can generate further DABs in historic Iranian cities

8.3. Government agencies and the current revitalisation policy

This section focuses on current design policy and processes for revitalising historic urban fabrics in Kashan, Yazd and Isfahan. The discussion includes the results of in-depth interviews conducted by the researcher with policy-makers in three government agencies in charge of historic urban areas in Iran, including the heritage authority (ICHHTO), Department for Roads and Urban Development, and local municipalities (see section 2.4.6, Chapter 2).

8.3.1. Department for Roads and Urban Development

Over the past four years, the national revitalisation working group has been established for the study, design and approval of revitalising projects in historic cities, since president Rohani's term of office began in August 2013. At the national level, the president of the Islamic Republic of Iran is head of the committee, and the minister for road and urban development is the deputy chairman, while the rest of the cabinet constitutes other members of the committee. In the provinces, the governor would be head of the local committee; while mayors become secretaries, and heads of all local government agencies become members of the committee (N-SS).

Accordingly, the sixth strategic plan for the development of Iran emphasises the revitalisation of dysfunctional urban fabrics inside cities. So far, the relevant policies or legal documents which may direct/indirectly target DABs at the state level are considered as the: (1) "national

strategic plan for the rehabilitation, improvement, reconstruction and empowerment of deteriorated-dysfunctional urban fabrics” (approved in 2014); (2) “organizing and supporting the production and supply of housing” Act and Regulations; (3) “supporting the revitalization, regeneration and renovation of dysfunctional and inefficient urban contexts” Act and Regulations; and (4) “rehabilitation, improvement and reconstruction of inefficient urban contexts” Acts and Regulations (KH-SS).

In Kashan, Yazd and Isfahan, similar to other historic cities, the local revitalisation work-group employs qualified consultants or engineers for conducting revitalisation studies/programs. Commissioned consultants are required to provide reports by conducting local field studies, interviews with residents and so on, to propose suitable land use inside DABs. Qualified, commissioned consultants are required to collaborate with several government agencies to implement organisational feedback into their proposed project (H-SS).

Today, the Department for Roads and Urban Development has devoted a large proportion of its resources to the revitalisation of cities including historic areas. In previous governments departmental resources were allocated to affordable housing (Maskan-i-Mehr); today President Rouhani’s government has concentrated on the revitalisation of inefficient, deteriorated or dysfunctional urban areas inside cities. Thus, during 2012--2013 the department has concentrated on providing policies (e.g. trial implementation of the guidelines), while in more recent years (the second term of office for Mr. Rouhani) empowerment of residents inside deteriorated and dysfunctional urban textiles has become the central theme in proposed policies (T-HD).

On a larger scale, the department has endeavoured to replace public funding resources with private investment packages, while at the same time providing governmental assistance, and seeking public interest regarding the design and implementation of regeneration projects. Currently, several consultants are commissioned to create revitalisation projects in historic Kashan, namely ‘Karegar’, ‘Mofatteh’ and ‘Feiz’ neighbourhoods (N-SS).

These regeneration projects may include widening roads as well as proposing public facilities such as libraries or cultural centres. However, the proposals must comply with larger strategic plans. One positive outcome of those regulations/programs in Kashan has been the formation of a cultural and shopping complex, combined with façade restorations inside historic fabrics (Figure 8.5). The development could be seen as a catalyst, launched a few years ago, and yet to activate several private projects in close proximity (N-SS, T-HD).



Figure 8.5: Revitalisation of DABs by implementing a shopping centre in historic Kashan, 2018 (Source: author)

In the current socio-spatial planning context all programs must be presented/approved by the provincial revitalisation working group, which contains high profile officials, such as governor, mayor, and head of the Department for Roads and Urban Development plus heads of 23 other government agencies in Kashan, Yazd and Isfahan. Sustainable urban regeneration laws and regulations approved in 2013 generally apply to all revitalisation projects, as a part of the sixth strategic plan for socio-economic development of Iran. The Department has also allocated significant funds for pilot projects to regenerate life and raise cultural awareness inside traditional urban contexts (KH-SS).

Some departmental activities include governmental proprietorship and implementation of revitalisation projects inside DABs. Hence, programs and deliverables are categorised, proposed, developed and finally approved by the provincial revitalisation working group. Qualified consultants provide standard deliverables such as scope of the work, feasibility studies, and research and design phases. Qualified consultants are commissioned by the Department, or by local municipalities independently (N-SS).

Legislative documents have defined the components of a standard revitalisation project, (e.g. general scope of the work and deliverables). Currently, the department's revitalisation programs in conjunction with other government agencies or the private sector may include: (1) direct implementation by the department, (2) provision of financial incentives (e.g. low interest loans, government rebates, tax discounts or exemptions and so on), and (3) cooperation with other investors and joint ventures, either by providing land or funding (H-SS).

Today, this has become important for the Department to implement various investment packages in cooperation with local trusts or the private sector. The Department is also willing to work in partnership with local municipalities or other relevant government agencies. Accordingly, public engagement offices also were established in targeted neighbourhoods to inform the Department regarding local feedback. In this case, local information could later provide bottom-up management plans and specific scope in each targeted neighbourhood (KH-SS).

8.3.2. Local municipalities

Currently, the urban revitalization committee¹ is in charge of appointing qualified consultants for conducting feasibility studies and providing revitalisation programs inside historic cities. After the Islamic revolution, the municipality has also revitalised several cultural-historic axes in Kashan, Yazd and Isfahan and by cooperating with the heritage authority. Moreover, for utilising DABs, some public projects were proposed in the new strategic plan; however, those suggestions have only included general land use and have not delivered further suggestions (F-DM).

At present, organizing and supporting the production and supply of housing Act and regulations 1998 for the first time focused on the problem of DABs. Accordingly, today, DABs are reflected in the national strategic plan for the rehabilitation, improvement, reconstruction and empowerment of deteriorated-dysfunctional urban fabrics. Besides, the municipality follows a comprehensive five-year plan (i.e. the sixth strategic plan for the socio-economic development of Iran), and for conducting cross-agency revitalisation projects, which may indirectly regenerate DABs (GH-HUDD).

For instance, under the auspices of the Ministry of State 270 neighbourhoods must be revitalised each year, of which 27 neighbourhoods are to be located in Isfahan province and Kashan may receive a percentage of those 27 neighbourhoods. As another example of supportive laws, it is suggested that the owners/developers who invest in cultural centres inside deteriorated urban fabrics could receive considerable tax exemptions. Moreover, inside DABs municipalities have allocated a 50% discount on new development application fees. Banks also are required to offer no-deposit loans to redevelopment or restoration projects inside dysfunctional historic urban fabrics (H-HDRID).

¹ “Setad-i-baz-afarini-i-shari”.

The municipality has reduced expenses for developers, strengthened financial values and facilitated possible income for such investments. The municipality has also utilised local, national and even emotional moves for revitalising historic urban areas. For instance, the municipality has recently rediscovered a fabulous 3000 m² house in historic Kashan, which became dilapidated-abandoned, and was turned into an area for rubbish collection. The landowners currently live outside the country. The municipality contacted them and convinced the wealthy heirs to restore the old house as a museum, and for celebrating their grandfather's memory, who was the father of mechanical fabrication in Iran. This museum has been launched in 2018 (GH-HUDD).

Today, along with other historic cities, the Yazd municipality has developed legal and organisational tools that could regenerate historic cities. Recently, legislation has been instigated by the Ministry for Roads and Urban Development which needs to be implemented by ICHHTO and municipalities. This new legislation targeted the revitalisation of 2500 hectares of deteriorated fabrics nationwide, including DABs inside the city of Yazd. The legislation has concentrated on: (1) identification/revitalisation of deteriorated-dysfunctional heritage fabrics, (2) application of internal sustainable growth and re-utilisation of in-between land resources, (3) provision of building incentives, such as low-interest/no-deposit loans, communal loans or tax exemptions, and (4) facilitation of housing in DABs and surrounding depopulated areas (F-DM).

Nonetheless, methods for proposing revitalisation projects in municipalities are based on the following steps: (1) conducting feasibility studies for understanding urgent need, and a realistic definition of projects (this stage typically is conducted by hiring qualified consultants), (2) selection and clarification of target projects by the municipality and relevant agencies, (3) provision of local offices, for receiving actual information and public feedback, (4) provision of master plans by consultants, based on directions from the municipality or other agencies, and (5) provision of detailed master plans ready for implementation by the municipality. The municipality also reconsiders DABs in targeted neighbourhoods and reflects them in the preparation of future strategic plans (F-DM).

As a general outline in 2018, the municipality of Yazd has concentrated on the revitalisation of a few neighbourhoods, which could be considered as both deteriorated and historic. Thus, the municipality aims to generate one pilot project in each neighbourhood. It is expected that such pilot projects could attract private investors and create a cultural campaign for public

recognition of historic areas as national heritage. Based on private-public demand and the size of DABs, feasibility studies could be prepared by the municipality on a case by case basis. Accordingly, investment packages will be defined, including predicted cash flow and income, profit, interest and so on. Additionally, as an incentive for developers, basic infrastructure (e.g. water, electricity...) will be provided by relevant government agencies, free of charge. Additionally, local offices in targeted neighbourhoods will be established, which connect private investors to property owners (F-DM).

In Isfahan, the municipality has provided programs for revitalising socio-cultural axes and stimulus plans for revitalisation of neighbourhoods (Figure 8.6). All three government agencies mutually approved this program, which connects several important historic sites and may branch out to other adjacent historic zones such as 'Jolfa', 'Dar-dasht', 'Joo-i-bareh' and so on. It is generally assumed that such linear projects could stimulate further developments in historic areas. These projects may include, paving upgrades, façade preservation and restoration/adaptive reuse of historic sites/buildings, which injects activities into historic areas. For instance, in Jolfa, the municipality has revitalised a safe walking area by restoring traditional pavements that will later naturally enhance financial activities within the area, and functions today as a shopping precinct in historic Isfahan (S-SS).

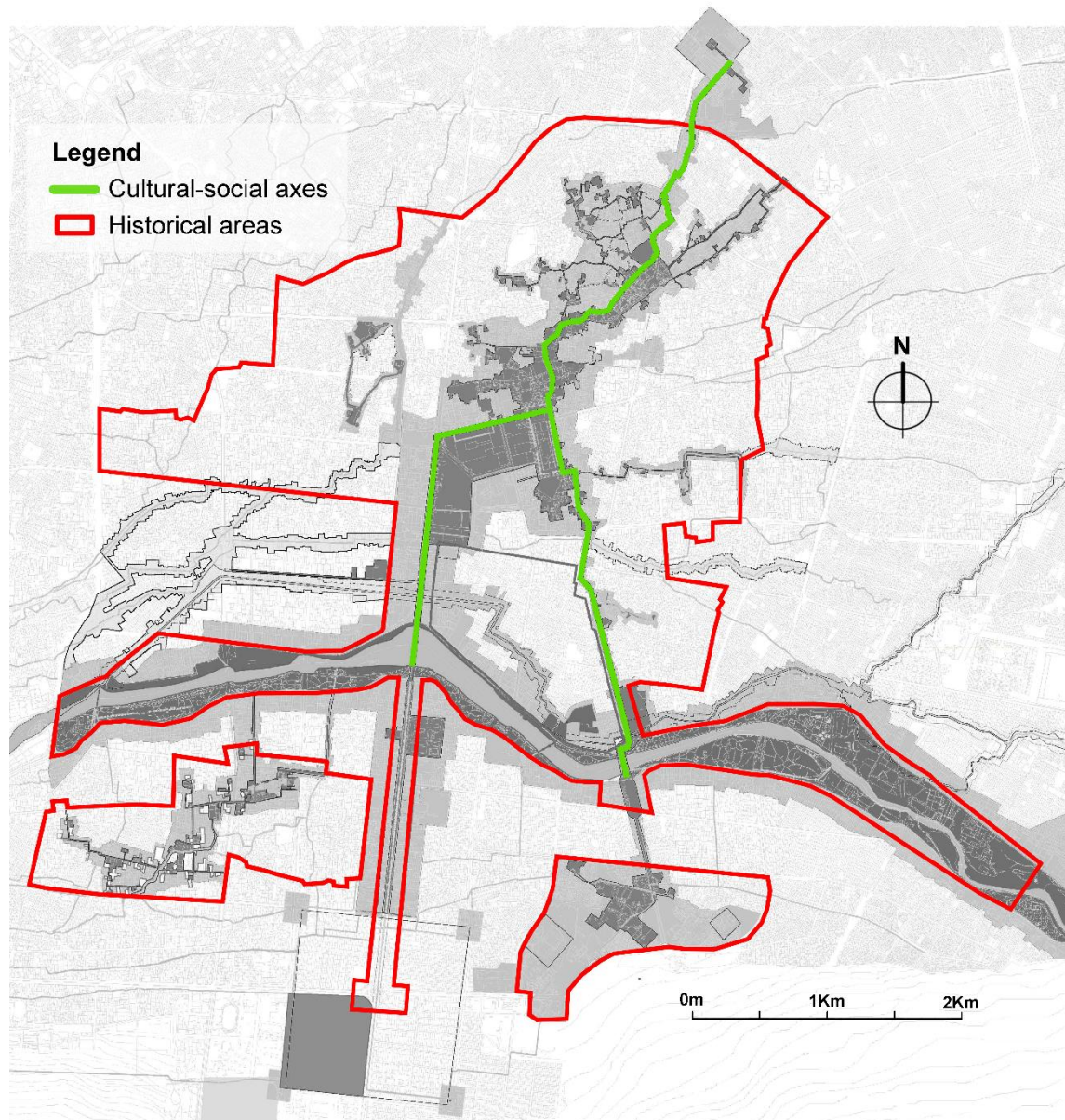


Figure 8.6: Revitalisation of cultural-social axes of Isfahan (map developed based on the strategic plan of Isfahan by NJP Consultants, 2006 revision)

8.3.3. Iran Cultural Heritage, Handcraft and Tourism Organization (ICHHTO)

The heritage authority hires qualified consultants for conducting feasibility studies, design and evaluation of revitalisation projects. On the other hand, the Ministry for Roads and Urban Development is a supervisory agent which facilitates funding and cooperates in large scale projects, for instance, in the regeneration of cultural-historic axes in Kashan, Yazd and Isfahan (M-UP, KH-HPRD).

Municipalities are working closely with ICHHTO and have facilitated many mutual projects (B-UP, N-HRC). The heritage authority of Isfahan has produced a large number of projects in

historic areas. For instance, the heritage authority (along with other agencies) has implemented large scale projects such as the regeneration of cultural-historic axes of historic Isfahan (Figure 8.6), as well as small scale programs, such as the revitalisation/restoration of neighborhood centres, generally implemented in collaboration with other two government agencies (M-UP, KH-HPRD).

In a contemporary urban planning context and based on current regulations, the management of DABs could be seen as an agenda for the Department as well as local municipalities. Nonetheless, in sustainable urban regeneration Acts and Regulations, there is a section devoted to the re-utilisation of DABs, that emphasises identification of dilapidated-unbuilt land areas (Figure 8.7). The Act indicates that strategic and development plans need to allocate such underutilised areas for generating new housings. Nevertheless, today all works of the ICHHTO along with the other two government agencies can be specified as: (1) introducing cultural-historic axes, and (2) the proposition/facilitation of tourism-investment packages for property owners and/or relevant stockholders (Z-HPRD).

At present, an exclusive package of building regulations for historic Kashan is under contract, and will hopefully be instigated by the end of 2019. Moreover, new advertising mechanisms and policies proposed by the heritage authority have deliberated the whole context as heritage, rather than segregated historic sites. For instance, new guided tours are encouraging tourists to walk through historic contexts, along with sightseeing activities. These strategic tours can also facilitate re-utilisation of DABs. Nonetheless, a specific centre for research and design in historic Kashan has been approved from 2017 and will be established, similar to what we already have in Isfahan and Yazd (Z-HPRD).

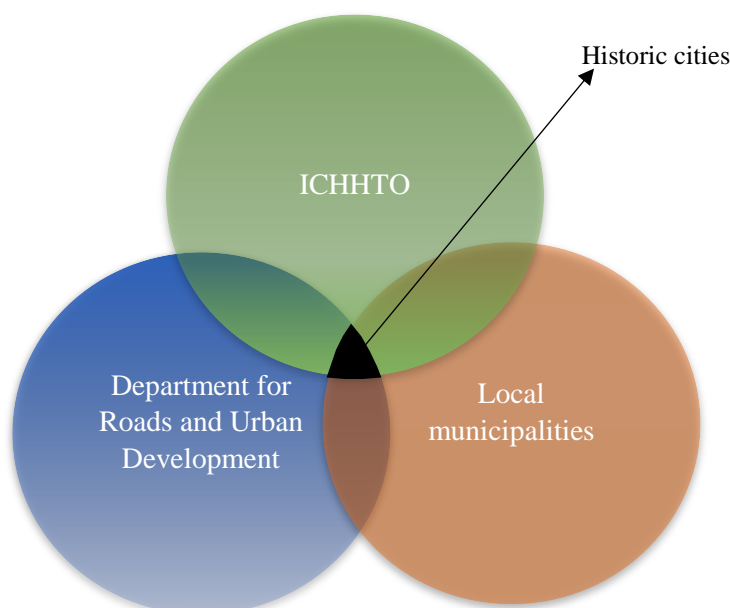


Figure 8.7: Urban design and planning in historic Iranian cities have become a mutual theme between three government agencies following the Islamic Revolution in 1979

8.4. Negative aspects of revitalisation practices in historic cities

In the current planning context, many large scale projects have been detrimental to historic fabrics. The Imam-Ali project is an excellent example. Instead of redirecting vehicular accessibility to bypass historic areas the project brought vehicles right through the historic context, and simply destroyed it. Today, the structural integrity of ‘Masjid-i-jameh’² is threatened by adjacent heavy vehicular traffic (Figure 8.8). This vehicular accessibility has also encouraged further car use among residents. For instance, many shopkeepers, who previously rode their bicycles, today use their private cars for commuting to work (S-SS). Such approaches foster negative public expectation regarding further road widening and full car accessibility inside historic areas. Such expectations are a kind of cultural-spatial trend that has arguably harmed the historic fabric of Isfahan (M-UP, KH-HPRD).

Nonetheless, the municipality and other agencies mostly do not present specific programs that reuse or preserve disused urban fabrics, while currently all historic incentives focus on the restoration of approved historic buildings, partly supported by the heritage authority (S-SS). Additionally, in the current planning context, private ownership inside historic areas could

² Also known as the Friday Mosque this is a significant Iranian architectural masterpiece which is totally unique, and its present configuration is the sum of building and decorating activities carried out from the 8th through 20th centuries. Please see Dalal, R. 2014. *The Great Mosque (or Masjid-e Jameh) of Isfahan* [Online]. Mountain View, CA: Khan Academy.

delay government proprietorship and revitalisation programs, while only about 20% of the anticipated projects were executed in historic cities in Iran (KH-SS).

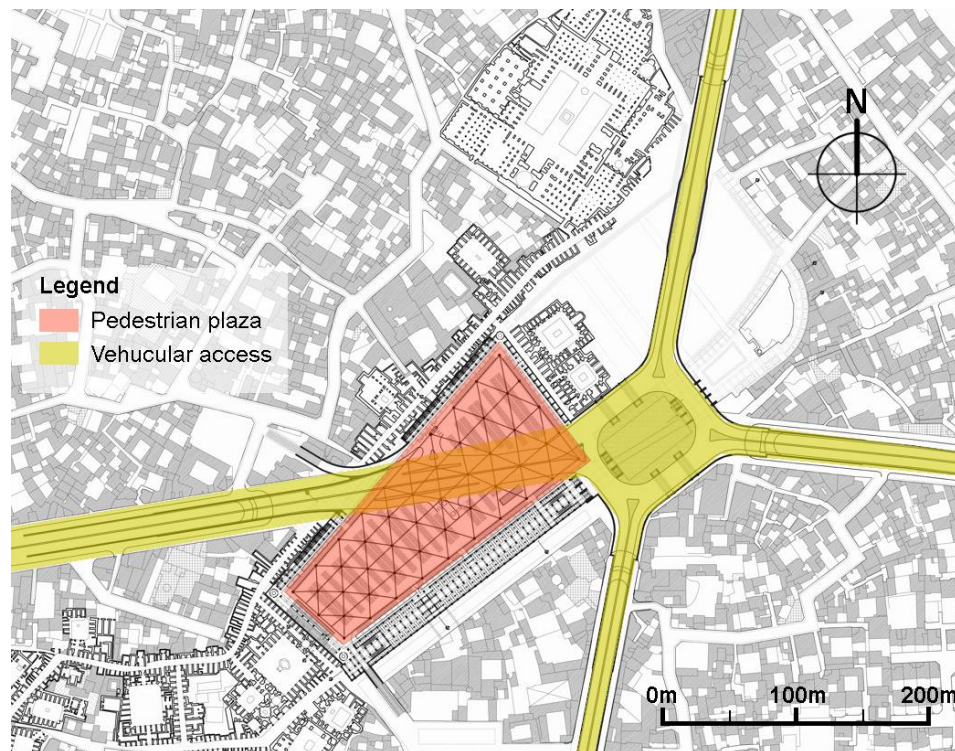


Figure 8.8: The Imam-Ali project is a large scale revitalisation program implemented in historic Isfahan (map developed based on the proposed plans by NJP Consultants, 2006)

8.4.1. Different organisational perspectives and lack of synchronisation in management

In the current socio-spatial planning context, the relationship between the three government stakeholders is not adequately defined. As a result, the current disorder and lack of negotiations have partially damaged historic urban fabrics. Consequently, those governmental problems have discouraged public life inside historic cities and created chaos in the spatial management of historic cities. Inappropriate building materials, unfitting building heights, unsuitable demolition of historic fabrics and unnecessary road widening have depopulated historic cities, which may form further DABs (Z-HPRD).

Moreover, heritage authorities in many Iranian historic cities have identified historic sites and suggested exclusive building/preservation regulations for these areas over past decades, while historic Kashan has yet to provide such approved documents for the public (Z-HPRD).

Nowadays, lack of synchronisation between three government stakeholders can be seen as the major impediment for facilitating efficient regeneration projects. For instance, the Department for Roads and Urban Development identifies five types of problematic urban context, namely “historic fabrics, informal settlements, in-between contexts, rural backgrounds, and former

military camps” (Office for Urban Renewal and Improvement, 2017). Nonetheless, DABs inside historic Kashan could be seen as both historic and in-between regarding context, which in many circumstances may remain unspecified (N-SS, T-HD). This lack of cross-agency consistency has advanced a low level of trust among private stakeholders and can generate further DABs in historic cities (H-SS).

Today, government agencies have not understood the real value of historic contexts. Therefore, government agencies can be seen as the main impediment for natural revitalisation of DABs inside historic cities. During recent years, the abovementioned three government agencies have been shocked by cultural movements initiated by pilot restoration projects in many Iranian historic cities. For instance, in historic Kashan these agencies have experienced an unprecedented influx of private investors. Unfortunately, government agencies do not know how to keep pace with such new demands from private investors. Accordingly they have been left behind by this natural regeneration process, in terms of providing public services and local infrastructure (H-TAD).

Government agencies also have lagged regarding tourism and the provision of world-class tourist facilities. Despite the enormous growth in international tourism in recent years, Kashan lacks all kinds of infrastructure, regarding the facilitation of international tourism (H-TAD). Therefore, such deficiencies prove that government agencies have emphasised their organisational perspectives rather than focusing on synchronisation in regeneration programs. Due to such lack of collaboration, current government stakeholders quickly rule out legitimate strategic plans, to meet their financial needs in historic cities (M-PTA, B-PUD).

For instance, in 2008 in the city of Znajjan a “maskan-i-mehr” residential megaproject was introduced and implemented in the green belt, considered to be an absolutely no-go zone regarding construction in the broader strategic plan. Another example of lack of synchronisation, it that bank loans are offered only for new construction, while restoration projects in historic areas are rarely funded by financial institutions (M-UP, KH-HPRD).

8.4.2. The inefficiency of current strategic plans

Currently, development plans are not updated as a result of the long processing time. For instance, the current development plan of Kashan took more than 16 years to be approved and has not been stipulated for 18 years, which could generate further DABs (Z-HPRD). On the other hand, lack of clear and compelling strategic plans further extends the formation of DABs.

It is crucial to understand that this deleterious phenomenon did not happen overnight. It was initiated during the 1960s and 1970s, and further developed (N-SS, T-HD).

Due to lack of consistency among government stakeholders, ICHHTO and municipalities rarely offer their feedback on strategic plans (i.e. Isfahan) and this may reduce the chance for revitalising DABs (M-UP, KH-HPRD). Nevertheless, today, 10% to 15% of strategic plans are carried out in historic areas, mainly focusing on public projects and/or road developments (GH-HUDD, H-HDRID).

A significant problem in Isfahan and Kashan is related to lack of an exclusive strategic plan for historic urban areas. As a result of this issue, the current strategic plans can not differentiate historic areas from the modern city. Hence, historic areas may be ignored, neglected and severely damaged (H-SS).

Implementation of such development plans can completely destroy historic urban fabrics and leave many of the 300 selected/preserved historic sites (i.e. Isfahan) as freestanding, with no connection to their surrounds. In proposing strategic plans, environmental and financial aspects should match. Unfortunately, today financial aspects marginalise environmental design qualities and dictate the types of materials used in historic areas (M-PTA, B-PUD).

One example regarding such inefficiency is that municipalities expect at least six meters of road width for the provision of public services, which fundamentally opposes the nature of heritage fabrics (GH-HUDD).

8.4.3. Lack of assessment tools

In historic cities such as Isfahan, government planning and policy procedures, including local master plans, road widening, construction incentives or architectural regulations, somehow directly or indirectly target DABs, which in turn generate positive or negative outcomes. Since strategic planning has concentrated on vehicular accessibility, road widening still works as a fundamental planning tool that has yet to generate pros and cons. At the current time, government agencies have implemented some strategies that could be evaluated as problematic, since there is no effective, sensible procedure at work for assessing the social-spatial impact of revitalisation programs such as the Imam-Ali project (H-SS).

Implementation of such programs is mainly based on legislative perspectives, while evaluations are falsely based on organisational propaganda, instead of assessing real outcomes. For instance, one can see that many revitalisation projects have won national prizes and are

considered successful, but cannot pass a single scientific evaluation test in reality. Currently, the main criteria for assessing such programs are based on total financial investments or social/organisational propaganda that cannot be considered as a real evaluation tool (S-SS).

Today, many government projects claimed to be successful have never been accurately assessed, and their so-called achievements are in doubt. For instance, the municipality of Isfahan has facilitated a “Department for Cultural-Social Studies” that aims to evaluate revitalisation projects and their implications for the city. It is a type of post-mortem inquiry that aims to study the socio-cultural impacts of already executed projects, but has yet remained mostly unsuccessful. Thus, a realistic assessment should measure social, economic and cultural impacts of regeneration projects among residents, for instance, regarding employment or urban life (S-SS).

8.4.4. Programs are linear physical and do not penetrate deep inside traditional fabrics

As discussed earlier, government agencies have currently chosen to restore several cultural-historic axes to revitalise historic urban areas. Correspondingly, such programs mostly focus on façade restoration, and upgrading and/or provision of stone pavements in predefined thoroughfares (Figure 8.9). Nonetheless, by implementing such restored axes the public cannot foresee the dangerous aspects of DABs inside historic cities. Once one enters historic cities, it can be seen that such revitalisation programs are only partially completed or superficial (H-SS).

Moreover, instead of proposing a combination of socio-spatial design, such contemporary linear programs have substantially remained freestanding and therefore cannot penetrate adjacent urban contexts. Such programs have become unable to generate life in the city (Z-HPRD), while beyond restored frontages and pavements the problem of DABs remains unresolved (KH-SS). However, revitalisation programs cannot be effective without considering the social and financial grassroots of historic neighbourhoods (M-PTA, B-PUD).



Figure 8.9: Revitalisation projects for regenerating cultural and historic axes in Yazd mainly include façade restoration and provision of stone pavements (Source: author)

8.4.5. Programs are non-holistic and not incorporated in the broader context

At present, after conducting several types of studies on historic areas for more than 40 years, the authorities have not generated holistic plans and instead have concentrated on facilitating independent development restoration. Hence, such programs and incentives suffer from being implemented in a political atmosphere, without a full understanding of historic built environments (M-UP, KH-HPRD).

Today, current regeneration projects in historic areas are foreseen mainly as freestanding entities that neither interconnect with neighbouring projects nor incorporate surrounding urban contexts (F-DM). Thus, current revitalisation has largely concentrated on preserving historic houses, without considering their surrounding contexts. Such freestanding projects aim to attract investors by facilitating adaptive reuse of segregated historic buildings for coffee shops, restaurants, hotels, and so on. Nonetheless, such an approach cannot be successful without incorporating broader contexts in relation to historic cores. In this sense, to generate a successful revitalisation program, colonnades, narrow alleyways, squares, and so on need to be restored and interconnected (S-SS).

8.4.6. Programs are not well studied and mostly implemented by incompetent consultants

Another problematic aspect of revitalisation programs is the lack of adequate socio-spatial studies before and during design and implementation phases of projects. In many cases, regeneration programs implemented by government agencies are mainly unsuccessful

regarding heritage preservation measures (i.e. destructing and road widening), while the impact of such adaptive reuse (e.g. tourist accommodation) is largely overlooked (M-UP).

In many circumstances, revitalisation programs may generate deleterious building effects, create further dilapidation and damage adjacent historic sites. In several environments, urban activity overload generated by new developments in historic areas have negatively impacted historic fabrics. For instance, the generation of a high level of vehicular and human traffic can impose irreparable damage to heritage sites in Kashan (Z-HPRD).

Moreover, short-term financially driven approaches have all but devastated historic cities, and in many cases destroyed irreplaceable heritage buildings. For instance, historic 'Harounieh' tower was destroyed and turned into shops (i.e. gold makers' bazaar), during the construction phase of the Imam-Ali project, which by its very nature is supposed to be a revitalisation project (KH-HPRD). (Also see Figure 8.10.)

As a result of such management problems, in many circumstances commissioned consultants are incompetent, and their design outcomes are not based on evidence based scientific research. Hence, such master plans can be misleading, fake, unreal and technically not feasible. Thus, despite producing a large number of strategic and master plans, proposed cultural-historic axes and so on, the historic urban fabrics of Isfahan and many other Iranian cities have never been realistically understood, enhanced or restored (M-UP, KH-HPRD, F-DM).

For implementing revitalisation programs (urban design planning) in historic areas we need to provide realistic socio-spatial studies and define several policy areas specific to each historic city. Such programs should not generalise problems, based on the fact that in many historic cities the traditional bazaar has preserved its financial centrality (e.g. Tehran, Isfahan), while in other cities (e.g. Shiraz) the bazaar has lost its significance (M-PTA, B-PUD).

Urban design planning procedures produced as a result of specific studies must support the broader economic context; otherwise, they fall short of expectations. Unfortunately, in Iran, financial and political trade-offs at the national level oppose the formation of local development in old and valuable urban areas. In this sense, the identification/documentation of historic fabrics must be completed by relevant agencies, while today (after 40 years) ICHHTO has not provided a reliable data bank regarding historic fabrics (D-GC). For instance, so far there are about 330 heritage houses in the "Shah-abolghasem" neighbourhood in Yazd, which has not been properly documented and/or registered (KH-SS).

8.4.7. The lack of social capacity building for revitalising historic fabrics

Nowadays, government agencies have partly understood that without proper community engagement, effective projects can never become a reality. Nonetheless, one can see that systematic organisational problems prevent community participation in regeneration programs, not only in historic Isfahan but in many historic Iranian cities. This lack of social capacity building is mainly attributed to a top-down planning approach implemented at the national level by government agencies (H-SS).

Today, planning or design methods are generalising problems, merely focusing on the provision of physical structures, public services, or renovation of facades/pavements inside historic cities, instead of conducting local studies on capacity building among actual residents (M-UP, KH-HPRD).

Currently, due to lack of cooperation between three government agencies and residents, land prices have dramatically dropped in historic areas. Nonetheless, the facilitation of real public participation has the potential to attract private investors and activate development opportunities (M-UP, KH-HPRD, H-SS).

One reason for such lack of public empowerment can be the fact that in government agencies only loud voices can be heard. Thus, multiple agencies need to hear and consider the real voice of the public sector to facilitate their capabilities. This local empowerment needs an extensive educational plan to be implemented by all relevant government agencies with local residents. Unfortunately, at the moment, urban management in historic cities is mainly based on top-down decision-making processes, and therefore cannot hope to address or fulfil genuine local needs (H-SS).

Today, the abovementioned three agencies have rarely defined projects which are fully-partially funded by local resources that could facilitate empowering residents. As a solution to this problem, government agencies need to facilitate local offices before and during the implementation of revitalisation projects within targeted neighbourhoods, which could generate capacity building among all stakeholders and reflect the real needs of residents (M-UP, KH-HPRD).

8.4.8. Displacing residents in implementing revitalisation projects

In many revitalisation projects, government agencies are not only unable to generate local empowerment but they have displaced original residents. For instance, in the context of the Jammalleh project, local residents were forced to sell their properties and evacuate. After the

completion of the project, units/shops remained unoccupied for a long time, which evolved into modern abandoned buildings (M-UP, KH-HPRD).

Another example worth mentioning is the Imam-Ali megaproject, implemented by the Isfahan municipality. The project began in 2007 and yet the municipality has so far spent 4000-5000 billion Rials, while the second phase has not started. The general approach to this revitalisation project has focused on the possession of all historic land and properties within the boundaries of the project (S-SS) (Figures 8.8 and 8.10).



Figure 8.10: In the Imam-Ali megaproject, courtyard and underground building structures have been mostly unoccupied for more than 10 years (Source: author)

Since the municipality projected a top-down approach and did not undertake realistic local feasibility studies (i.e. the Imam-Ali project or similar projects), today revitalisation projects generate more significant problems; for instance, in many cases, the municipality has not received enough demands for selling or renting large-scale commercial areas. In this case, while

original shop owners were forced to sell their properties, today new owners are reluctant to run shops and prefer retain areas as largely unoccupied for investment. This has generated large-scale rows of closed shops in Imam-Ali square, despite massive expenditure by the municipality of Isfahan (S-SS).

In another project (on the eastern side of Char-Bagh), the municipality also bought up all the shops and forced original business owners to leave. Today, after spending a large amount of money and developing hundreds of shops, there is no reasonable demand for leasing or purchasing developed commercial units from the public, and shops have thus remained unoccupied for years. In many cases, shops were being traded as repayment of construction debts to municipality subcontractors, while owners kept the units closed for future property growth and associated financial benefit (S-SS) (Figures 8.11 and 8.12).

In many similar projects, the municipality should have cooperated with original business owners, to create jobs, generate business, to inject life and vibrancy to such regeneration programs. Consequently, the municipality has encountered a lack of financial resources (i.e. investment) because these projects do not meet anticipated economic outcomes. Accordingly, the municipality needs to engage local communities and private investors in such projects, to facilitate successful revitalisation programs in Isfahan (S-SS).

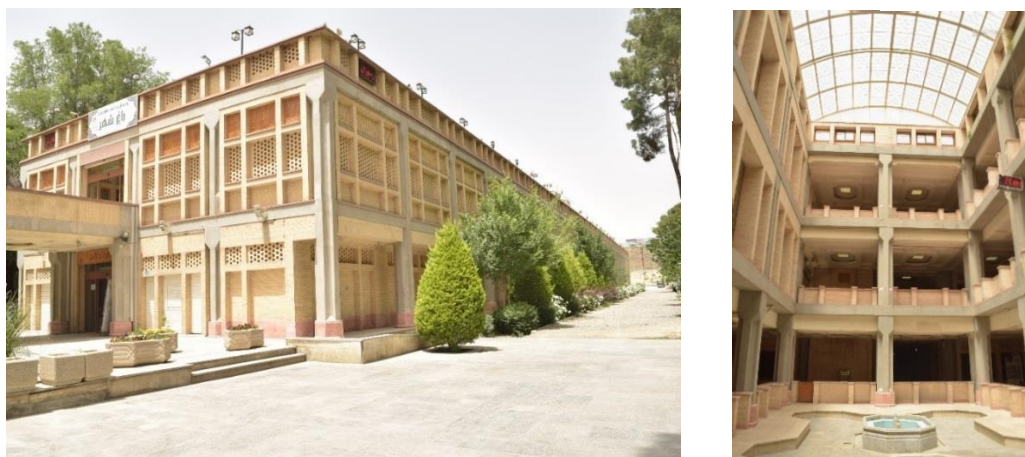


Figure 8.11: Commercial structures were implemented for the regeneration on the eastern edges of historic Char-Bagh in Isfahan by the municipality (2018), (Source: author)

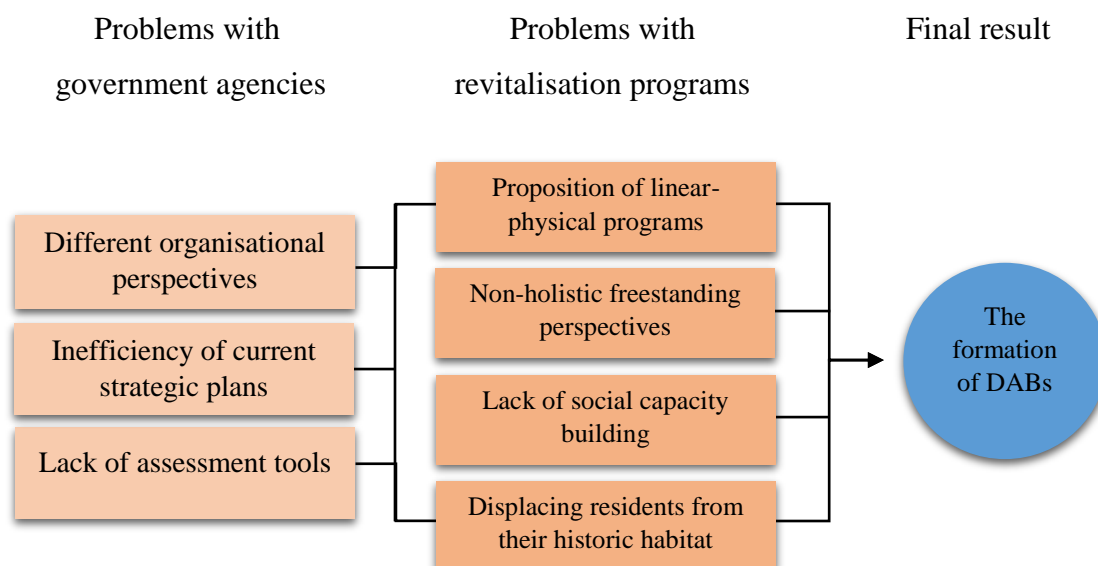


Figure 8.12: The process of generating DABs as a result of inefficient revitalisation programs and policies in historic Iranian cities, as deliberated in section 8.4

8.5. Summary

This chapter elaborated the results of in-depth interviews on two levels. At the first part, the chapter identified social-spatial causes that have generated DABs, and their impact on historic fabrics. It was discussed that since the Islamic revolution in 1979 large-scale urban strategic plans and decision-making processes have encouraged urban sprawl and city fringe developments, perceived as the primary reason for the formation of DABs.

The interviews clarified other socio-spatial difficulties such as change of social-spatial behaviour amongst new generations, lack of public services and the irresponsible nature of historic fabrics against modern lifestyles, along with a high rate of building restoration have encouraged local Iranian residents to abandon their historic houses.

It was highlighted that as a result of such emigration, nonlocal disadvantaged communities have been encouraged to settle in historic areas, and this has generated a lack of sense of belonging to place as well as the formation of further DABs. Moreover, it was deliberated how improper governmental policies/procedures since the 1960s have stigmatised historic urban fabrics that in turn considerably devaluated land and properties in heritage urban areas.

The second part of the chapter disclosed current revitalisation policy and practices yet to be implemented by three government agencies. Through critical analysis, several shortcomings in the current revitalisation movement were specified. It was argued that a lack of synchronisation among three government agencies has exacerbated problems in historic areas. One significant outcome of such inconsistency was elaborated as inefficiency of current strategic plans.

Nonetheless, it was deliberated that revitalisation programs suggested by government agencies were mostly linear-physical, freestanding and not realistically incorporated within larger urban contexts. It was discussed that in many circumstances revitalisation projects and programs were not well studied, have not generated actual public participation, and have displaced local residents from their traditional dwellings. It was argued that social-spatial impacts of large-scale revitalisation projects have rarely been assessed, which in turn culminated in the formation of newly-built abandoned buildings in historic areas.

These points are in line with spatial, demographic and attitudinal results and analysis (Chapters 5 to 7). Final results and analysis (as discussed in Chapter 8) clearly reinstate a strong correlation between the emigration of local residents (lack of spatial liminality type-B), immigration of refugees (spatial liminality type-A) and the extent of DABs. The implications of such empirically proven correlations will be discussed in Part 3 of this thesis.

Part III: Revitalization of spatial liminality
in historic Iranian cities

Chapter 9: Discussion



Aerial picture of Godal-i-Mosalla urban tissue (courtesy of ICHHTO, Yazd)

9.1. Introduction

In Part II, and through the lens of spatial liminality, this thesis investigated correlational aspects of socio-spatial vulnerability against the extent of DABs in 15 urban blocks in three historic Iranian cities. Subsequently, this chapter further discusses how such socio-spatial factors have been largely overlooked in current revitalisation projects and processes.

Part II also elaborated how the larger extent of DABs can be correlated to an oppressive atmosphere of spatial liminality type-A, a lack of spatial liminality type-B, and possibly to a higher devaluation of properties in all 15 case studies. It will be discussed here that current contexts of socio-spatial planning contribute meaningfully to a state of spatial liminality in historic urban fabrics. The current condition of socio-spatial planning contexts can also be strongly relevant to spatial liminality as well as devaluation of the land in historic cities.

As an introduction to Part III, this chapter further analyses and deliberates the findings from Part II. The chapter conducts inferential analysis to re-examine the hypothesis and research findings regarding spatial liminality. By triangulating the shreds of evidence as stated in Part II, this chapter singles out spatial liminality as an informing analytical tool, which can recalibrate revitalisation projects and policies in historic Iranian cities.

9.2. Spatial aspects

Spatial aspects have revealed factual quantitative qualities that can demonstrate the correlation between DABs and spatial liminality in 15 case studies. These qualities as discussed in this research demonstrate how the extent of refugee settlements as liminal spaces are deeply connected to the larger extent of DABs, lower levels of building investment, and further shrinkage of local Iranian settlement fabrics.

9.2.1. Physical correlation between DABs and refugee settlements

Section 5.3 (Chapter 5) suggests that DABs and refugee settlements abut in almost all historic case studies. In this sense, a strong physical-spatial coexisting correlation between DABs and spatial liminality type-A is apparent. Such spatial adjacencies may establish a partial or complete association with the extent of DABs.

It is demonstrated that refugee settlements may bridge the gap between DABs, and generate informal access (e.g. pedestrian shortcuts) between some thoroughfares, that may establish socio-spatial interconnection between clusters of refugee settlements. It will be discussed that such associations between non-Iranian disadvantaged communities are outside the scope of this research.

Smaller areas of refugee settlement in historic Isfahan (1% of all surveyed areas) compared to Yazd (8% of all surveyed areas) and Kashan (5% of all surveyed areas) suggest that stronger land economy makes properties a precious commodity in more populated cities. In this case, refugees can find a very limited number of affordable housing opportunities in historic Isfahan, compared to Yazd and Kashan (Figure 9.1).

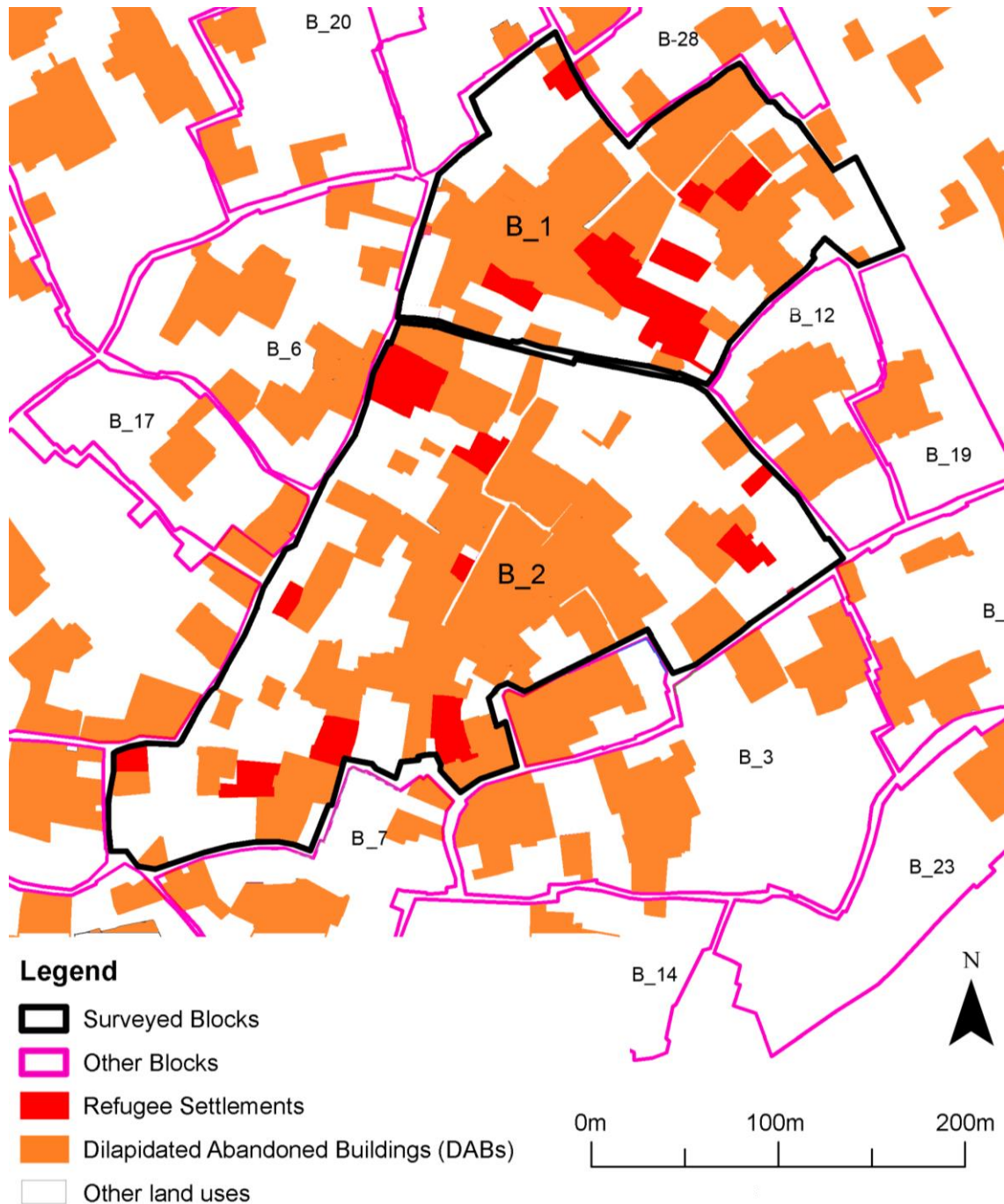


Figure 9.1: Some examples of physical cohabitation between refugee settlements and the extent of DABs in surveyed areas of Kashan (Source: author)

9.2.2. DABs in 2018 versus 2008

Section 5.4 (Chapter 5) suggests that formation of the current extent of DABs (2018) could be relevant to the size of DABs in the past (2008) in historic urban fabrics. This correlation can also be seen in close association with the value of land, and hence this is significant in Kashan, a city with lower land value, less significant in Yazd and almost non-existent in Isfahan as a consequence of higher land value. Such variations can prove that the higher value of land (e.g. in historic Isfahan compared to Kashan and Yazd) can overrule such formidable associations between the extent of DABs in 2008 and 2018 (Table 9.1).

Table 9.1: Correlation between the extent of DABs in 2008--2018 based on Tables 5.2, 5.4 and 5.5 (see Chapter 5)

Historic cities	% of correlations in surveyed cases	Land value (based on Table 4.4)
Kashan	In 80% of cases (Higher)	Lower
Yazd	In 67% of cases (Medium)	Medium
Isfahan	In 0% of cases (Lower)	Higher

9.2.3. Areas of refugee settlement versus DABs

Section 5.5 in Chapter 5 noted a strong association between the larger extent of refugee settlements (i.e. spatial liminality type-A) and the higher proportion of DABs in historic cities. This correlation can also be perceived in relation to land value. Again, the correlation becomes stronger in historic Kashan (as a consequence of the lower value of land) and less significant in historic Yazd and Isfahan, where land value has increased significantly (Table 9.2).

Table 9.2: Correlation between the extent of DABs and the areas of refugee settlement, based on Tables 5.2, 5.4 and 5.5 (see Chapter 5)

Historic cities	% of correlations in the surveyed cases	Land value (based on Table 4.4)
Kashan	In 100% of cases (Higher)	Lower
Yazd	In 75% of cases (Medium)	Medium
Isfahan	In 0% of cases (Lower)	Higher

9.2.4. Areas of newly-built houses versus DABs

Section 5.6 (Chapter 5) reveals that the extent of new building investment shows a reverse relationship with the percentage of DABs inside all surveyed historic urban fabrics. However, there is a more complicated relationship here as a result of the current socio-spatial planning context (as articulated in Chapter 8), where it seems that landowners and public agencies in the administration have no incentive to preserve historic building fabrics.

This opposite correlation between DABs and the extent of newly-built houses can also be seen in close association with land value, and hence this is quite significant in Isfahan¹, a city with the highest land value. Nonetheless, it is less significant in Yazd and Kashan, as a consequence of lower land value and a smaller urban population (Table 9.3).

Table 9.3: The opposite correlations between the extent of DABs and the areas of newly-built houses, based on Tables 5.2, 5.4 and 5.5 (see Chapter 5)

Historic cities	% of reverse correlations in the surveyed cases	Land value (based on Table 4.4)
Kashan	In 80% of cases (Medium)	Lower
Yazd	In 80% of cases (Medium)	Medium
Isfahan	In 100% of cases (High)	Higher

9.2.5. Areas of local Iranian settlement versus DABs

Section 5.7 (Chapter 5) confirmed a robust reverse association between the extent of Local Iranian settlement fabrics and the extent of DABs. This opposite correlation is interpreted in conjunction with the emigration of local Iranian residents and lack of spatial liminality type-B, as defined in historic cities (see section 3.4, Chapter 3).

In a state of spatial liminality type-B, not unlike the discourse in this research, the association between the emigration of local Iranian residents and the larger extent of DABs can be seen as strong, independent of land value within larger surrounding urban areas. This section explains how a lack of spatial liminality type-B can actively contribute to both emigration of residents and the formation of larger extent of DABs, equally in historic Kashan, Yazd and Isfahan (Table 9.4).

Table 9.4: Correlations between the extent of DABs and areas occupied by local Iranian residents, based on Tables 4.4 (see Chapter 4), 5.2, 5.4 and 5.5 (see Chapter 5)

Historic cities	% of reverse correlations in the surveyed cases (except outliers)	Land value (based on Table 4.4)
Kashan	In 100% of cases (High)	Lower
Yazd	In 100% of cases (High)	Medium
Isfahan	In 100% of cases (High)	Higher

¹The higher value of land in surveyed areas of Isfahan can also relate to mercantile bazaar groups that have largely encroached on historic areas for bulk storage of goods and for large-scale commercial purposes (see section 5.2.3). In this case, section 8.4 shows how authorities have been largely incapable of controlling and directing such inappropriate commercial encroachments that further eradicate historic fabrics.

9.3. Demographic aspects

Demographic aspects provide further empirical evidence as discussed in section 9.2. In understating spatial liminality type-A, demographic results and analysis measured the proportion of liminal populations in historic urban areas. Spatial liminality type-A thus singles out the proportion of newcomers, leaseholders, refugees, deprived and poor communities as liminal populations, and proves the correlation between proportions of liminal residents against the extent of DABs in case study urban blocks.

9.3.1. Vulnerability of newcomers

Section 6.2.1 (see Chapter 6) hypothesised that ratios of accumulation of all disadvantaged new settlers show a close relationship with the percentage of DABs per block in Yazd and Kashan.² Section 6.2.2 in Chapter 6 proposed that while there is no connection between the percentage of DABs and overall distribution of local Iranian new settlers, the higher gathering of refugee new settlers is significantly relevant to the greater extent of DABs in all three historic cities. Consequently, it can be claimed that a correlation between spatial liminality type-A (formed as a result of an influx of refugee new settlers), and the percentage of DABs is valid inside historic cities (Table 9.5).

Table 9.5: Comparing clusters of non-Iranian newcomers (refugees) with respect to the extent of DABs based on Figure 6.5 (see Chapter 6)

City Levels of DABs	Kashan		Yazd		Isfahan	
	% of newcomers	Surveyed blocks	% of newcomers	Surveyed blocks	% of newcomers	Surveyed blocks
High	42%	(B-1 and B-15)	66%	(B-43 and B-8)	40%	(B-30)
Medium	17%	(B-2 and B-3)	11%	(B-30 and B-28)	40%	(B-7)
Low	16%	(B-16 and B-5)	12%	(B-9 and B-47)	20%	(B-2)

9.3.2. Vulnerability of leaseholders

Section 6.3.1 (Chapter 6) theorised that the ratio of accumulation of all low-income leaseholders could be seen to correlate to the percentage of DABs per urban block in historic Yazd, Isfahan and Kashan. Section 6.3.2 concludes that the overall proportion of local Iranian leaseholders

² The formation of spatial liminality type-A (as a result of the existence of all disadvantaged newcomer residents) cannot be proved in Isfahan, which may be due to the insufficient number of case studies, or can be relevant to higher land value considering strategic positioning of the three sample blocks in conjunction with the historic bazaar.

does not indicate any association with the extent of DABs. However, a clear trend is detectable, while overall, a larger proportion of refugee leaseholders are inclined to settle inside urban blocks with higher percentages of DABs, and in all three larger historic cities. This can indicate a correlation between the formation of spatial liminality type-A (generated as a result of the accumulation of disadvantaged refugee leaseholders) and the percentage of DABs in historic cities (Table 9.6).

Table 9.6: Comparing clusters of non-Iranian leaseholders (refugees) with respect to levels of DABs based on Figure 6.8 (see Chapter 6)

City Levels of DABs	Kashan		Yazd		Isfahan	
	% of leaseholders	Surveyed blocks	% of leaseholders	Surveyed blocks	% of leaseholders	Surveyed blocks
High	42%	(B-1 and B-15)	66%	(B-43 and B-8)	40%	(B-30)
Medium	33%	(B-2 and B-3)	11%	(B-30 and B-28)	40%	(B-7)
Low	16%	(B-16 and B-5)	17%	(B-9 and B-47)	20%	(B-2)

9.3.3. Vulnerability of living in highly-deteriorated houses

Section 6.4.1 (Chapter 6) disclosed how the accumulation of all disadvantaged residents (who cannot afford to repair their homes) can be relevant to the percentage of DABs in historic cities. Section 6.4.2 also clarified that the overall distribution of vulnerable local Iranian residents (who cannot afford to repair their houses) shows no correlation with the percentage of DABs. However, it also proves that the overall accumulation of poor refugees (who cannot repair their houses) is strongly related to the higher proportion of DABs in historic cities. Consequently, a strong correlation can be observed between the formation of spatial liminality type-A (formed as a result of the accumulation of poor refugees) and the proportion of DABs in historic cities of Iran (Table 9.7).

Table 9.7: Comparing clusters of deteriorated refugee dwellings with respect to levels of DABs based on Figure 6.11 (see Chapter 6)

City \ Levels of DABs	Kashan		Yazd		Isfahan	
	% of deteriorated houses	Surveyed blocks	% of deteriorated houses	Surveyed blocks	% of newcomers	Surveyed blocks
High	50%	(B-1 and B-15)	67%	(B-43 and B-8)	40%	(B-30)
Medium	33%	(B-2 and B-3)	11%	(B-30 and B-28)	40%	(B-7)
Low	16%	(B-16 and B-5)	17%	(B-9 and B-47)	0%	(B-2)

9.3.4. Vulnerability of low-income disadvantaged communities

Section 6.5.1 (Chapter 6) discussed how the accumulation of low-income disadvantaged communities can be correlated to the percentage of DABs in surveyed urban blocks, and among all residents in case studies. Section 6.5.2 also explicitly clarified that there is no significant relationship between the overall distribution of local Iranian disadvantaged communities and the proportion of DABs. However, the overall distribution of low-income refugees is strongly related to the percentage of DABs per urban block. The discussion elucidates a correlation between spatial liminality type-A (generated as a result of the presence of low-income refugees) and the percentage of DABs in historic urban areas (Table 9.8).

Table 9.8: Comparing clusters of non-Iranian low-income disadvantaged communities with respect to levels of DABs based on Figure 6.14 (see Chapter 6)

City \ Levels of DABs	Kashan		Yazd		Isfahan	
	% of low-income residents	Surveyed blocks	% of newcomers	Surveyed blocks	% of newcomers	Surveyed blocks
High	50%	(B-1 and B-15)	72%	(B-43 and B-8)	40%	(B-30)
Medium	33%	(B-2 and B-3)	11%	(B-30 and B-28)	40%	(B-7)
Low	16%	(B-16 and B-5)	17%	(B-9 and B-47)	0%	(B-2)

9.3.5. Vulnerability of liminal refugees and DABs

Section 6.6.1 (Chapter 6) shows a strong relationship between the percentage of refugees and the proportion of DABs in surveyed urban blocks. Section 6.6.2 also suggests there is no

association between the overall distribution of local Iranians and the extent of DABs. However, the overall distribution of refugees per block closely relates to the percentage of DABs. Such an observation can demonstrate that the formation of spatial liminality type-A (generated as a result of the influx of refugees) is largely relevant to the proportion of DABs in historic cities (Table 9.9).

Table 9.9: Comparing the overall clusters of non-Iranian communities (refugees) with respect to levels of DABs based on Figure 6.16 (see Chapter 6)

City Levels of DABs	Kashan		Yazd		Isfahan	
	% of refugees	Surveyed blocks	% of refugees	Surveyed blocks	% of refugees	Surveyed blocks
High	50% (High)	(B-1 and B-15)	72% (High)	(B-43 and B-8)	40% (Medium)	(B-30)
Medium	33% (Medium)	(B-2 and B-3)	11% (Low)	(B-30 and B-28)	40% (Medium)	(B-7)
Low	16% (Low)	(B-16 and B-5)	17% (Low)	(B-9 and B-47)	20% (Low)	(B-2)

9.3.6. Spatial liminality type-A versus DABs

Based on discussion in sections 6.2 to 6.6 (Chapter 6) and by studying several types of socio-spatial vulnerability among residents, it can be concluded that spatial liminality type-A (caused by the accumulation of disadvantaged refugees) is indeed relevant to the percentage of DABs per block in Kashan, Yazd and Isfahan.

Section 6.2 (Chapter 6) reveals that the magnitude of correlation between spatial liminality type-A and the percentage of DABs can be diminished due to greater levels of urban population and higher land and property value in historic cities. In this sense, DABs in Kashan (with a lower population) and Yazd (a moderately populated city) can be considered as significantly correlated to spatial liminality type-A, and as a result of the accumulation of liminal populations such as refugees. However, in Isfahan (a highly populated city) it can be argued that the magnitude of correlation between spatial liminality type-A and the extent of DABs largely weakened.

This phenomenon can be associated with the higher value of land and properties, given the strategic positioning of historic fabrics in the centre of metropolitan Isfahan (Table 4.4). The analysis acknowledges a reliable correlation between the higher proportion of DABs, the formation of spatial liminality type-A and lower value of land and properties in historic urban areas (Figure 9.2).

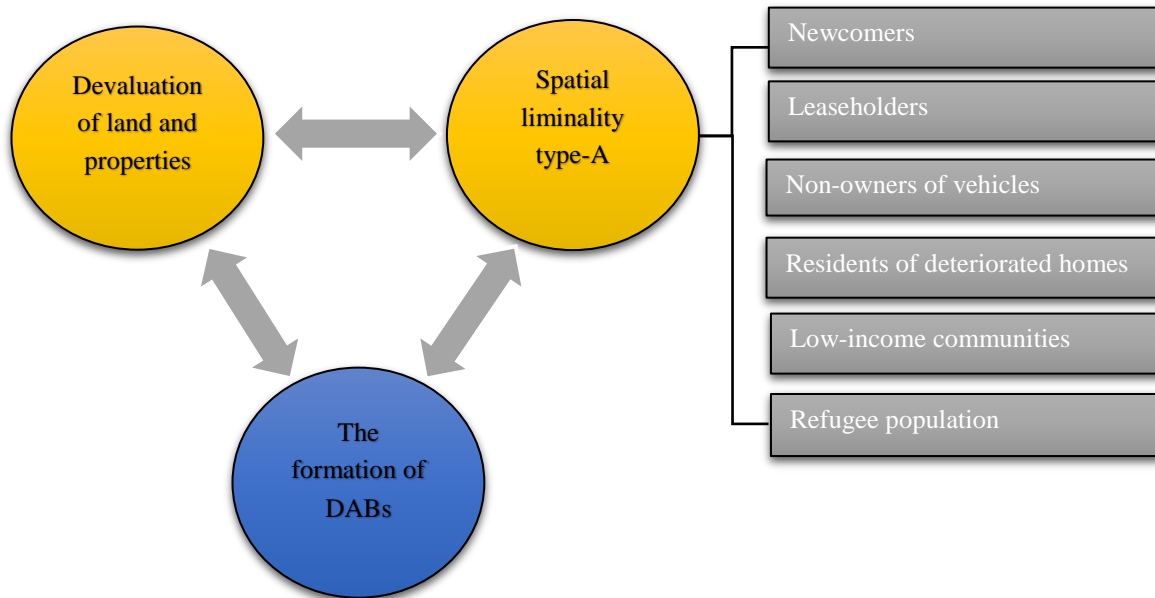


Figure 9.2: Correlation between the extent of DABs, the lower value of land and the formation of spatial liminality type-A in historic Iranian cities as deliberated in Chapter 6

9.4. Attitudinal aspects

Attitudinal aspects establish another layer of empirical evidence with regard to spatial and demographic aspects, as discussed earlier in sections 9.2 and 9.3. In exploring spatial liminality type-B, attitudinal results and analysis measured the quality of territorial interdependence amongst participating residents in historic urban areas (see section 3.4.8, Chapter 3). Spatial liminality type-B thus measures a sense of belonging to place and place satisfaction, social capital, and a sense of social safety and place identity amongst both non-Iranian and local Iranian residents. The analysis thus elaborates the correlation between spatial liminality type-B and the extent of DABs in several case study urban blocks.

9.4.1. Lack of sense of belonging to place

Section 7.2 in Chapter 7 demonstrates that a lack of sense of belonging to place could be a prevalent problem in historic urban areas. It has been observed that a large proportion of residents in Kashan, Yazd and Isfahan have moved into historic areas for accessing cheaper

housing options. In this sense, residents may have developed little or no sense of belonging to place.

Section 7.2.1 in Chapter 7 shows that levels of lack of spatial liminality type-B (generated as a consequence of a lack of a sense of belonging to place) effectively differ among refugee and local Iranian residents. Kashan shows the highest lack of spatial liminality type-B among both residents and refugees. In Yazd and Isfahan respectively, one can observe medium and lower levels of lack of spatial liminality type-B among both refugee and local Iranian residents.

Section 7.2.1 (Chapter 7) also indicates that the lower value of land in historic areas can be correlated to residents' motives for immigrating to historic areas (as noted above, mostly to access cheaper housing), which consequently increases lack of spatial liminality type-B. This is strongly experienced in historic Kashan (as a result of lower land value), while it was moderate and lower respectively in Yazd and Isfahan, where land value had increased significantly (Table 9.10).

Table 9.10: Comparing lack of sense of belonging to place (as stated by local Iranian residents) with respect to levels of DABs in Kashan, based on Figure 7.2 (see Chapter 7)

City Levels of DABs	Kashan	
	% of Iranian local residents who indicated they had settled in surveyed historic areas to obtain cheaper housing options	Surveyed blocks
High	69% (High)	(B-1 and B-15)
Medium	61% (Medium)	(B-2 and B-3)
Low	49% (Low)	(B-16 and B-5)

9.4.2. Lack of sense of place satisfaction

Sections 7.3 and 7.4 in Chapter 7 disclose that the lack of a sense of place satisfaction (as a result of lack of vehicular accessibility) can be seen as the major reason as to why residents leave historic areas, equal to lack of spatial liminality type-B. DABs is thus perceived as the second major reason for lack of sense of place satisfaction among local residents in historic cities.

Sections 7.3.1 and 7.4.1 (Chapter 7) have specified a direct correlation between the percentage of DABs and lack of a sense of social safety (as an indicator of lack of spatial liminality type-

B) among local Iranian residents in historic Yazd and Kashan (Table 9.11). It is reconfirmed that lack of spatial liminality type-B (generated as a result of lack of sense of place satisfaction) among local Iranian residents can be seen as clearly in line with lack of vehicular accessibility (as the first major urban problem) and higher percentages of DABs (as the second major urban problem) in historic urban areas.

Table 9.11: Comparing residents’ sense of place satisfaction with respect to levels of DABs in Kashan and Yazd, based on Figures 7.5 and 7.8 (see Chapter 7)

City Levels of DABs	Kashan (local residents’ concerns)		Yazd (local residents’ concerns)				
	Lack of public security in the larger context	Surveyed blocks	Lack of public security in the larger context	Pests and vermin	Local DABs	I feel unsafe in my neighbourhood	Surveyed blocks
High	31% (High)	(B-1 and B-15)	63% (High)	15% (High)	66% (High)	74% (High)	(B-43 and B-8)
Medium	14% (Medium)	(B-2 and B-3)	45% (Medium)	13% (Medium)	57% (Medium)	47% (Medium)	(B-30 and B-28)
Low	11% (Low)	(B-16 and B-5)	23% (Low)	0% (Low)	53% (Low)	26% (Low)	(B-9 and B-47)

9.4.3. Lack of social capital

Section 7.5 (Chapter 7) investigated levels of social capital among residents via two layers of independent variables. First, the average percentage of local Iranian residents interested in participating in revitalising historic neighbourhoods was measured, either by using personal funds-loans or by taking up loans via NGOs or banks. Secondly, the percentage of local Iranian residents who either hoped to move out of the historic city by selling or exchanging their properties (with buildings or apartments of equal value outside historic areas) and/or who had no interest in participation was measured.

Both layers reveal lower degrees of social capital in historic Kashan and Isfahan. However, in Yazd residents respectively reflect a better sense of social capital that characterises higher levels of spatial liminality type-B compared to Kashan and Isfahan. Section 7.5.1 showed no observable correlation between lack of social capital (as an indicator of spatial liminality type-

B) and the extent of DABs in historic urban areas (Table 9.12). The discussion revealed that almost no sense of social capital is observable among refugees in historic cities.

Table 9.12: Comparing social capital amongst local Iranian residents in respect to the extent of DABs, based on Figures 5.16 and 7.11 (see Chapters 5 and 7)

City \ Social capital	Hoping to move out or not interested in participating	Interested in participating by personal fund or loans (more reliable measure)
Kashan (High, 36%<DABs)	76% (Low)	21% (Low)
Yazd (Medium, 29 %< DABs<36%)	47% (Medium)	50% (Medium)
Isfahan (Low, DABs<15%)	100% (Low)	34% (Low)

9.4.4. Lack of sense of socio-spatial safety

Section 7.6 (Chapter 7) deliberated that the most crucial reasons for a sense of lack of safety among local residents can be seen as relevant to the absence of vehicular accessibility as well as the existence of DABs in historic cities. Those qualities are entirely in line with the findings as deliberated in sections 7.3 and 7.4, where it was discussed that the lack of vehicular accessibility and the existence of DABs could be seen as the most crucial causes for generating of a lack of spatial liminality type-B (resulting from the lack of place satisfaction) among local residents.

Section 7.6.1 discovered that one of the significant reasons for the formation of a (perceived or real) feeling regarding lack of safety among local Iranian residents in Yazd could be relevant to the presence of foreign refugees, addicts or criminals, which in turn proved to be correlated to the proportion of DABs (Table 9.13). These findings are totally in line with results in section 5.5.1 (Chapter 5) where it was demonstrated that the larger population of refugees tend to settle in highly dilapidated-abandoned urban blocks in Yazd and Kashan.

Section 7.6.1 suggested that refugees rarely felt unsafe in historic areas. As a possible reason, it can be claimed that as refugees start to replace traditional populations, they may establish their own social structures and safe zones (Williams, 1990). However, it was proved that the presence of refugees as the significant reason for the formation of spatial liminality type-A (see sections 5.5 and 6.6) generates a feeling of lack of safety among local residents.

It was deliberated that a lack of spatial liminality type-B, associated with a perception of lack of safety among a large proportion of local residents can be specifically correlated to lack of vehicular accessibility, the existence of DABs and the presence of refugees, addicts and

criminals in the urban case studies analysed here. It can be suggested that this lack of spatial liminality type-B can also be correlated to the formation of spatial liminality type-A, resulting from a greater presence of refugees and/or formation of DABs in historic urban areas (Table 9.13).

Table 9.13: The average percentage of local Iranian residents' concerns regarding their safety with respect to the extent of DABs based on Figure 7.13 (see Chapter 7)

City Levels of DABs	Kashan		Yazd		
	Foreign refugees	Surveyed blocks	Foreign refugees	Addicts or criminals	Surveyed blocks
High	17% (High)	(B-1 and B-15)	40% (High)	68% (High)	(B-43 and B-8)
Medium	10% (Medium)	(B-2 and B-3)	20% (Medium)	42% (Medium)	(B-30 and B-28)
Low	0% (Low)	(B-16 and B-5)	14% (Low)	34% (Low)	(B-9 and B-47)

9.4.5. DABs and the correlation between spatial liminality type-A and type-B

Section 7.7 strongly suggested that the existence of DABs can be seen as one of the major problematic urban conditions that can cause a lack of a sense of place satisfaction, and consequently generate a lower level of spatial liminality type-B among local Iranian residents in historic cities.

Section 7.7.1 (Chapter 7) indicated a meaningful correlation between expressions of refugees regarding DABs. In this case, many refugees who live in highly dilapidated-abandoned areas suggest that DABs are not a problem. Conversely, refugee residents who live in areas with lower levels of DABs, largely suggest that DABs are either dangerous or must be restored or reutilised. Such contradictory perceptions among refugees can suggest the existence of DABs as a desirable phenomenon³ for refugees who are living in highly dilapidated-abandoned areas, while corresponding with spatial liminality type-A (section 5.5.1).

Section 7.7.1 (Chapter 7) strongly suggests a correlation between the formation of DABs and the proportion of residents' concerns regarding DABs in historic Yazd and Isfahan, signifying

³ DABs can be a desirable situation for non-Iranian residents or refugees, either because disused areas create opportunities for refugees to occupy them at low or no cost, or they can possibly establish a safe sanctuary in such deprived low-populated urban areas. In both cases historic areas with a larger extent of DABs can protect refugees from xenophobic or anti-refugee feeling.

a lack of spatial liminality type-B in historic cities (Table 9.14). On the other hand, section 5.5 previously proved a strong correlation between the extent of DABs and the formation of spatial liminality type-A in historic Iranian cities. Consequently, one can claim that in some circumstances there is a direct perceived relationship between spatial liminality type-A, the extent of DABs and lack of spatial liminality type-B in historic Iranian cities.

Table 9.14: The average percentage of local Iranian residents' concerns regarding the existence of DABs with respect to the calculated extent of DABs, based on Figure 7.16 (see Chapter 7)

City Levels of DABs	Yazd (Local residents' concerns regarding DABs)			Isfahan	
	DABs are dangerous	DABs must be reutilised	Surveyed blocks	DABs are dangerous	Surveyed blocks
High	74% (High)	70% (High)	(B-43 and B-8)	40% (High)	(B-1)
Medium	54% (Medium)	49% (Medium)	(B-30 and B-28)	20% (Medium)	(B-7)
Low	23% (Low)	49% (Medium)	(B-9 and B-47)	14% (Low)	(B-2)

9.4.6. Lack of sense of place identity

Section 7.8 suggested that lack of spatial liminality type-B associated with lack of a sense of place identity becomes evident among local residents in surveyed historic cities. Such a lack of a sense of place identity can also be observed at its highest level in Kashan, while largely ameliorated in Yazd and Isfahan (Table 9.15).

It can also be claimed that the extent of a lack of sense of place identity can be principally connected to the economy of the land. In this sense, in less populated historic towns, such as Kashan where the value of land is low, a sense of place identity can be extremely insignificant. However, in Yazd and Isfahan, the higher value of land has generated a stronger sense of place identity (representing higher levels of spatial liminality type-B) among local residents in historic urban areas.

Thus, it becomes clear that higher levels of spatial liminality type-B (resulting from a higher sense of place identity) are strongly relevant to higher value of land in historic urban fabrics. In other words, historic urban areas with a higher value are places where local people want to live, for familial, economic or other reasons.

Table 9.15: The average percentage of local Iranian residents who are willing to swap their traditional houses with external properties with respect to the extent of DABs, based on Figures 5.16 and 7.19 (see Chapters 5 and 7)

City	% of residents who are willing to swap their traditional houses
Kashan (High, 36%<DABs)	80% (High)
Yazd (Medium, 29%<DABs<36%)	63% (Medium)
Isfahan (Low, DABs<15%)	61% (Low)

9.4.7. Vulnerability as a result of lack of spatial liminality type-B

Chapter 7 deliberated current conditions of spatial liminality type-B by interpreting seven independent attitudinal variables in historic cities. It was proved that there is a strong correlation between lack of spatial liminality type-B, vehicular accessibility, higher proportion of DABs and devaluation of land within case studies. Besides, the correlation between lack of spatial liminality type-B and higher levels of DABs and the presence of refugees in historic areas proved to be significant.

Thus, this discourse substantiates strong connections between lack of spatial liminality type-B, the formation of spatial liminality type-A and the extent of DABs in these historic Iranian urban case studies (Figure 9.3).

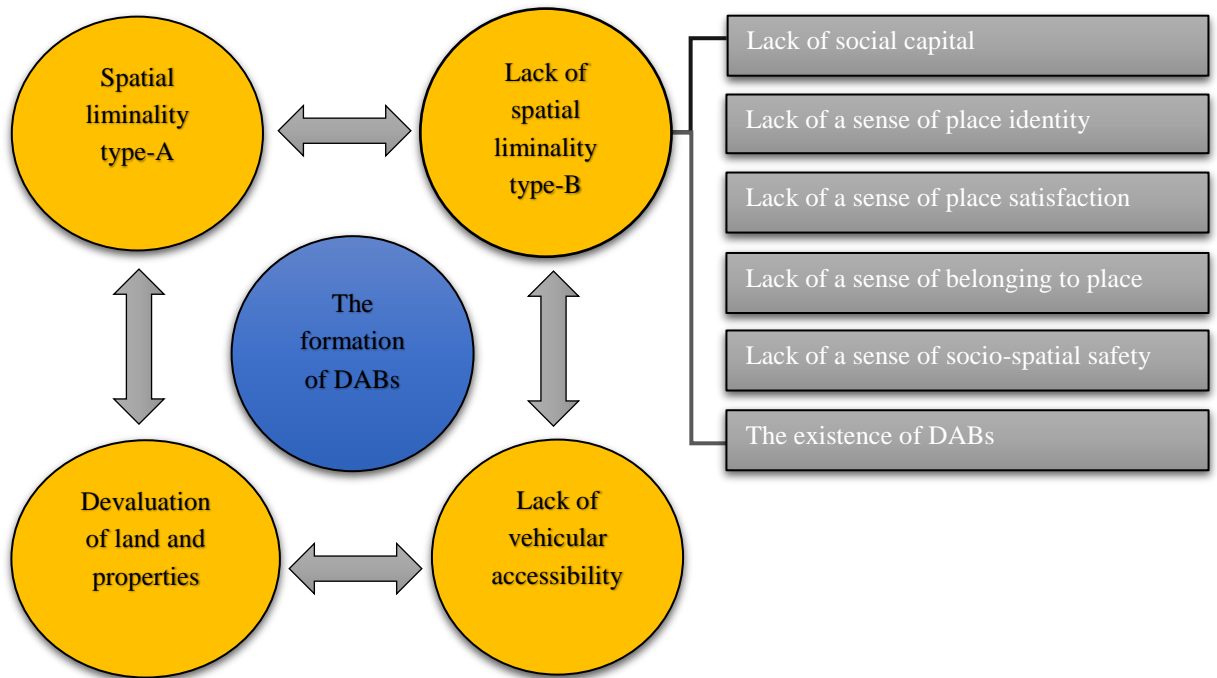


Figure 9.3: Correlation between several independent variables of spatial liminality and the extent of DABs as elaborated in Chapter 7

9.5. Socio-spatial planning context

Chapter 8 has verified that the current problematic socio-spatial planning context can strongly relate to lack of vehicular accessibility, the formation of DABs, emigration of local Iranian residents, an influx of refugees and devaluation of land and properties in historic urban areas.

Therefore, in line with spatial, demographic and attitudinal inquiries (see Chapters 5 to 7), this final layer of investigation reconfirmed substantial correlations between lack of spatial liminality type-B, the formation of spatial liminality type-A, devaluation of land and properties and the extent of DABs in three historic cities. It was deliberated how spatial liminality and the extent of DABs can be related to contemporary design and planning (Figure 9.4).

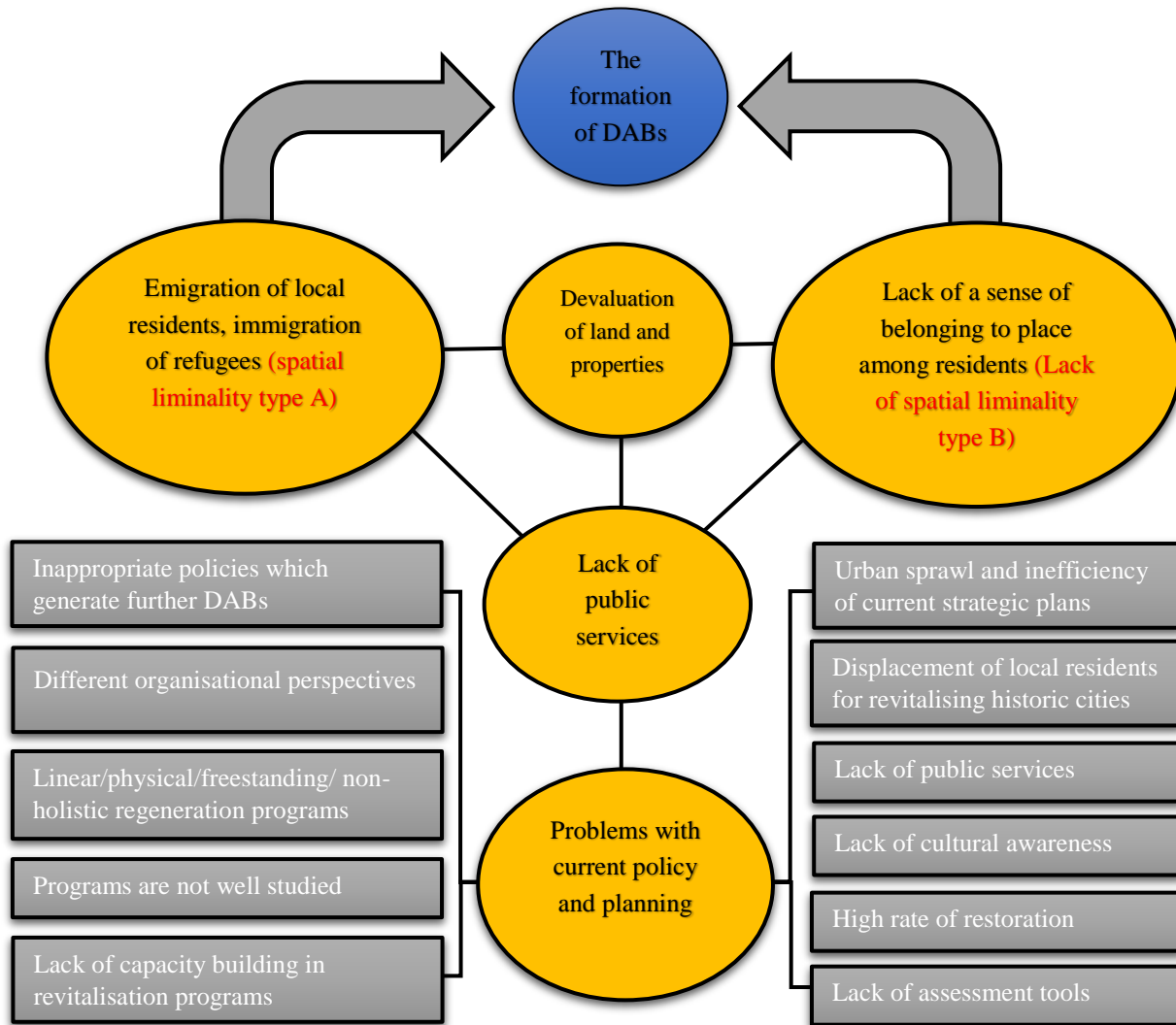


Figure 9.4: The current social-spatial planning context as a deleterious effect can be relevant to spatial liminality and the extent of DABs in historic cities

9.6. Conducting inferential analysis

On an advanced analytical level, several Chi-square tests of independence were performed to re-examine the overall relationships between demographic and attitudinal aspects of spatial liminality against the percentage of DABs. However, a reliable correlation was not found in any inquiries. For example, in one inquiry: $X^2(5, N=61) = 4.564, p > 0.05$ (Table 9.16).

Table 9.16: Several Chi-square tests of independence were conducted and showed no significant correlation between demographic/attitudinal aspects of spatial liminality and the extent of DABs

Chi-Square Tests			
	Value	df	Asymptotic significance (two-sided)
Pearson Chi-square	4.564 ^a	5	.471
Likelihood ratio	4.693	5	.454
Linear-by-Linear association	2.151	1	.142
N of valid cases	61		

a. 6 cells (50.0%) have expected a count less than 5. The minimum expected count is 1.77.

Moreover, a Pearson correlation was run to verify the association between percentage of DABs and several aspects of spatial liminality (type-A and type-B) in 15 sample blocks in historic Kashan, Yazd and Isfahan, corresponding to 61, 80 and 20 street surveys in those cities (Table 9.17).

In Kashan, a robust, positive correlation ($r=0.902$, $N=61$, $p < 0.01$, $R^2=0.813$) can be observed between the percentage of DABs in 2008 and 2018. Such a relationship in Yazd remained positive and moderate ($r=0.448$, $N=80$, $p < 0.01$, $R^2=0.2$), although it is considerably weaker compared to Kashan. In Isfahan, such a relationship cannot be proven ($p = - 0.535$). The analysis shows that in sample blocks of historic Kashan and Yazd the proportion of DABs in 2008 is related to the extent of DABs in 2018. However, in Isfahan, such a relationship is absent, possibly as a result of strong land economy and proximity of sample blocks to the historic bazaar as a major centre of tourism and local trade.

In Kashan, a substantial, negative correlation ($r= -0.939$, $N=61$, $p < 0.01$, $R^2=0.881$) is recognised between the percentage of DABs (2018) and the extent of areas accommodated by all local Iranian residents (as an indicator of spatial liminality type-B). However, in Yazd this correlation is diminished to strong ($r= -0.700$, $N=61$, $p < 0.05$, $R^2=0.490$). In Isfahan, a moderate negative relationship ($r= -0.573$, $N=61$, $p < 0.01$, $R^2=0.328$) could be documented between the percentage of DABs and the extent of areas accommodated by local residents. This inquiry can suggest that in historic urban areas with lower levels of population and land value (e.g. in Kashan and Yazd) the liminal impacts of DABs could be stronger, which might significantly encourage further emigration of local residents, as a result of lack of spatial liminality type-B.

However, considering the strategic positioning of three building blocks, it could be assumed that in the case of Isfahan the absence of local residents can be genuinely relevant to the ongoing demand for commercial land use, as discussed in section 5.2.3 (Chapter 5).

Additionally, a strong negative association ($r = -0.671$, $N=61$, $p < .01$, $R^2=0.450$) can be perceived between the percentage of DABs (2018) and the proportion of newly-built houses in Kashan. This relationship became moderate-negative in Yazd ($r = -0.509$, $N=80$, $p < 0.01$, $R^2=0.259$), while in Isfahan it was strongly negative ($r = -1.00$, $N=20$, $p < 0.01$). This trend again suggests that the larger extent of DABs could significantly devalue land and properties and discourage building investments in the proximity of DABs in historic cities.

Quite parallel to what was discussed in sections 5.5 and 6.6, in sample blocks of Kashan, a positive-strong association ($r = 0.666$, $N=61$, $p < .01$, $R^2=0.443$) is observed between the percentage of DABs and the proportion of areas accommodated by non-Iranian residents or refugees (as a representative of spatial liminality type-A). This correlation became weaker and positive in Yazd ($r = 0.546$, $N=80$, $p < 0.01$, $R^2=0.298$), while it could not be detected in Isfahan ($r = -0.891$). This declining trend reiterates the idea that DABs in lowly-populated urban areas can generate stronger levels of spatial liminality type-A, compared to highly populated regions, where the higher land value can diminish the availability of deteriorated, cheap housing options for refugee settlements (Figure 9.5).

Table 9.17: Correlation between factual aspects of spatial liminality and the percentage of DABs in three historic cities, based on numerical and categorical results amongst 161 participating residents

Pearson Correlation						
Kashan		Area of DABs 2018	Area of DABs 2008	Area accommodated by all local residents	Newly-built housing areas	Area accommodated by all refugees
Area of DABs 2018	Pearson Correlation	1	.902*	-.939*	-.671*	.666*
	Sig. (1-tailed)		.000	.000	.000	.000
	N	61	61	61	61	61
Yazd		Area of DABs 2018	Area of DABs 2008	Area accommodated by all local residents	Newly-built housing areas	Area accommodated by all refugees
Area of DABs 2018	Pearson Correlation	1	.518*	-.749*	-.508*	.634*
	Sig. (1-tailed)		.000	.000	.000	.000
	N	80	80	80	80	80
Isfahan		Area of DABs 2018	Area of DABs 2008	Area accommodated by all local residents	Newly-built housing areas	Area accommodated by all refugees
Area of DABs 2018	Pearson Correlation	1	-.535*	-.573*	-1.000**	-.891*
	Sig. (1-tailed)		.015	.008	.000	.000
	N	20	20	20	20	20
* Correlation is significant at 0.05 level (1-tailed)						
** The number (-1) shows a complete negative correlation which can be moderated by a higher number of respondents (N) and more diversity in responses in future studies						

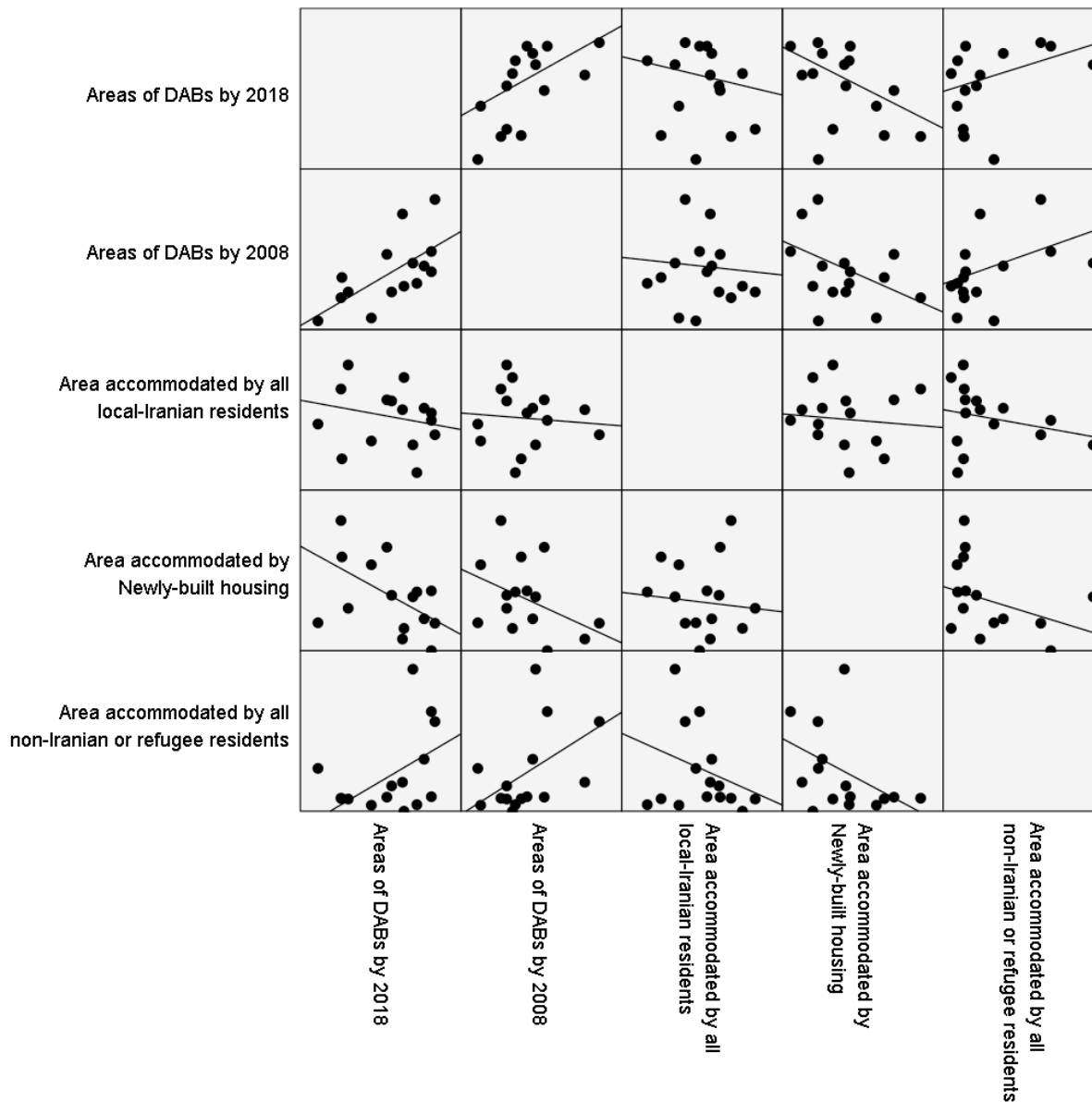


Figure 9.5: Scatterplot matrix and relevant fit lines demonstrating the overall relationship between the extent of DABs and the intensity of spatial liminality in historic Iranian cities. Image is based on numerical results in 15 urban case study blocks, surveyed during March-May 2018 by the researcher

9.7. Triangulation

As a result of triangulating the discourse as presented in sections 9.2 to 9.6, the hypothesis as extrapolated in section 1.3 (see Figure 1.5, Chapter 1) can be confirmed. Thus, there are substantial grounds to believe that lack of vehicular accessibility along with the current socio-spatial planning context have caused DABs to increase in historic cities in Iran. This phenomenon can be meaningfully accompanied by spatial liminality type-A, while generating further DABs, encouraging emigration of original residents (as a representative of a lack of spatial liminality type-B), and discouraging building investment as a result of land devaluation.

On the other hand, it becomes evident that the larger areas of DABs could be truly correlated to lack of vehicular accessibility, which can encourage emigration of local residents (lack of spatial liminality type-B) and attract higher numbers of liminal residents, such as refugees (spatial liminality type-A), to settle in historic urban areas.

The triangulation demonstrates that levels of spatial liminality type-A could be stronger when there is no likelihood for income related to tourism (e.g. significant heritage sites, UNESCO registrations, and so on), or no prospect for financial profit relevant to land use exists. In this sense, DABs can truly generate spatial liminality type-A and diminish spatial liminality type-B in smaller historic cities such as Kashan. Consequently, the larger population of urban areas along with higher land value significantly diminishes liminal qualities of DABs, as observed in Yazd and Isfahan (Figure 9.6).

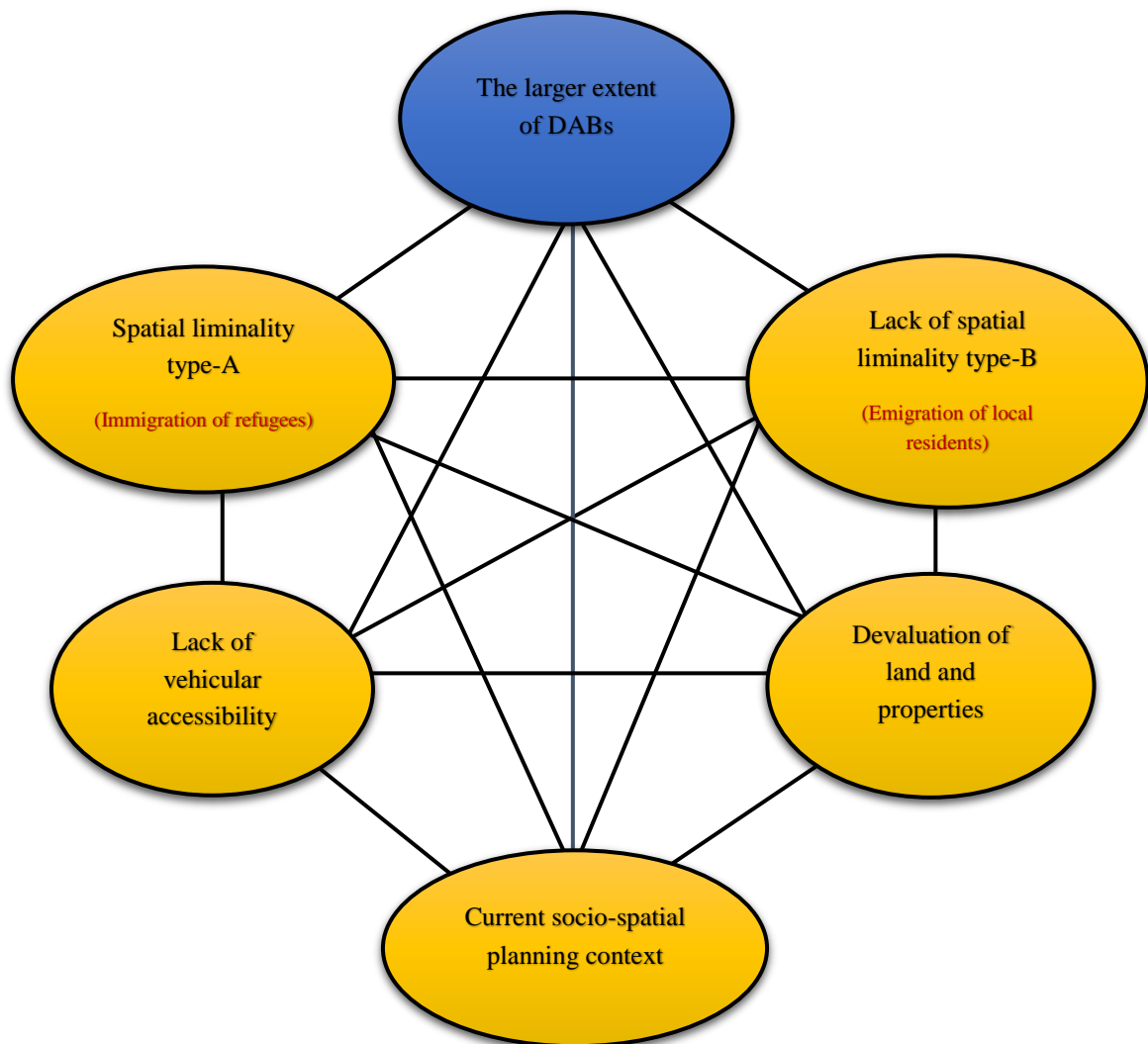


Figure 9.6: A complex relationship between DABs, spatial liminality and the current socio-spatial planning context, produced as a consequence of triangulating results in Chapters 5 to 8

9.8. Deliberations: Place as the foundation of spatial liminality

The thesis so far has offered a novel methodology for understanding/treating socio-spatial vulnerability in urban areas of Iran, and by proffering a specific focus on the correlation between DABs and the formation of spatial liminality (types A and B) in historic cities. Throughout the chapter, for the first time, it has been demonstrated how historic cities of Iran could simultaneously generate at least two types of spatial liminality indicating real-life transitions among residents.

As discussed in Chapter 3, Arnold Van Gennep first coined the term “liminality” as rites that marked the passage of an individual or social group from one social status to another (cited in Thomassen, 2014). He pointed out that when individuals or groups are in a state of suspension, they constitute a threat to themselves and the entire group. By defining liminality, Van Gennep introduced a new anthropological approach that instead of utilising priori categories as units of his taxonomy, he abstracted these units from the structure of the ceremonies themselves. In this respect, current research has contributed to exploring the role of “Place” as the third dimension of liminality along with “Time” and “Event” as originally proposed by Van Gennep (1960).

The discourse in this thesis interconnects the works of several key thinkers who have shared the same passion for utilising liminality as a tool for investigating vulnerability in real-life events; namely Mortland (2017) as a cultural anthropologist, Thomassen (2014) as an urban anthropologist, Szokolczai (2017a) as a political anthropologist and Stavrides (2014) as an architect. The discussion takes a post-structuralist approach for evaluating and analysing the condition of in-between-ness (liminality) that can be seen as ‘empirical, lived reality’ in social science (Szokolczai, 1998, p.211). The theoretical contribution as proposed in this research has brought about a new perspective where two types of spatial liminality (type-A and type-B) are identified and formed the grand theory of spatial liminality that exists in historic cities of Iran.

9.9. Dealing with spatial liminality type-A

This thesis recognises a significant aspect of spatial liminality, which has not been highlighted in the literature and can be documented through the ideas of cultural anthropologists such as Mortland (1987) and Dudley (2010). Such scholarly thinkers suggest that refugees in refugee camps can go through real-life transition, clearly in the same way that Van Gennep proposed as “rites of passage” for individuals or communities (cited in Manjikian, 2010). On the other hand, through the literature, it was discussed how today an influx of refugees and non-local disadvantaged communities are evident in historic cities of Iran, which reflect socio-spatial

segregation and marginality (Abbaszadeh and Mirzaei, 2014; Behzadfar, 2012; Mirmiran, 2011; Tavassoli, 1987). Since the socio-spatial conditions of refugees in both refugee camps and run-down settlements in Iranian historic cities can be seen as comparable, this thesis defines spatial liminality type-A as a deleterious building phenomenon. By endorsing the research hypothesis (see section 1.3, Chapter 1), spatial liminality type-A proved to be correlated to dilapidated abandoned buildings (DABs), and this can generate further marginality.

9.9.1. Specifications of spatial liminality type-A

This thesis has demonstrated that engendering a sense of place, alone, could stimulate liminal stages in rites of passage, and more precisely those in marginalised communities who have been exiled to refugee camps (Mortland, 1987). In line with the concept of spatial liminality type-A in refugee camps, it was mostly identified that today inside historic Iranian cities, refugees and exogenous minorities are gradually occupying heritage fabrics while original residents are leaving these areas (Abbaszadeh and Mirzaei, 2014; Behzadfar, 2012; Ehlers and Floor, 1993; Faghih, 1976; Mirmiran, 2011; Tavassoli, 1987).

Through a completely original discussion, the research has suggested that Iranian historic cities can clearly be considered as liminal spaces because they accommodate liminal residents, refugees or low-income communities in semi-restricted areas, as a result of the general lack of vehicular access. It was discussed that those socio-spatial conditions are reasonably comparable to liminal communities constrained in actual refugee camps (section 3.3.3, Chapter 3).

It is within this context that the current influx of refugees and rural economic migrants in historic urban fabrics of Iran (as deliberated in sections 1.2 (Chapter 1) and 2.5.2 (Chapter 2)) are analogous to refugees in refugee camps. In both cases, the subject communities are somehow forced to live in ghettos/camps, become liminal in their rites of passage, suspended in-between their previous social status and an unknown future, seeking to become a citizen of the new land (Table 9.18).

Table 9.18: Several ethnicities or minority groups that make up the population of vulnerable liminal communities inside historic Iranian cities

Subjects of liminality	Types of participants	Sought societal status
Non local or non-Iranian disadvantaged (low-income) communities or migrants	Foreign refugees (illegal or legal)	To become a citizen of the new city
	Poor economic migrants from other provinces or nearby rural areas	
	Other marginalities: criminals, drug abusers, homeless, very poor, etc.	

9.9.2. Permanent spatial liminality type-A in historic Iranian cities

Through the discourse of liminality, Victor Turner (1974, p.59) and Arnold Van Gennep (1960, p.90) both suggested that during liminal rites of passage, ‘masters of ceremony’ (principally elders of the community) whether implicitly or explicitly must teach rules and supervise neophytes. Thus, it becomes a notable point that contrary to refugee camps, where processing centres act as masters of ceremony (Mortland, 1987, Dudley, 2010), inside historic urban fabrics, ritual rules and instructions regarding rites of passage – here interpreted as “rules of the game” – are unknown to neophyte refugees, who have been torn away from their elders.

In this sense, spatial liminality in refugee settlements in Iranian cities generates a socio-spatially vulnerable environment for both refugees and their local cohorts, not dissimilar to what Szokolczai (2017, p.231) suggests as ‘permanent liminality’, because of ‘the absence of masters of ceremony’. In this case, respected community leaders, and older generations of the family who are possibly absent in a refugee ghetto/camp might be the equivalent of masters of ceremony (Nowak, 1984, p.45):

In a more formally structured liminal condition, the passage from former to future state, ... is ultimately controlled by knowledgeable specialists who have themselves undergone a similar experience’. In the case of the refugees in camps ‘neither the de facto leaders of the community nor the inexperienced youth can be confident that such "reintegration" will in fact occur.

This lack of supervision among refugees in historic cities is in line with Szokolczai’s (2015, p.155) discussion, that in the absence of masters of ceremony ‘liminality will not be restricted to a temporary crisis followed by a return to normality, but can be perpetuated endlessly’. In a parallel context, inside historic urban areas, it can also be claimed that if place could initiate spatial liminality type-A, then upcoming socio-spatial events could be impulsive, dangerous or even criminal, in the case of drug lords or ghetto owners.

Therefore, the notion of permanent liminality as described by Szakolczai (2017) becomes not dissimilar to high levels of socio-spatial vulnerability, deprivation, residents' dissatisfaction, poverty and crime inside historic areas, yet to be documented by many Iranian urbanists and scholars, since the beginning of the 20th century (Abbaszadeh and Mirzaei, 2014; Andalib, 2010; Faghih, 1976; Falamaki, 2015; Tavassoli, 1987).

9.9.3. DABs and permanent spatial liminality type-A

By verifying the hypothesis (the correlation between DABs and spatial liminality type-A), the research showed how DABs can be seen as "liminal spaces" in Iranian historic cities. It was further shown how DABs were spawned as a result of modern road developments at the beginning of the 20th century, contributing to a state of in-between-ness in Middle Eastern historic cities (Bianca, 2000). Such long-term underutilisation of DABs in this thesis is in line with the concept of permanent liminality, when any of the phases in this sequence (including separation, liminality and re-aggregation) become frozen as if a film stopped at a particular frame (Szakolczai, 2000, p.220; Thomassen, 2014). In the absence of masters of ceremony, such permanent spatial liminality was recognised as dangerous and could potentially become associated with poverty, racism, antisocial behaviours and this leads to further marginality. Thus, the research highlighted that permanent liminality of DABs poses a threat to local residents as well as surrounding contexts, and should be seen as a deleterious phenomenon, that needs to be alleviated by implementing appropriate urban design and planning programs.

9.9.4. Dealing with permanent spatial liminality type-A in historic urban fabrics

The thesis has explained how, in historic Iranian cities, place has generated a long-term spatial liminality type-A since the beginning of the 20th century, which can be seen as in line with the discourse on permanent liminality, where Szakolczai (2000, p.220) argues that three types of 'permanent liminality' are initiated within three phases of the rites of passage. He argues 'liminality becomes a permanent condition when any of the phases in this sequence [including separation, liminality, and re-aggregation] becomes frozen as if a film stopped at a particular frame', while it can happen both with individuals undergoing an 'initiation rite' and with groups who are participating in a 'collective ritual'.

Thomassen (2012, p.30) also warns that 'without a proper re-integration liminality is [a] pure danger'. Thus, as discussed by Szakolczai (2017, p.240) deciding on how to end such liminality or to leave it as 'permanitized liminality' becomes crucial. In this case, if Iranian stakeholders within the realm of building, construction, architecture, planning and policy-making could

foresee a need to end such permanent spatial liminality, then such transitory situations can move beyond their early initiation in anthropology and become a theoretical guideline in urban design/planning within historic cities. For that reason, the study of spatial liminality type-A, as discussed in this chapter, can be considered as a prerequisite for studying socio-spatial vulnerability and proposing reliable urban regeneration projects and policies in historic Iranian cities.

9.10. Facilitating spatial liminality type-B

The concept of spatial liminality type-B, as defined in this research, initially is based on the proposition made by Thomassen (2014). He suggested that “in-between spatial positioning” could be the primary cause for the simultaneous generation of “rites of transition” amongst early “interdependent societies” during Axial Age, as also defined by Jaspers (1948) in the 1950s. The discourse identified that Thomassen’s discussion regarding “in-between spatial positioning” and the formation of interacting/liminal societies signify a territorial interdependence, not dissimilar to what Stavrides has suggested as ‘Heterotopia’ (2007, p.4), referring to the quality of in-between places that separate and connect participating communities at the same time, and maintain osmotic boundaries, suitable for ‘acts of encounter’. In both cases, in-between spaces can facilitate rites of passage (liminality) amongst participating identity communities that make them move from one social status to another.

The thesis highlights significant similarities between the language which is exploited by the two scholars of liminality (Stavrides, 2007, Thomassen, 2014), that produce rites of passage for larger societies or social groups, which must have at least four intrinsic qualities:

- Firstly, several identity societies need to co-exist as unique social groups (Stavrides, 2014, Thomassen, 2015).
- Secondly, such heterogeneous communities should be bounded by specific territorialities that make places different from other places (Stavrides, 2007).
- Thirdly, for the survival of such identity groups, different socio-spatial interactions need to be established (Thomassen, 2014).
- Fourthly, the existence of threshold in-between spaces becomes necessary for the improvisation of such socio-spatial interactions which together can generate liminality (Jaspers, 1948; Thomassen, 2014; Stavrides, 2007).

Moreover, the dimensions of spatial liminality type-B, as defined here, clearly explain the existence of interdependent neighbourhoods, given the strong sense of territoriality amongst

residents in historic Iranian cities (Akbar, 1988; Mortada, 2003). In this sense, the discourse elaborates how spatial liminality type-B has generated “rites of passage” amongst interdependent social-groups and endowed a strong sense of belonging to place on members of heterogeneous neighbourhoods in historic Iranian cities.

9.10.1. Spatial liminality type-B as a progressive concept in historic cities

In line with Chapter 3 (sections 3.4 to 3.6) in historic cities of Iran, a neighbourhood used to be the original cell of the city, where a specific ethnic group, race, religion or sect could freely settle (Soltanzadeh, 2011). Hence, in its process of formation, urban society comprised tribal systems based on ethnic circumstances, shared interests (e.g. similar professions) and/or religious preferences (Habib et al., 2013).

In historic cities in Iran, followers of the diverse Shia and Sunni schools such as ‘Shafi‘i’ ‘Hanafi’, ‘Hanbali’ ‘Keramatieh’, ‘Mu'tazilah’, ‘Isma'illah’ and other religious groups such as Jews, Christians or Zoroastrians once lived in contact with each other, and because of the creation of neighborhoods had their separate veneration places, marketplaces, cemeteries and public institutions (Abu-Lughod, 1987; Ashraf, 1987, p.31; Soltanzadeh, 2011, p.199). Thus, such qualities were explained by engendering sense of place amongst residents.

The separation of minority religious groups from Muslims has been observed in all Middle-Eastern cities, while Muslims and non-Muslims once lived in different neighbourhoods from each other, in separate ‘mahalle’. Despite living inside cities where Islam was the dominant religion, non-Muslim communities did not find themselves on the whole in an integrated community (Holt et al., 1977). Nonetheless, traditional neighbourhoods secured life for minority religious groups and their separation from Muslims. Hence, separation of minority religious groups from Muslims has been accepted with respect to Islamic rule, and yet in favour of minority (religious) groups (Sattari et al., 2014).

Non-Muslims received support by paying taxes that were lower than usual taxes for Muslims, and as a result, they could set up their settlements in separate neighbourhoods (Ellethy, 2014). Thereby, they had freedom of action, trade and negotiation as well as authority to practise their religious customs and traditions, while their own religious places (e.g. temples) were developed in their neighbourhoods (Sweet, 1970, Emon, 2012). In many medieval Iranian cities (e.g. in Isfahan during and before the Safavid era between 1501 to 1736 AD), Shia and Sunni and their various sects coexisted in separate neighbourhoods (Habib et al., 2013).

Such socio-spatial coexistence led to the creation of profound social-spatial exchange and sense of place identity amongst multiple social groups-communities (Sultanzade, 1991), while at the same time totally in line with spatial liminality type-B (as defined in section 3.4, Chapter 3), signifying rites of passage of subjected groups/communities in historic cities in Iran. The formation of such neighbourhoods enhanced social life, where individuals could meet their personal needs through collective life (Mortada, 2003). Such identity neighbourhoods had built security in the district and effectively encouraged public participation, which generated self-growing public institutions (Akbar, 1989; Ramezani and Hamidi, 2010). Nonetheless, the discourse in this research discloses how emigration of original residents destabilised and displaced socio-spatial ecosystems, by reducing spatial liminality type-B and inducing spatial liminality type-A.

9.10.2. Spatial liminality type-B in current urban revitalisation projects

By elaborating on spatial liminality type-B, this research has disclosed socio-spatial mechanisms formed social groups, generated physical and social inclusion among residents as members of a community and/or neighbourhood, enhanced social life and encouraged residents to meet their personal needs through collective life (see sections 3.4.4 to 3.4.7, Chapter 3). In this sense, spatial liminality type-B may be extrapolated to have existed among residents during the pre-modern epoch in historic cities of Iran.

Thus, spatial liminality type-B could have facilitated public participation, social inclusion/interaction, a sense of social security, residents' satisfaction, and belonging to place among identity groups in historic neighbourhoods (section 3.4.8, Chapter 3).

Through the lens of spatial liminality, it is deliberated that because of the current revitalisation programs DABs are acting as liminal urban fabrics, which has consequently stimulated further dilapidation, poverty, social-spatial segregation and stigmatisation. In this case, spatial liminality type-B specifies that lack of sense of belonging to place among residents of historic cities can be explained with respect to the extent of DABs.

The thesis has proven that such socio-spatial qualities relevant to spatial liminality type-B no longer exist (or only exist in fragmentary cases) in historic cities, as a result of the emergence of contemporary urban transformation (section 1.2, Chapter 1). Hence, the current inquiry has clearly shown that such a strong sense of place identity (which once united social groups in historic urban fabrics) is largely absent among residents today.

The research suggests that lack of spatial liminality type-B can be relevant to the formation of spatial liminality type-A and to a larger extent DABs. It was demonstrated how lack of vehicular accessibility and the existence of DABs can be most crucial regarding lack of sense of place satisfaction and in turn lack of sense of belonging to place among local Iranian residents in historic cities.

It was elaborated how this lack of sense of belonging can respectively encourage further emigration of local residents, which consequently culminates in the formation of more DABs. It was explained that DABs (generated as a result of the lack of spatial liminality type-B) can be strongly related to the immigration of refugee residents in historic cities, which in turn develops spatial liminality type-A.

As a Western experience in historic cities, Jane Jacobs (1961) famously described how in Greenwich Village during a period of modernisation and change, cultural complexity and richness was eradicated by functionalist models of development. In the case of historic cities, however, instances of agency and/or resistance and the possibility of non-Iranian settlers bringing their own culture (and sense of place) with them can somehow exist. But this has proved to be deleterious⁴, considering the ever-increasing destruction of historic fabrics over the past decade (section 5.4, Chapter 5).

9.11. Spatial liminality as a guideline for revitalising historic cities

Today, in many Iranian historic cities, revitalisation programs are not efficient, mainly based on Western urban design and planning (Bianca, 2000). Many of these programs are attempting to implement Lynchian perspectives, and based on methods that retain an image of the city (as perceived by citizens), and/or physical intervention (Masoud & Beigzadeh, 2012). This approach has proven to be largely unfeasible in non-Western urban contexts (Damayanti & Kossak, 2016; Sankalia, 2014). Such an interventionist design approach has generated freestanding revitalisation such as façade restoration, repaving and regeneration of cultural-historic axes in Iranian historic cities (Hanachi et al., 2007).

By demonstrating the correlation between DABs and spatial liminality, this research for the first time establishes a practical association between revitalisation programs and spatial liminality in the context of historic cities of Iran. The percentage and distribution of DABs (and consequent spatial liminality type-A) has increased by an average of 14% in Isfahan, Kashan

⁴ Generation of local culture as a result of accumulation of refugees in historic cities is outside the scope of this research.

and Yazd between 2008 and 2018. This shows how contemporary revitalisation programs have been mostly unsuccessful in these cities. Such findings redress a gap in the knowledge, that is, understanding spatial liminality and its social, cultural, physical and financial implications must be seen as a significant prerequisite for the proposition of revitalisation programs in Iranian historic cities, and possibly in cities with similar urban structure in the Middle East and Northern Africa.

Hereby, spatial liminality as an analytical tool demonstrates the necessity of revitalising DABs to prevent permanent spatial liminality type-A, perceived as dangerous by many scholars (Szokolczai, 2017; Thomassen, 2012). On the other hand, spatial liminality type-B has offered urban design as a guideline by demonstrating the role of in-between spaces in the formation of a strong sense of belonging to place (territorialities) amongst interdependent neighbourhoods, which today can practically inform revitalisation projects and processes in historic Iranian cities.

9.11.1. Spatial liminality as an innovative tool to identify social-spatial vulnerability

The thesis represents a new method for understanding urban vulnerability, which is fundamentally different from the approaches yet to be implemented in historic urban areas. The perspective is different because it moves beyond contemporary methods of revitalisation, which concurrently generalise socio-spatial needs and problems in all historic cities. Spatial liminality has disclosed the reality of historic cities through a method that Szokolckzai (1998, p.211) has described as an ‘empirical, lived reality’.

Based upon a consideration of the effects of spatial liminality, this research has deliberated that the major reason for the formation of DABs in historic urban areas is the emigration of local Iranian residents, who are leaving their homes, mostly due to lack of vehicular accessibility and/or other permanent urban problems. The discourse has clarified how the ramification of such emigration can be correlated to the formation of further DABs and devaluation of land, which consequently encourages local families to either abandon their properties or sell/rent their homes to non-local disadvantaged communities (i.e. refugees).

Spatial liminality has thus reflected a pronounced influx of refugees to historic urban areas. The thesis has proved that, in such circumstances, refugees are suspended between their past and future and merely want to survive, while they have no idea about the cultural value of historic contexts. It was elaborated that liminal vulnerable settlers, along with the impoverished local

owners, usually cannot afford to repair their homes, which exacerbates the deterioration-dilapidation process of buildings in historic urban areas.

Through the lens of liminality, in-depth interviews illuminated how, in the last decade, revitalisation movements have led to restoring historic areas by private sectors (in cooperation with, or independent of, relevant government agencies), or by world heritage organisations such as UNESCO. It was revealed that financial motivation mostly inspires such restoration movements that typically include freestanding design. As previously discussed, in a large number of cases private and/or public investors have purchased significant historic buildings and transformed them into hotels, coffee shops or other tourist attractions.

It was discussed that most financially driven movements tend to develop small, medium and large scale commercial developments inside DABs. Even though in many circumstances these types of rehabilitation movements have been verified to be successful⁵, such freestanding trends generally proved to be unable to spawn actual life in historic urban areas. Instead, such movements have shaped historic sites and buildings as isolated tourist islands, which provide no connection with their surrounding (less important, deteriorated or stigmatised) urban fabrics.

This research has also indicated that during one decade (2008--2018) such scattered movements (on average) have reutilised 15%, 19% and 21% of surveyed historic areas respectively in historic Kashan, Yazd and Isfahan. These spaces may include new car parks, houses and commercial buildings, hotels and tourist centres, as well as proposed infrastructure (Appendix B-1). Spatial liminality, along with mapping DABs, has informed us that such recycling processes are inefficient, have lagged far behind a deleterious phenomenon, a failure that is a consequence of lack of integrative social-spatial regeneration programs.

9.11.2. DABs as a tool for evaluating contemporary socio-spatial planning context

The thesis shows how current revitalisation policies and methods (yet to be implemented in historic areas) are merely following the Lynchian⁶ school of thought, and have predominantly engaged with visual physical aspects of cities (see section 2.5.3, Chapter 2). In seeking to verify this claim, section 8.4 (Chapter 8) elaborated how in most circumstances in practice revitalisation projects have been linear, physical and mostly concentrated on the regeneration

⁵ Today many public and/or private tourist attractions such as traditional hotels, teahouses and museums are successfully established and generate reasonable financial returns in historic Yazd, Kashan and Isfahan as demonstrated in section 8.4.5.

⁶ In Iranian urban planning contexts, programs and projects are largely inspired by Western revitalisation literature, specifically modern heritage restoration movements after the 1950s, as discussed in Chapter 2.

of freestanding urban axes/nodes, and by utilising façade and paving restorations, rather than considering the grassroots of social life.

It was elaborated how those programs have been chiefly designed as freestanding entities, not able to be interconnected to their broader urban contexts (sections 8.4.4 and 8.4.5, Chapter 8). The inefficiency of programs was also verified, based on the fact that from 2008 to 2018 the average percentage of DABs (as liminal urban fabrics, see section 9.9.3) had increased to about 14% in surveyed historic areas (see section 5.4, Chapter 5). Such enormous growth of DABs reconfirms the fact that despite the disbursement of huge amounts of public funding (by government agencies during the past 10 years), currently revitalisation methods and socio-spatial planning contexts in historic Iranian cities proved to be mostly unsuccessful (see section 8.4, Chapter 8).

9.11.3. Necessity to reutilise DABs in historic cities

Through the lens of spatial liminality and via field research, this thesis has managed to comprehend fundamental socio-spatial problems in Iranian historic cities. This epistemological method allows us to move far beyond contemporary socio-spatial planning contexts and informs us that there are two dangerous aspects which can arise in historic cities as a consequence of DABs.

Firstly, DABs are largely correlated to the formation of spatial liminality type-A, which may attract non-local vulnerable communities towards historic cities. Secondly, DABs can be strongly associated with lack of spatial liminality type-B, the absence of which amounts to a breakdown in community identification and sense of place, which in turn encourages further emigration of local residents, immigration of refugees and eradication of historic areas.

Those critical matters strongly indicate that DABs need to be reutilised into active land resources while maintaining their heritage value.⁷ In this sense, morphologically informed design methods need to be developed, precisely in historic areas where there is no reasonable economic stimulation for reutilising DABs. In this case, we can refer to many successful revitalisation programs, which without sacrificing heritage value, have utilised DABs in historic cities, not unlike cases previously discussed in Iran and other countries (section 2.4, Chapter 2).

⁷ There are rare circumstances in which DABs contain significant heritage sites which are also outside the scope of this research.

Presumably, recycling of urban land resources can reduce crime and social problems, such as accumulation of disadvantaged communities, without the implementation of force or racism and this effectively diminishes urban sprawl in historic cities. Thus, by studying the current implications of DABs through the lens of spatial liminality, the thesis has identified the reutilisation of DABs as a suitable method for revitalising historic cities in Iran (Figure 9.7).

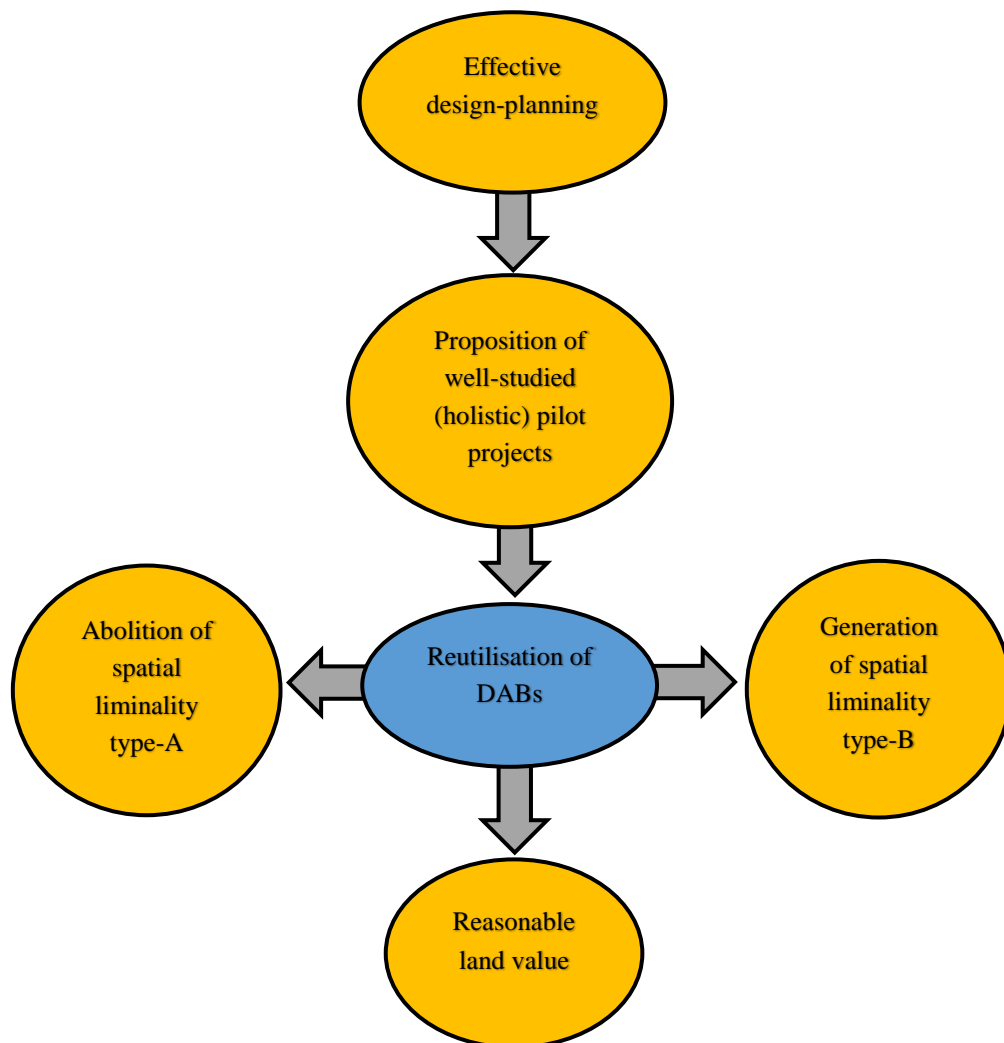


Figure 9.7: Application of spatial liminality as an analytical tool for revitalising historic cities

9.11.4. In-between open spaces and the formal language of historic Iranian cities

In line with section 9.10, sections 3.4 to 3.6 (Chapter 3) explained how in-between threshold spaces generated spatial liminality type-B in Iranian historic cities that was activated through several intertwined spatial-political layers such as power, traditions, gender segregation, ownership patterns, and ideological or blood-related backgrounds. In this sense, courtyards were seen as the basic form of in-between spaces in traditional Iranian architecture (Khaghani, 2012).

Mulavi (1990) explored several stages in the process of implementing in-between courtyards in a traditional structure, and by interpreting methods of geometrical drawings in Iranian traditional architecture during the medieval era. His investigation uses a theory of design based on the sections of a circle to design courtyard structures inside amorphous land areas in historic Iranian cities. Mulavi (1990) identifies three design stages in a historic case study⁸ inside the old city of Isfahan (Appendices G-1).

In the first phase, the geometrical centres of amorphous land are identified. The demarcation process can occur as a result of intersecting the major diametrical elements of the subject land. In the second phase, a circle is drawn based on each centre, in such a way that the closest boundary line (or extension of a boundary line) becomes a tangent line, touching the circle at one point. In the third phase, a rectangle is positioned, which is totally inscribed in each circle. The orientation and dimension of such in-between spaces were based on the length of the bisected areas of land and the direction of sunlight (Khaghani, 2012).

By comparing socio-spatial structures in three traditional cities in Iran (Figures 9.8 to 9.10) as a homogeneous model (see Figure 3.4, Chapter 3), as presented by Rapoport (1981, p.252), with the concept of territorial interdependence as presented in this thesis (see section 3.4.7, Chapter 3), it can be claimed that the socio-spatial trade-offs amongst identity groups on a larger scale had indeed generated spatial liminality type-B in medieval Iranian cities. In this case, not dissimilar to interdependent societies of the Axial Age (see Figure 3.2, Chapter 3) and the formation of primitive Middle-Eastern states (see Figure 3.3, Chapter 3), it can be proposed that in Iranian historic cities heterogeneous neighbourhoods/communities recurrently underwent their rites of passage, and in conjunction with other neighbouring communities during the Middle Ages.

The discourse has demonstrated that spatial liminality type-B in historic cities of Iran was generated as a result of the existence of hierarchical in-between spaces, engendered osmotic borders such as courtyards and roads, in conjunction with medieval socio-cultural activities. In this sense, the decoding of socio-spatial dynamics that once generated spatial liminality type-B in historic Iranian cities along with the morphological-social interpretation of in-between spaces can be developed as a guideline for re-utilising DABs today (Appendices G-2 and G-3).

⁸ Haj Hassan Ghafari's house.

Having said that, it is evident that the formation of spatial liminality type-B (via generating in-between spaces) can only partly resolve the issue of how modern populations reoccupy DABs, in a mutually supportive way. Nonetheless, the research has highlighted that in the Western world this happens in historic districts through gentrification projects and processes. And in Iran and Middle-Eastern countries, it was implied that revitalisation can be implemented mostly via executing tourism related activities, infrastructure, new housing developments and/or by introducing new types of land use in historic cities.

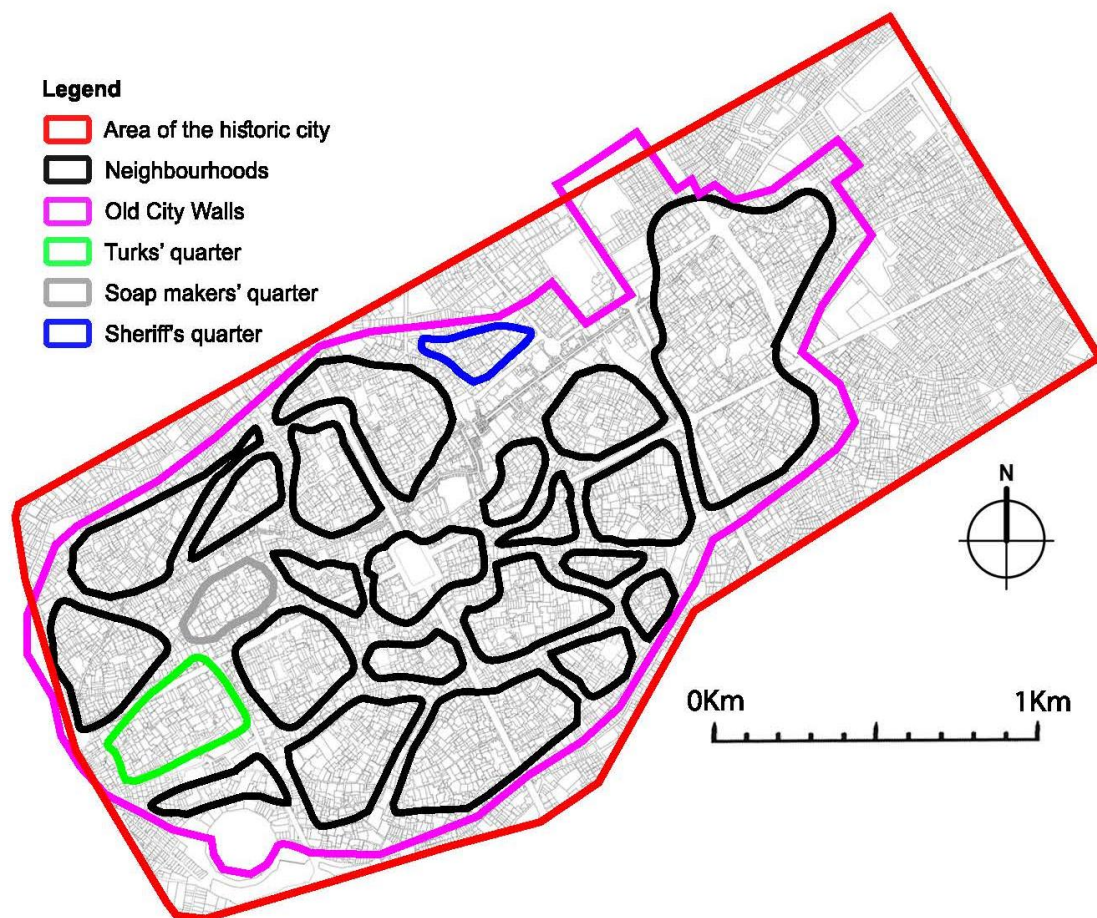


Figure 9.8: Heterogeneous neighbourhoods in historic Kashan in the medieval era, based on the layout map as demonstrated initially by the Kashan Heritage Authority (ICHHTO)

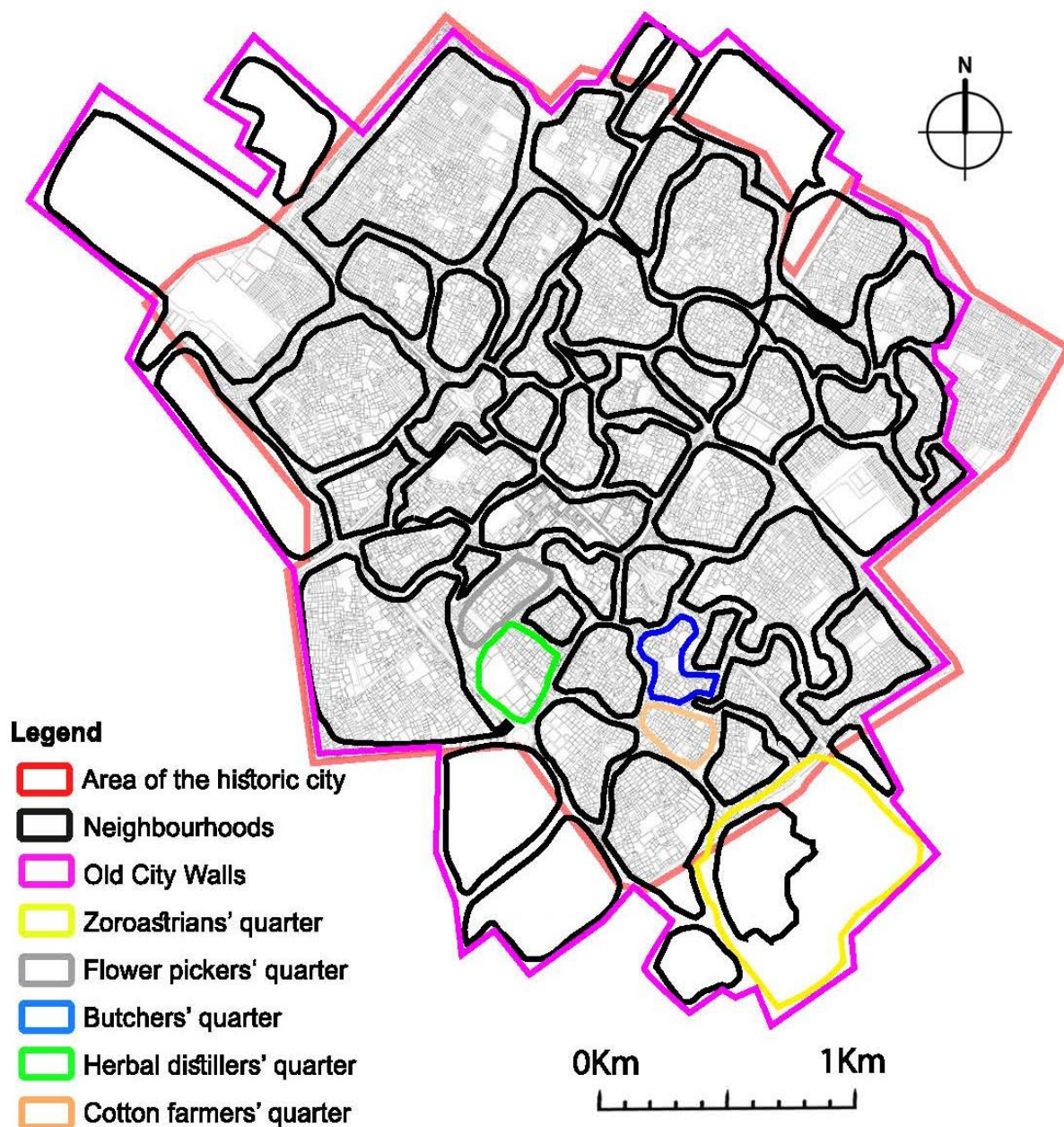


Figure 9.9: Heterogeneous neighbourhoods in the medieval city of Yazd were formed as a result of the accumulation of people with mutual religious identities or similar types of occupations in one place. The illustration is based on layout sketches originally produced by the Yazd Heritage Authority (ICHHTO)

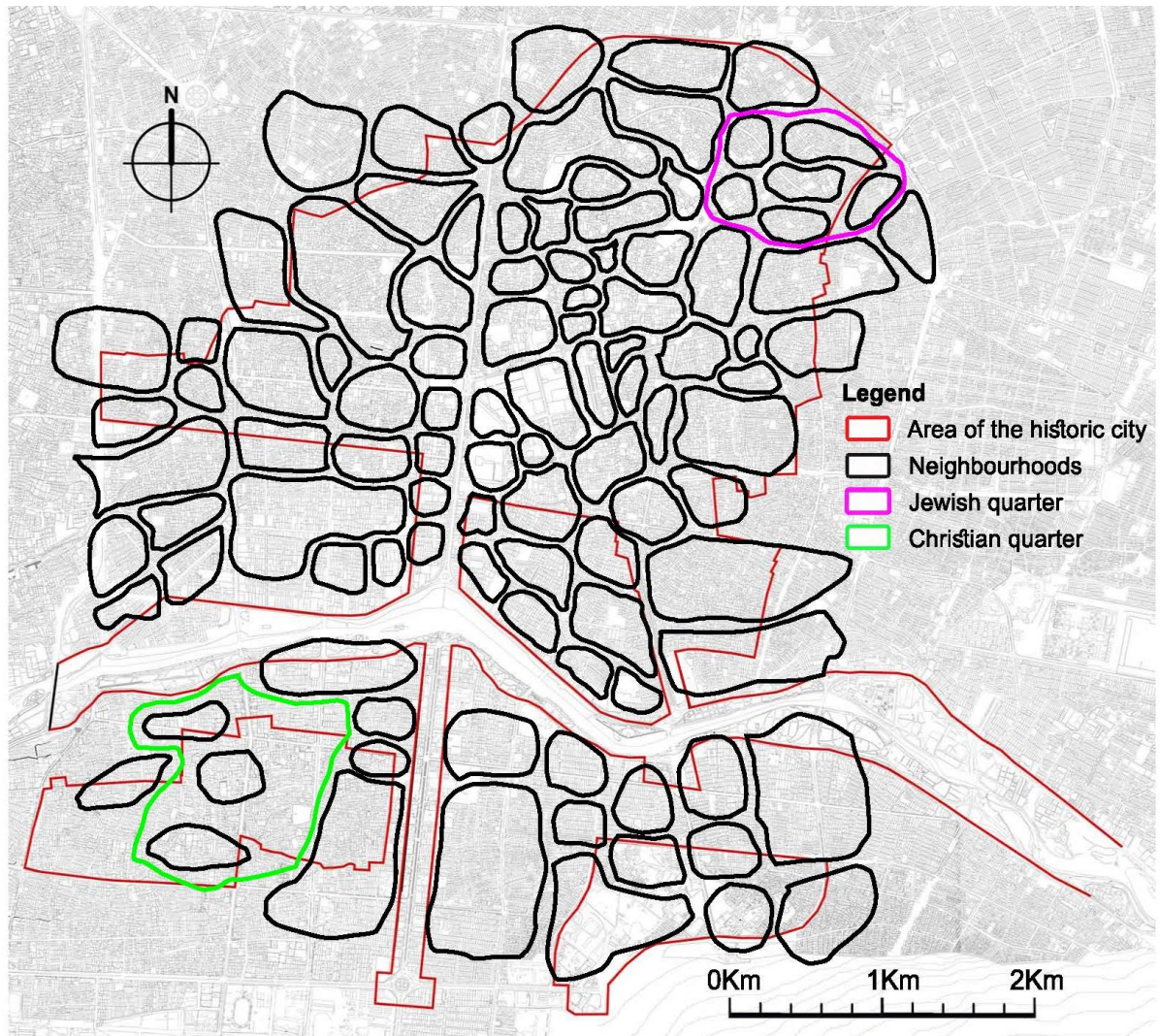


Figure 9.10: Interdependent identity neighbourhoods during the Safavid era in Isfahan, juxtaposed with the current structure of the city based on the layout map originally generated by the Isfahan Heritage Authority (ICHHTO)

9.11.5. Spatial liminality and DABs: Opportunities and challenges

Throughout this thesis, it was discussed how spatial liminality could be utilised as a tool for understanding the socio-spatial grassroots of contemporary transformation in Iranian heritage urban areas, and beyond current dominant Lynchian perspectives, which are merely based on the perception of residents regarding the image of the city.

Through the lens of spatial liminality type-A, the current planning context for DABs acts as liminal urban fabrics, which tend to generate further dilapidation, poverty, social-spatial segregation and stigmatisation. Furthermore, spatial liminality type-B indicates that a lack of sense of belonging to place among residents in historic cities can be explained with respect to the extent of DABs.

In light of spatial liminality, this thesis has suggested that when DABs do not include registered heritage buildings, it is best to reutilise them, either by implementing building restoration or by creating new infill developments in cities. It has also been demonstrated how the recycling of DABs eradicates spatial liminality type-A and facilitates spatial liminality type-B in historic urban areas. By proposing the regeneration of DABs two immediate questions arise:

Firstly, “where do the migrants go from DABs?” becomes a matter of large scale planning and national policy, which needs to provide fair opportunities for both non Iranian and local Iranian residents in historic urban areas.

Secondly, “how can DABs be reutilised?” that should be recognised as an essential task, and can be answered by decoding social-spatial approaches that once generated spatial liminality type-B in historic cities during the medieval period (i.e. the Middle Ages).

Therefore, this thesis deliberated on how the morphological-social interpretation of in-between spaces in Iranian historic cities can facilitate a practical understanding about the re-utilisation of DABs in current times. To do so, this chapter exploited spatial liminality type-B to extract social, spatial and cultural layers of medieval urban life, which today can be applied to revitalising historic Iranian cities.

9.12. Summary

This chapter in line with Szakolczai (1998, p.211) suggested that spatial liminality as an ‘empirical, lived reality’ improves our understanding of socio-spatial vulnerability in the context of historic cities and beyond contemporary revitalisation projects and processes. The research defined DABs as liminal urban fabrics with two deleterious socio-spatial effects: spatial liminality type-A (generate) and spatial liminality type-B (abolish).

The chapter has demonstrated that the revitalisation of DABs in historic cities today has become an urgent need, by illustrating the damaging qualities of DABs. The discourse highlighted socio-spatial requirements regarding targeted communities that need to be taken into account for implementing effective revitalisation projects in historic cities.

On the basis of the collected data and presented case studies, spatial liminality type-A was seen as a severe problem in Kashan, while less critical respectively in Yazd and Isfahan, possibly as a result of stronger land economy, and further investments by UNESCO and relevant heritage authorities.

In the light of the investigation on spatial liminality (type-A and type-B) in relation to heritage sites, DABs and liminality are significantly correlated. Thus, when DABs do not include significant heritage sites and/or buildings, it is best to reutilise them into active land resources in cities, to prevent permanent spatial liminality type-A.

The chapter explored socio-spatial dynamics that once generated spatial liminality type-B in historic Iranian cities. It is proven that such socio-spatial qualities relevant to spatial liminality type-B no longer exist (or only exist in fragmentary cases) in historic cities, as a result of the emergence of contemporary urban transformation. It was suggested that in-between spaces formerly spawned spatial liminality type-B among identity neighbourhoods in historic cities during the medieval era, which could be assumed as a progressive phenomenon. It is argued that today the same spatial arrangements can be developed as a guideline in the urban design of historic cities.

In describing one possible way of generating threshold spaces that can facilitate spatial liminality type-B, the chapter highlighted a traditional model for implementing in-between spaces within amorphous land areas (i.e. DABs) in historic cities in Iran. In this sense, further studies need to be conducted on how morphological studies combined with liminality can help liminal disadvantaged communities in historic cities, to transition into a more physically and socially diverse and integrated population.

Chapter 10: Conclusions and Recommendations



A preserved thoroughfare in historic Kashan, 2018 (Source: author)

10.1. Research questions answered and research objectives achieved

This thesis has defined and measured spatial liminality against the extent of DABs, in three historic cities in Iran (Parts I and II). The thesis then applied spatial liminality as an analytical tool for identifying factors impeding the revitalisation of these historic cities in Part III. Throughout the thesis, it was crucial to distinguish that the argument should not be interpreted as xenophobic, while an influx of non-local, disadvantaged communities in historic cities can be seen as a global issue. Thus, there is no ulterior motive behind the identification of cultural factors that have contributed to the proliferation of DABs in this research.

In sum, the research sought to identify socio-spatial vulnerability in historic cities of Iran through the lens of spatial liminality. The primary purpose was to inform urban revitalisation programs and policies in Iranian historic cities and other Muslim cities which yielded similar liminal conditions. The research was presented in three parts and consisted of eleven chapters.

In Part 1, Chapter 1 identified DABs as one of the most crucial problems in the historic cities of Iran. The chapter presented a preliminary literature review on the current conditions of DABs and socio-spatial impacts on historic cities. The chapter identified a hypothesis that indicated possible correlations between the lack of vehicular accessibility, inefficient planning models, the emigration of local Iranian residents, the immigration of refugees, the devaluation of land, a general condition of socio-spatial vulnerability, and the formation of DABs in historic urban areas.

As a consequence of such undesirable socio-spatial conditions in historic urban areas, the literature review in Chapter 2 indicated a need for new epistemological tools (beyond current Lynchian image-based methods) for understanding, treating and consequently revitalising historic cities of Iran. Since the existence of refugees in the literature was previously identified as a transitional condition, the chapter suggested liminality as an innovative epistemological tool, borrowed from anthropology, which can assist in identifying both positive and negative factors in relation to the formation of DABs (Section 2.5).

Chapter 3 identified two types of spatial liminality in historic cities: firstly, spatial liminality type-A, which equates to the contemporary accumulations of vulnerable communities, namely refugees and non-Iranian immigrants in historic cities. Secondly, spatial liminality type-B, which once generated a strong sense of belonging to place and community engagement among

social groups in medieval cities of Iran, before modernity transformed historic areas forever (Figure 11.1).

The chapter further highlighted general models for measuring spatial liminality type-A and type-B (as analytical tools) for understanding/measuring socio-spatial vulnerability in historic cities. The chapter highlighted four types of datasets that need to be scrutinised, to measure spatial liminality in historic cities, including spatial (factual) inquiries, demographic inquiries and attitudinal inquiries, along with the current socio-spatial planning context.

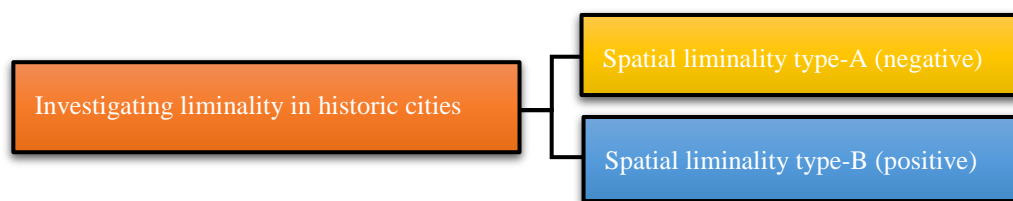


Figure 11.1: Two types of spatial liminality in historic Iranian cities (as deliberated in Chapter 3)

Chapter 4 (Methodology) proposed practical methods for measuring spatial liminality (type-A and type-B) in historic cities of Iran. Since DABs were previously identified as a severe socio-spatial problem, the chapter employs spatial liminality as a tool to disclose the correlation between the extent of DABs and consequent social-spatial vulnerability in historic cities.

The research scheduled a mixed methods case study for investigating 15 urban blocks in three historic cities of Iran. Through a comprehensive case study selection procedure, a number of urban blocks were selected based on maximum variation of DABs. Consequently, four datasets were collected for assessing the correlation between contemporary socio-spatial planning in conjunction with spatial liminality (type-A and type-B) and the proportion of DABs per urban block (Figure 11.2).

Spatial-factual data

Investigating spatial liminality type-A and type-B

- Ratios of all refugee settlements vs DABs per block (represent immigration of refugees)
- Adjacency between DABs and refugee settlements
- Correlation between the extent of previous DABS (2008) and current DABs (2018) per block
- Ratios of all local settlements vs DABs per block (represent the emigration of local residents)
- Ratios of newly-built houses vs DABs per block (represent the value of land)

Demographic data

Investigating spatial liminality type-A

- Newcomers vs DABs per block
- Leaseholders vs DABs per block
- Non-owners of vehicles vs DABs per block
- Deteriorated homes vs DABs per block
- Low-incomes vs DABs per block
- Refugees vs DABs per block

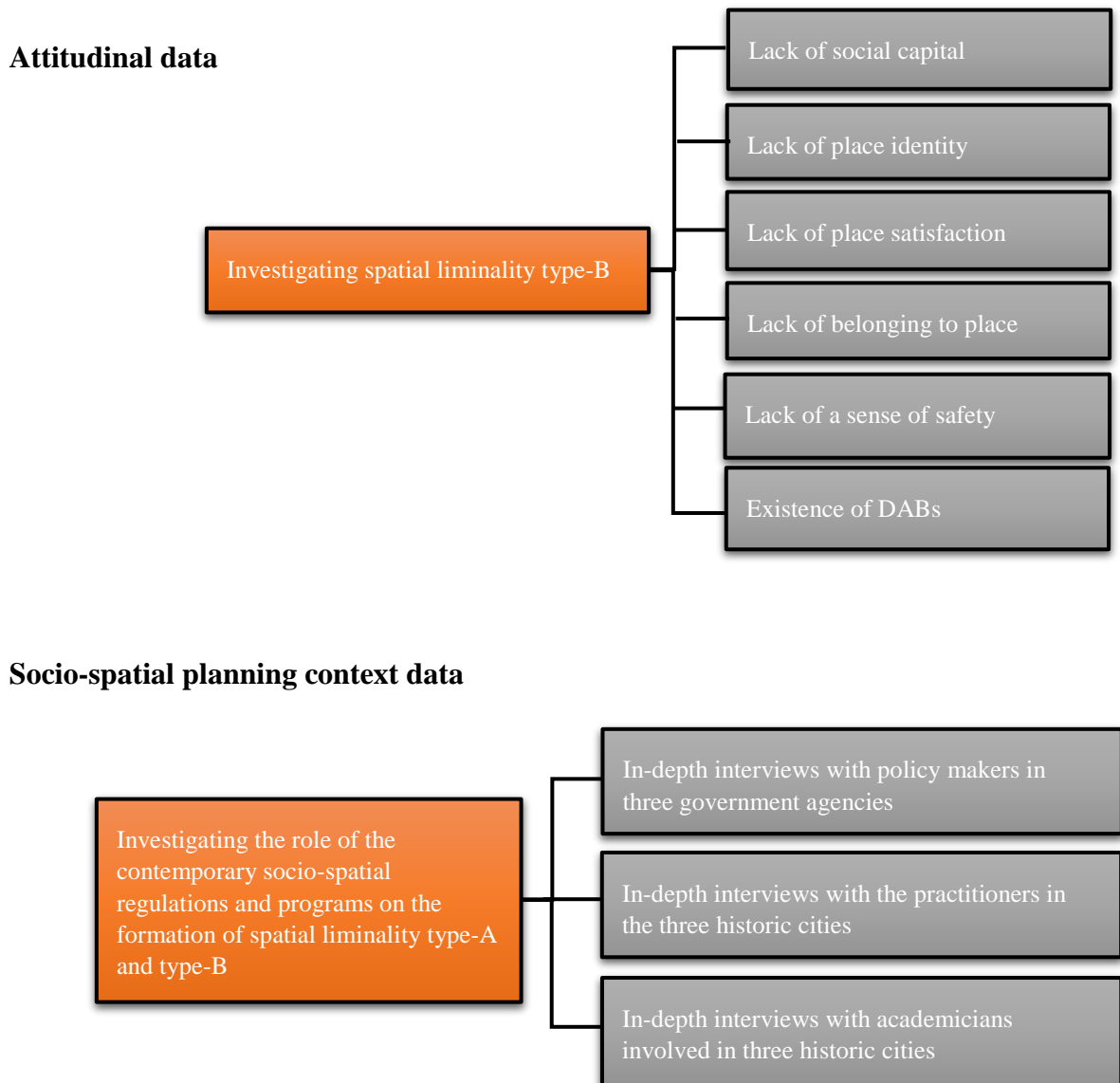


Figure 11.2: Methods of data collection (see Chapters 3 and 4)

Part II provided evidence wherein strong correlations between the current planning context, the extent of DABs and spatial liminality were identified. Consequently, the whole analytical process was conducted on four levels (see Chapters 5 to 8).

Chapter 5 analysed several aspects of socio-spatial vulnerability among residents by comparing factual (independent) variables of liminality (type-A and type-B) against the proportion of DABs (per block) in three historic cities. It was proven that substantial correlations are identifiable between spatial liminality, the value of the land and properties and extent of DABs in Iranian heritage urban fabrics.

Chapter 6 examined several aspects of socio-spatial vulnerability among all residents by comparing five demographic (independent) variables of spatial liminality type-A against the proportion of DABs (per block) in three historic cities. At another level of analysis, the chapter conducted and interpreted crosstab analysis, where demographic aspects of both non-Iranian and local Iranian residents were separately examined against the extent of DABs per urban block. The analysis disclosed a significant relationship between the extent of DABs and accumulation of vulnerable refugees in historic urban areas in Yazd, Kashan and Isfahan.

Chapter 7 measured aspects of socio-spatial vulnerability among residents, by evaluating correlations between seven attitudinal (independent) variables of spatial liminality type-B against the percentage of DABs, the value of land and the formation of spatial liminality type-A in three historic cities. The results and analysis disclosed significant associations between lack of spatial liminality type-B, formation of spatial liminality type-A, devaluation of land and formation of DABs in historic urban areas.

Chapter 8 reconfirmed the hypothesis in this research and added another dimension to the findings in Chapters 5 to 7. The discussion demonstrated how the current socio-spatial planning context could be perceived as another deleterious layer, correlated to spatial liminality, larger extent of DABs, and lower land value in historic urban areas.

Part III applied spatial liminality as a theoretical tool for informing revitalisation projects and processes in historic urban fabrics. The discussion specified urban elements that once facilitated spatial liminality type-B in historic cities of Iran during the medieval era. This rendition establishes a guideline that can facilitate morphologically informed design methods to be implemented for reutilising DABs in historic cities of Iran.

Chapter 9 advocated spatial liminality as an empirical, lived reality that can improve our understanding regarding socio-spatial vulnerability in historic built-environments, by moving beyond conceptual frameworks of currently practised projects and processes. In light of spatial liminality in relation to heritage sites, the chapter suggested a pragmatic theoretical tool that confirms a strong correlation between the extent of DABs and the formation of socio-spatial vulnerability amongst residents. The chapter determined when DABs do not include significant heritage sites and/or registered historic buildings, and that it is best to recycle into active land resources of the city, for facilitating a state of post-liminality.

Chapter 10 elucidated spatial liminality type-B as a guideline for urban design in historic cities. It was proposed that in-between spaces in historic cities could be divided into two major categories, roads and courtyards, which once generated spatial liminality type-B during the medieval era. It was elaborated how in-between spaces in semi-private scale could maintain territorialities amongst a small cluster of houses. Moreover, it was explained that in-between spaces in semi-public levels could fashion social groupings (e.g. heterogeneous neighbourhoods), while at a public level could have facilitated intergroup social-spatial interactions and negotiations, which together have generated rites of passage amongst communities in historic cities of Iran, clarified as spatial liminality type-B.

The thesis discussed how a liminality based study can expand the physical, cultural, spatial and aesthetic understanding of historic urban fabrics, far beyond current physical and image-based approaches that lead to unexpected results. The discussion for the first time allows practitioners and policymakers to understand the revitalisation of historic cities via the lens of spatial liminality. In this sense, spatial liminality as a guideline could lead to a state out of liminality in historic cities of Iran.

10.2. Summary of key findings and original contributions to knowledge

The current thesis elaborated spatial liminality as a theoretical model for contemporary discourses related to liminality. Hence, spatial liminality and its correlation with DABs, as identified in this study, can be viewed as a key finding that can be added to the current body of research and architectural theory.

The thesis has exploited a wide range of interdisciplinary ideas and philosophies from Michael Foucault, to Van Gennep, Karl Jaspers, Bjorn Thommasen, Carole Mortland, Stavros Stavrides and Arpad Szokolczai as well as Islamic scholars such as Hisham Mortada and Gustave E. von Grunebaum. The thesis for the first time allows practitioners, academics and policymakers to understand socio-spatial equations in Middle-Eastern and Iranian historic cities via spatial liminality, to enable current problems in real-life context to be investigated.

10.2.1. The inefficiency of Lynchian methods in historic Iranian cities

The thesis identifies a gap in the knowledge in which the argument, approach and methodology that have until now been presented by contemporary Lynchian (urban design and planning) perspectives which must be enhanced and fine-tuned before they can be applied to revitalising historic Middle-Eastern and Iranian cities. The research emphasised the need to identify new

epistemological tools in urban design. In this sense, for the first time, spatial liminality was suggested as a relevant analytical tool for understanding the practical governance of historic cities of Iran.

10.2.2. Definition and identification of spatial liminality in historic Iranian cities

The thesis has thus defined two types of spatial liminality in historic cities. Spatial liminality type-A is associated with the influx of refugees and non-local disadvantaged residents in historic cores, not unlike refugees who are living in a state of limbo in actual refugee camps. Spatial liminality can be associated with the formation of DABs to a larger extent, and aligned with negative aspects of contemporary socio-spatial planning contexts. Spatial liminality type-B may have existed among residents during the medieval era in historic Iranian cities, and once facilitated a strong sense of belonging to place and territorial interdependence among residents.

10.2.3. Correlation between spatial liminality and extent of DABs

The discourse in this thesis presented empirical evidence wherein the interrelations between spatial liminality type-A and lack of spatial liminality type-B (both as indicators of socio-spatial vulnerability), land value, the extent of DABs and current socio-spatial planning context in historic cities have become crucial. This correlation opens up a new perspective for policymakers and practitioners to consider DABs as liminal urban fabrics in historic cities of Iran, and also in similar urban contexts in other countries.

10.2.4. Spatial liminality as a tool for evaluating socio-spatial planning context

Along with spatial liminality, the research has verified DABs as a phenomenon that has exacerbated socio-spatial vulnerability in historic urban areas. By measuring the extreme proliferation of DABs in historic cities by an average of 14% over 10 years (2008--2018), the research illustrates the unsuccessful aftermath of contemporary revitalisation projects¹ and processes in Iran, and in a wide variety of cases in historic cities. Thus, the research evaluated levels of success in regeneration programs, by studying changes to the extent of DABs. In this sense, the thesis implemented spatial liminality as a speculative tool for evaluating contemporary design and planning context in historic cities of Iran.

¹ The thesis evaluated revitalisation programs with a specific focus on the Imam-Ali megaproject in Isfahan, which today can be seen as one of the most comprehensive and costly projects in the history of urban regeneration projects in Iran and the Middle-East (see Chapter 8).

10.2.5. An interdisciplinary contribution

The thesis has simultaneously contributed to spatial theories of liminality, while offering benefits for professional practice by proposing innovative interdisciplinary perspectives, and by re-theorising space. The thesis takes a new approach towards urban regeneration in historic cities, wherein the correlation between DABs and spatial liminality has proven to be significant, and this can inform future urban design. In this sense, the research can lead to the provision of a new generation of regulatory models, yet to be implemented inside DABs in historic Iranian cities (Figure 11.3).

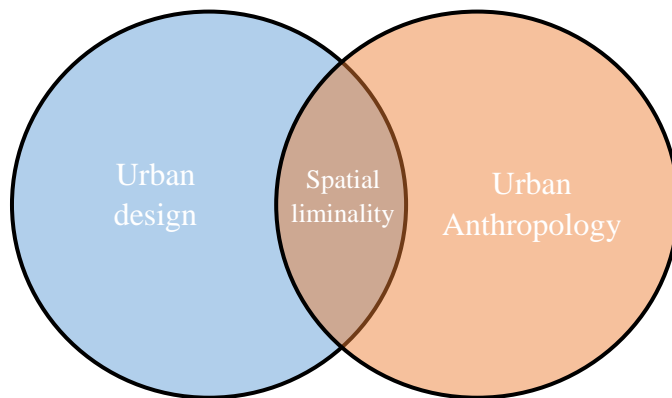


Figure 11.3: The interdisciplinary application of spatial liminality in urban design as proposed in this thesis

10.2.6. Application of spatial liminality for revitalising historic cities

The thesis allows practitioners (e.g. urban designers, architects and planners) to view the historic city via the lens of spatial liminality. The research has proposed that spatial liminality as a theoretical framework can address socio-spatial vulnerability in urban design. Such an understanding can facilitate the actual application of spatial liminality type-B in urban design, and for revitalising historic cities in Iran and other countries with similar urban conditions (Figure 11.4).

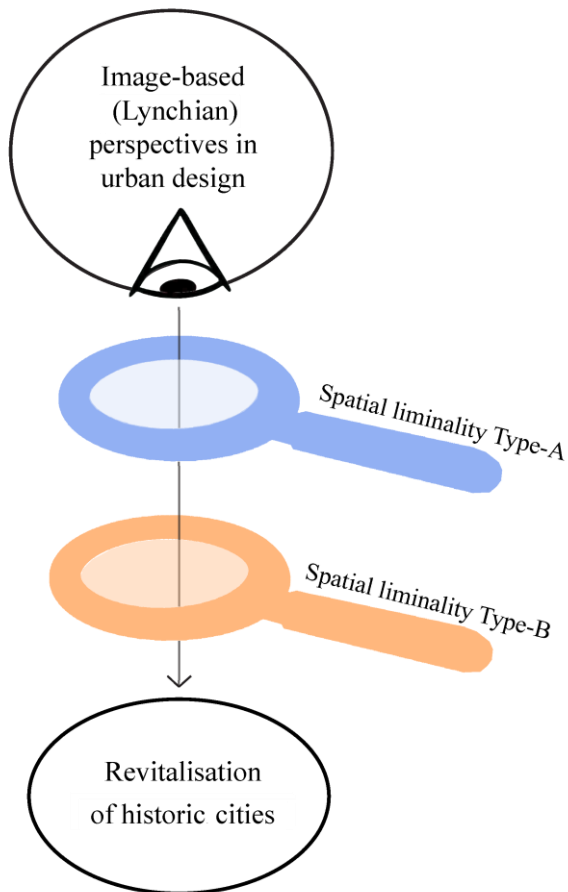


Figure 11.4. Spatial liminality as an analytical tool for revitalising historic Iranian cities

10.3. Recommendations for further research

Throughout the thesis, spatial liminality has proved to be an amorphous socio-spatial phenomenon that usually forms historic urban areas, which could also prove to be unpredictable alongside regional (geopolitical) affairs and global trade-offs. Thus, there are several inevitabilities that pinpoint re-examination of the current discussion by conducting further studies.

10.3.1. The proposition of new types of regulations that can holistically address DABs

The research opens up innovative opportunities for policymakers to be provided with new (integrated) types of regulations and programs, which are equally legible among three governmental layers, and can directly address infill building practices inside DABs. In this sense, further research needs to be conducted regarding DABs and the accompanied socio-spatial effects that could potentially enrich such regulations and programs in historic urban areas.

10.3.2. More case studies and participants to be investigated

The current thesis undertook case studies in 15 urban blocks, within seven urban tissues in three historic cities of Iran. Street surveys were also conducted among 161 participants. In this sense, the results, analysis and discussion here need to be reassessed in other historic cities, and also need to be conducted amongst a larger number of local and non-Iranian participants. In the current research, the number of refugees or local Iranian residents who participated in street surveys would seem to be insufficient, especially for reaching reliable outcomes that can be generalised in historic cities of Iran. In this sense, a larger number of case studies and participants need to be investigated.

10.3.3. Identification of the other types of spatial liminality in historic cities

This exploratory case study discovers the correlation between the extent of DABs and the presence of vulnerable populations; by distinguishing two types of spatial liminality, for recalibrating revitalisation programs in historic Iranian cities. Nevertheless, other transitional occasions that comply with real-life tripartite stages of liminality, as originally discussed by Van Gennep (1960), can reflect other types of spatial liminality in historic cities. For instance, the transition from childhood to adulthood among younger low-income residents. In this case, other real-life liminal stages among inhabitants could be investigated, to further develop the theory of spatial liminality. Here, in essence, the notion of spatial liminality becomes totally distinct from the “forces of tradition”, in terms of manifestations of cultural mentalités as in Braudelian terms, which generally aimed at describing and analysing how people of a given time period thought about, interacted with, and classified the world around them.

10.3.4. The study of spatial liminality in other historic cities

The theory, as discussed in this thesis, can be further developed by studying spatial liminality in historic cities in countries other than Iran. In this case, reference to the field research on sub-cultures in different historic Middle-Eastern cities could provide a rich context for conducting further exploration on spatial liminality. The theory can be further developed, by studying spatial liminality in other historic cities in Europe, Oceania, Asia, Africa, North America or South America.

10.3.5. Cultural, social, financial and liminal aspects of DABs

In line with liminality of DABs, other cultural, social and financial implications of disused buildings need to be further scrutinised to improve the theory of spatial liminality in conjunction with spatial-cultural affairs. For instance, questions such as “how can morphological studies be

combined with liminality studies to hypothesise culturally informed approaches?” and “how can populations in a state of suspended liminality be transitioned into a more physically and socially integrated population?” become crucial. These questions are necessarily related to larger political-spatial arrangements pertaining to the implementation of socially suitable architecture, appropriate change in land use and adaptive reuse of existing structures, as well as generating affordable housing and employment opportunities for both local and non-local disadvantaged communities in historic cities.

The research proposes a substantial argument for redeveloping DABs in historic cities. However, other cultural and financial factors need to be investigated and regulated. Questions could be: “who are the owners of DABs?”, “in whose interest is it for new housings/buildings to be developed inside DABs?”, “who should pay for it?”, “why should public-private developers be interested in new projects unless current undesirable populations are removed?”, “are DABs an opportunity for implementing required infrastructure, or a new form of affordable housing?” and so forth. In this regard, studies on cultural aspects of spatial liminality can become detrimental to future research that pursues the implementation of in-between spaces, as a morphologically informed method for revitalising DABs in historic urban areas.

10.3.6. Impacts of US economic sanctions on the settlement of refugees in historic cities

On November 4, 2018, the United States terminated its participation in the Joint Comprehensive Plan of Action² (JCPOA). On November 5, 2018, the United States fully re-imposed sanctions on Iran that had been previously lifted or waived under the JCPOA. These are the harshest sanctions ever imposed by the United States on Iran and they have targeted crucial sectors of Iran’s economy, such as energy, shipping and financial sectors. The sanctions are designed to impose maximum financial pressure on Iran. As discussed earlier, the current project was conducted during March to May 2018. However, a few months after conducting this research (in November 2018) the value of the national currency in Iran (Rial) dramatically plunged as a consequence of unprecedented socio-economic sanctions. As a result, today, many non-Iranian economic migrants and/or disadvantaged communities have left Iranian cities, specifically people who used to send money back home. Thus, for the purpose of studying spatial liminality, new research should update the change in population as well as the extent of refugee settlement fabrics in historic cities of Iran as a consequence of current socio-political embargos.

² Known commonly as the Iran nuclear deal, is an agreement on the Iranian nuclear program reached in Vienna on July 14, 2015, between Iran, China, France, Russia, the United Kingdom, the United States, Germany and the European Union.

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Appendices

Appendix A: Calculating areas of DABs per block in the selected historic cities

A-1. Kashan, Darb-i-Isfahan urban tissue

All urban blocks	Dilapidated (m2)	All block area (m2)	Percentage of dilapidation per block
Darb_i_Isfahan_B_25	629	839	74.97%
Darb_i_Isfahan_B_1	13043	28770	45.34%
Darb_i_Isfahan_B_12	3259	8446	38.59%
Darb_i_Isfahan_B_7	4360	11712	37.23%
Darb_i_Isfahan_B_18	1353	3683	36.74%
Darb_i_Isfahan_B_27	1274	3614	35.25%
Darb_i_Isfahan_B_6	5501	15680	35.08%
Darb_i_Isfahan_B_11	8502	27880	30.49%
Darb_i_Isfahan_B_13	6845	24488	27.95%
Darb_i_Isfahan_B_8	2263	8287	27.31%
Darb_i_Isfahan_B_5	5703	21307	26.77%
Darb_i_Isfahan_B_10	4931	19518	25.26%
Darb_i_Isfahan_B_3	5683	23005	24.70%
Darb_i_Isfahan_B_4	11316	48797	23.19%
Darb_i_Isfahan_B_2	12400	55180	22.47%
Darb_i_Isfahan_B_26	1958	9935	19.71%
Darb_i_Isfahan_B_19	1226	6247	19.63%
Darb_i_Isfahan_B_17	1230	7452	16.51%
Darb_i_Isfahan_B_15	1938	12413	15.61%
Darb_i_Isfahan_B_20	1702	11887	14.32%
Darb_i_Isfahan_B_9	4832	34752	13.90%
Darb_i_Isfahan_B_14	1504	10828	13.89%
Darb_i_Isfahan_B_21	1651	12310	13.41%
Darb_i_Isfahan_B_22	979	9204	10.64%
Darb_i_Isfahan_B_29	749	9162	8.18%
Darb_i_Isfahan_B_23	1163	14718	7.90%
Darb_i_Isfahan_B_24	720	12147	5.93%
Darb_i_Isfahan_B_28	178	6367	2.80%
Mean	4026.58	17042.27	23.63%

A-2. Kashan, Mohtasham urban tissue

Neighbourhood	Dilapidated (m2)	All block area (m2)	Percentage of dilapidation per block
Mohtasham_B_22	923	1204	76.66%
Mohtasham_B_12	595	1172	50.77%
Mohtasham_B_17	525	1406	37.34%
Mohtasham_B_8	5724	16433	34.83%
Mohtasham_B_5	5615	20813	26.98%
Mohtasham_B_1	14605	62675	23.30%
Mohtasham_B_13	5677	24452	23.22%

Mohtasham_B_15	9513	46559	20.43%
Mohtasham_B_7	3974	20530	19.36%
Mohtasham_B_3	1723	9761	17.65%
Mohtasham_B_21	2677	15585	17.18%
Mohtasham_B_10	2598	17134	15.16%
Mohtasham_B_4	11077	76557	14.47%
Mohtasham_B_16	4515	34047	13.26%
Mohtasham_B_11	1500	14837	10.11%
Mohtasham_B_9	1365	15277	8.94%
Mohtasham_B_2	770	9633	7.99%
Mohtasham_B_14	3393	50346	6.74%
Mohtasham_B_25	465	7578	6.14%
Mohtasham_B_24	229	4089	5.60%
Mohtasham_B_26	187	4242	4.41%
Mohtasham_B_23	611	27318	2.24%
Mean	3726.71	21893.09	17.02%

A-3. Kashan, Posht-i-Mashhad-i-paen urban tissue

Neighbourhood	Dilapidated	All block area(m2)	Percentage of dilapidation per block
Posht_i_Mashhad_i_paen_B_3	7252	56303	12.88%
Posht_i_Mashhad_i_paen_B_2	3099	25309	12.24%
Posht_i_Mashhad_i_paen_B_6	543	4668	11.63%
Posht_i_Mashhad_i_paen_B_5	2349	22365	10.50%
Posht_i_Mashhad_i_paen_B_9	1131	16023	7.06%
Posht_i_Mashhad_i_paen_B_7	384	5478	7.01%
Posht_i_Mashhad_i_paen_B_4	2525	50705	4.98%
Posht_i_Mashhad_i_paen_B_8	131	7340	1.78%
Mean	2176.75	23523.875	9.25%

A-4. Yazd, Godal-i-Mosalla urban tissue

Neighbourhood	Dilapidated	Abandoned	Dilapidated and Abandoned (DABs)	All block area(m2)	Percentage of DABs per block
Godal_i_Mosalla_B_15	1567	0	1567	2229	70.30%
Godal_i_Mosalla_B_40	6620	739	7359	10791	68.20%
Godal_i_Mosalla_B_44	6703	667	7370	11846	62.22%
Godal_i_Mosalla_B_14	765	0	765	1346	56.84%
Godal_i_Mosalla_B_21	2852	0	2852	5029	56.71%
Godal_i_Mosalla_B_39	2350	165	2515	4764	52.79%
Godal_i_Mosalla_B_24	5809	0	5809	11598	50.09%
Godal_i_Mosalla_B_38	4486	3142	7628	15791	48.31%
Godal_i_Mosalla_B_2	2256	2157	4413	9306	47.42%
Godal_i_Mosalla_B_1	2388	2485	4873	10538	46.24%
Godal_i_Mosalla_B_25	4180	649	4829	10582	45.63%
Godal_i_Mosalla_B_13	2602	286	2888	6333	45.60%
Godal_i_Mosalla_B_5	10135	1927	12062	29883	40.36%
Godal_i_Mosalla_B_32	6963	1547	8510	21361	39.84%
Godal_i_Mosalla_B_30	11806	2545	14351	36058	39.80%
Godal_i_Mosalla_B_17	1564	0	1564	4137	37.81%
Godal_i_Mosalla_B_7	520	1904	2424	6836	35.46%
Godal_i_Mosalla_B_4	2481	89	2570	7395	34.75%
Godal_i_Mosalla_B_42	1797	772	2569	7666	33.51%
Godal_i_Mosalla_B_31	0	744	744	2378	31.29%

Godal_i_Mosalla_B_3	3529	1981	5510	18543	29.71%
Godal_i_Mosalla_B_34	2829	4741	7570	26017	29.10%
Godal_i_Mosalla_B_26	1546	866	2412	8345	28.90%
Godal_i_Mosalla_B_23	1038	439	1477	5380	27.45%
Godal_i_Mosalla_B_43	8993	665	9658	36004	26.82%
Godal_i_Mosalla_B_18	796	291	1087	4391	24.76%
Godal_i_Mosalla_B_22	974	0	974	4029	24.17%
Godal_i_Mosalla_B_11	732	193	925	4059	22.79%
Godal_i_Mosalla_B_33	8529	0	8529	41525	20.54%
Godal_i_Mosalla_B_9	985	0	985	4942	19.93%
Godal_i_Mosalla_B_35	778	1838	2616	13778	18.99%
Godal_i_Mosalla_B_19	274	0	274	1628	16.83%
Godal_i_Mosalla_B_27	659	1540	2199	14293	15.39%
Godal_i_Mosalla_B_8	287	0	287	2113	13.58%
Godal_i_Mosalla_B_45	687	82	769	5676	13.55%
Godal_i_Mosalla_B_28	777	0	777	5904	13.16%
Godal_i_Mosalla_B_16	916	0	916	7349	12.46%
Godal_i_Mosalla_B_41	362	95	457	3891	11.75%
Godal_i_Mosalla_B_10	497	0	497	4317	11.51%
Godal_i_Mosalla_B_20	490	0	490	5284	9.27%
Godal_i_Mosalla_B_36	0	241	241	2611	9.23%
Godal_i_Mosalla_B_6	0	443	443	5776	7.67%
Godal_i_Mosalla_B_12	63	0	63	2982	2.11%
Mean	2642	773	3414	10342	31%

A-5. Yazd, Dolat-abad urban tissue

Neighbourhood	Dilapidated	Abandoned	Dilapidated and Abandoned	All block area(m2)	Percentage of DABs per block
Dolat_Abad_B_3	6944	133	7077	12059	58.69%
Dolat_Abad_B_7	4675	261	4936	8593	57.44%
Dolat_Abad_B_18	972	34	1006	1981	50.78%
Dolat_Abad_B_5	529	42	571	1141	50.04%
Dolat_Abad_B_4	6168	1461	7629	15301	49.86%
Dolat_Abad_B_20	2235	0	2235	5107	43.76%
Dolat_Abad_B_10	9584	4014	13598	31830	42.72%
Dolat_Abad_B_17	6409	1930	8339	20592	40.50%
Dolat_Abad_B_2	915	215	1130	2840	39.79%
Dolat_Abad_B_6	4367	574	4941	13032	37.91%
Dolat_Abad_B_24	1932	0	1932	5447	35.47%
Dolat_Abad_B_8	2168	578	2746	7920	34.67%
Dolat_Abad_B_37	1584	213	1797	6808	26.40%
Dolat_Abad_B_9	4976	1207	6183	24066	25.69%
Dolat_Abad_B_1	1928	0	1928	7607	25.35%
Dolat_Abad_B_14	3297	799	4096	16526	24.79%
Dolat_Abad_B_16	1312	1337	2649	10914	24.27%
Dolat_Abad_B_39	189	218	407	1739	23.40%
Dolat_Abad_B_23	2675	0	2675	11752	22.76%
Dolat_Abad_B_19	5571	456	6027	27034	22.29%
Dolat_Abad_B_22	1654	79	1733	8013	21.63%
Dolat_Abad_B_27	953	1672	2625	12604	20.83%
Dolat_Abad_B_15	407	260	667	3203	20.82%
Dolat_Abad_B_29	299	445	744	3924	18.96%
Dolat_Abad_B_12	2002	766	2768	14649	18.90%
Dolat_Abad_B_34	71	0	71	403	17.62%

Dolat_Abad_B_25	1258	258	1516	9145	16.58%
Dolat_Abad_B_11	596	456	1052	6565	16.02%
Dolat_Abad_B_28	2259	300	2559	16954	15.09%
Dolat_Abad_B_13	510	298	808	7574	10.67%
Dolat_Abad_B_21	1651	708	2359	23348	10.10%
Dolat_Abad_B_32	227	989	1216	15943	7.63%
Dolat_Abad_B_31	0	496	496	6717	7.38%
Dolat_Abad_B_41	94	0	94	1495	6.29%
Dolat_Abad_B_40	0	89	89	1522	5.85%
Dolat_Abad_B_26	123	229	352	6168	5.71%
Dolat_Abad_B_33	142	0	142	2805	5.06%
Dolat_Abad_B_38	329	0	329	7776	4.23%
Dolat_Abad_B_35	127	0	127	6482	1.96%
Mean	2080	526	2606	9938	25%

A-6. Yazd, Gonbad-i-sabz urban tissue

Neighbourhood	Dilapidated	Abandoned	Dilapidated + Abandoned	All block area(m2)	Percentage of DABs per block
Gonbad_i_sabz_B_77	1763	168	1931	3844	50.23%
Gonbad_i_sabz_B_65	522	0	522	1138	45.86%
Gonbad_i_sabz_B_28	66	596	662	1506	43.97%
Gonbad_i_sabz_B_9	602	703	1305	3197	40.82%
Gonbad_i_sabz_B_68	1164	0	1164	2934	39.67%
Gonbad_i_sabz_B_6	2855	484	3339	9204	36.28%
Gonbad_i_sabz_B_10	481	314	795	2232	35.62%
Gonbad_i_sabz_B_18	1988	0	1988	5739	34.64%
Gonbad_i_sabz_B_1	2658	2426	5084	15387	33.04%
Gonbad_i_sabz_B_46	105	0	105	339	31.00%
Gonbad_i_sabz_B_25	448	0	448	1512	29.62%
Gonbad_i_sabz_B_60	642	0	642	2247	28.58%
Gonbad_i_sabz_B_7	2132	0	2132	7697	27.70%
Gonbad_i_sabz_B_72	577	0	577	2122	27.19%
Gonbad_i_sabz_B_11	598	0	598	2309	25.90%
Gonbad_i_sabz_B_12	855	159	1014	4133	24.53%
Gonbad_i_sabz_B_59	1140	0	1140	4682	24.35%
Gonbad_i_sabz_B_5	1142	918	2060	8470	24.32%
Gonbad_i_sabz_B_74	0	1195	1195	4936	24.21%
Gonbad_i_sabz_B_52	1212	0	1212	5104	23.75%
Gonbad_i_sabz_B_8	4024	865	4889	20838	23.46%
Gonbad_i_sabz_B_15	2362	700	3062	13168	23.25%
Gonbad_i_sabz_B_16	4115	0	4115	18736	21.96%
Gonbad_i_sabz_B_41	332	0	332	1518	21.87%
Gonbad_i_sabz_B_3	1482	1136	2618	12699	20.62%
Gonbad_i_sabz_B_14	3630	0	3630	18929	19.18%
Gonbad_i_sabz_B_19	5120	0	5120	26941	19.00%
Gonbad_i_sabz_B_20	1235	352	1587	8380	18.94%
Gonbad_i_sabz_B_32	906	0	906	4875	18.58%
Gonbad_i_sabz_B_17	2890	0	2890	15791	18.30%
Gonbad_i_sabz_B_54	772	0	772	4295	17.97%
Gonbad_i_sabz_B_38	498	0	498	2868	17.37%
Gonbad_i_sabz_B_76	473	0	473	2835	16.68%
Gonbad_i_sabz_B_24	0	589	589	3595	16.38%

Gonbad_i_sabz_B_56	0	399	399	2443	16.33%
Gonbad_i_sabz_B_13	936	485	1421	8876	16.01%
Gonbad_i_sabz_B_34	430	0	430	2726	15.78%
Gonbad_i_sabz_B_55	430	468	898	5789	15.51%
Gonbad_i_sabz_B_27	97	423	520	3366	15.45%
Gonbad_i_sabz_B_51	7250	0	7250	47094	15.39%
Gonbad_i_sabz_B_4	2488	1223	3711	25282	14.68%
Gonbad_i_sabz_B_69	376	0	376	2780	13.53%
Gonbad_i_sabz_B_21	0	439	439	3278	13.39%
Gonbad_i_sabz_B_53	976	0	976	7329	13.32%
Gonbad_i_sabz_B_71	900	0	900	7298	12.33%
Gonbad_i_sabz_B_40	421	0	421	3682	11.43%
Gonbad_i_sabz_B_49	206	0	206	1958	10.52%
Gonbad_i_sabz_B_2	238	0	238	2309	10.31%
Gonbad_i_sabz_B_23	1383	0	1383	14043	9.85%
Gonbad_i_sabz_B_26	560	0	560	5718	9.79%
Gonbad_i_sabz_B_61	299	0	299	3087	9.68%
Gonbad_i_sabz_B_30	403	0	403	4461	9.03%
Gonbad_i_sabz_B_44	517	251	768	9473	8.11%
Gonbad_i_sabz_B_43	304	0	304	3956	7.68%
Gonbad_i_sabz_B_62	0	390	390	5084	7.67%
Gonbad_i_sabz_B_29	437	0	437	6069	7.20%
Gonbad_i_sabz_B_73	0	344	344	4882	7.05%
Gonbad_i_sabz_B_22	256	167	423	6053	6.99%
Gonbad_i_sabz_B_63	467	0	467	7385	6.32%
Gonbad_i_sabz_B_45	339	0	339	5621	6.03%
Gonbad_i_sabz_B_31	117	220	337	5736	5.88%
Gonbad_i_sabz_B_48	156	0	156	2708	5.76%
Gonbad_i_sabz_B_42	176	0	176	3266	5.39%
Gonbad_i_sabz_B_75	233	0	233	4697	4.96%
Gonbad_i_sabz_B_67	272	0	272	5527	4.92%
Gonbad_i_sabz_B_37	107	0	107	2335	4.58%
Gonbad_i_sabz_B_33	99	0	99	2180	4.54%
Gonbad_i_sabz_B_64	172	1007	1179	26529	4.44%
Gonbad_i_sabz_B_57	0	191	191	4625	4.13%
Gonbad_i_sabz_B_58	341	0	341	8685	3.93%
Gonbad_i_sabz_B_66	260	0	260	7105	3.66%
Gonbad_i_sabz_B_50	170	177	347	10010	3.47%
Gonbad_i_sabz_B_47	798	0	798	28394	2.81%
Gonbad_i_sabz_B_70	0	236	236	10309	2.29%
Gonbad_i_sabz_B_36	78	0	78	3935	1.98%
Gonbad_i_sabz_B_39	178	0	178	9071	1.96%
Gonbad_i_sabz_B_35	54	0	54	6030	0.90%
Mean	933	225	1157	7754	14.93%

A-7. Isfahan, Imam-Ali mosque urban tissue

Neighbourhood	Dilapidated	All block area(m2)	Percentage of dilapidation per block (2008)
Imam_Ali_Mosque_B_4	1597	2761	57.83%
Imam_Ali_Mosque_B_3	1166	3808	30.62%
Imam_Ali_Mosque_B_2	6122	34025	17.99%
Imam_Ali_Mosque_B_1	5379	34569	15.56%
Imam_Ali_Mosque_B_9	4437	31936	13.89%
Imam_Ali_Mosque_B_8	179	1765	10.14%
Imam_Ali_Mosque_B_6	3180	67558	4.71%
Imam_Ali_Mosque_B_7	569	13244	4.30%
Mean	2337.625	13387.40169	17.46%

Appendix B: Spatial (factual) results and analysis

The appendix is calculated by Arc GIS software, based on field surveys and upon AutoCAD drawings provided by ICHHTO, and local municipalities.

B-1: Conditions of land use within the surveyed areas in three historical cities

Types of land use	Isfahan	Yazd	Kashan
All surveyed areas (m2)	81092	162289	243224
Dilapidation abandonment per block by 2008	12070	38438	48863
New dilapidation by 2018	20277	27045	50319
Reinstated dilapidation by 2018	3446	27328	36273
Dilapidation abandonment per block by 2018	23723	54373	86592
Active urban areas per block 2018 (areas occupied by all local residents)	56367	95256	144966
Area accommodating old housings per block by 2018	9592	51122	88440
Area accommodating foreign refugees or illegal migrants by 2018	1002	12660	11666
Area accommodating single elderly or died per block by 2018	1737	5036	2663
Change of land use to hoteling per block by 2018	0	6001	4512
Change of land use to storage/irrelevant uses per block by 2018	11395	1227	0
Change of land use to infrastructure per block by 2018	4875	12554	2228
Change of land use to carpark per block by 2018	0	1860	0
Local mosque or religious centre per block by 2018	1551	0	3305
Listed Heritage building per block by 2018	4067	622	1359
Newly built houses per block by 2018	13185	10795	26605
Roads and in-between spaces	4156	6039	15854
Change of land use to commercial	5809	0	0

Types of land use (%)	Isfahan	Yazd	Kashan
All surveyed areas (%)	100%	100%	100%
Dilapidation abandonment per block by 2008	15%	24%	20%
New dilapidation by 2018	25%	17%	21%
Reinstated dilapidation by_2018	4%	17%	15%
Dilapidation abandonment per block by 2018	29%	34%	36%
Active urban areas per block 2018	70%	59%	60%
Area accommodating old housings per block by 2018	12%	32%	36%
Area accommodating foreign refugees or illegal immigrants by 2018	1%	8%	5%
Area accommodating single elderly or died per block by 2018	2%	3%	1%
Change of land use to hoteling per block by 2018	0%	4%	2%
Change of land use to storage/irrelevant uses per block by 2018	14%	1%	0%
Change of land use to infrastructure per block by 2018	6%	8%	1%
Change of land use to carpark per block by 2018	0%	1%	0%
Local mosque or religious centre per block by 2018	2%	0%	1%
Listed Heritage building per block by 2018	5%	0%	1%
Newly built houses per block by 2018	16%	7%	11%
Roads and in-between spaces	5%	4%	7%
Change of land use to commercial	7%	0%	0%

B-2: Conditions of land use within the three surveyed urban tissues of historic Kashan

Three urban tissues of Kashan	Darb-i-Isfahan	Mohtasham	Posht-i-Mashhad-i-Paean
All block area(m2)	83950	80606	78668
Dilapidation abandonment per block by 2008	25234	14028	9601
New dilapidation by 2018	18806	16245	15268
Reinstated dilapidation by 2018	17504	11475	7294
Dilapidation abandonment per block by 2018	36310	27720	22562
Active urban areas per block 2018	40100	51160	53706
Area accommodating old housings per block by 2018	25275	32810	30355
Area accommodating foreign refugees or illegal migrants by 2018	7540	1726	2400
Area accommodating single elderly or died per block by 2018	1128	1118	417
Change of land use to hoteling per block by 2018	2074	1683	755
Change of land use to storage irrelevant uses per block by 2018	0	0	0
Change of land use to infrastructure per block by 2018	356	0	1872
Change of land use to carpark per block by 2018	0	0	0
Local mosque or religious center per block by 2018	757	745	1803
Listed Heritage building per block by 2018	263	1096	0
Newly built houses per block by 2018	5314	8786	12505
Roads and urban spaces	4933	4922	5999

Three urban tissues of Kashan	Darb-i-Isfahan	Mohtasham	Posht-i-Mashhad-i-Paeen
All block area (%)	100%	100%	100%
Dilapidation abandonment per block by 2008	30%	17%	12%
New dilapidation by 2018	22%	20%	19%
Reinstated dilapidation by 2018	21%	14%	9%
Dilapidation abandonment per block by 2018	43%	34%	29%
Active urban areas per block 2018	48%	63%	68%
Area accommodating old housings per block by 2018	30%	41%	39%
Area accommodating foreign refugees or illegal migrants by_2018	9%	2%	3%
Areas accommodating single elderly or died per block by 2018	1%	1%	1%
Change of land use to hoteling per block by 2018	2%	2%	1%
Change of land use to storage irrelevant uses per block by 2018	0%	0%	0%
Change of land use to infrastructure per block by 2018	0%	0%	2%
Change of land use to carpark per block by 2018	0%	0%	0%
Local mosque or religious centre per block by 2018	1%	1%	2%
Listed Heritage building per block by 2018	0%	1%	0%
Newly built houses per block by 2018	6%	11%	16%
Roads and urban spaces	6%	6%	8%

B-3: Conditions of land use in six sample blocks of historic Kashan

Six urban blocks	Darb_i_Isfahan_B_1	Darb_i_Isfahan_B_2	Mohtasham_B_15	Mohtasham-B-16	Posht-i-Mashhad-i-paeen-B-3	Posht_i_Mashhad_i_paeen_B_5
All block area (m2)	28770	55180	46559	34047	56303	22365
Dilapidation abandonment per block by 2008	12834	12400	9513	4515	7252	2349
New dilapidation by 2018	4291	14515	12105	4140	12153	3115
Reinstated dilapidation by 2018	8700	8804	8515	2960	6230	1064
Dilapidation abandonment per block by 2018	12991	23319	20620	7100	18383	4179
Active urban areas per block 2018	12218	27882	24780	26380	35926	17780
Area accommodating old housings per block by 2018	6693	18582	14989	17821	20916	9439
Area accommodating foreign refugees or illegal migrants by 2018	3561	3979	1159	567	1994	406
Areas accommodating single elderly or died per block by 2018	658	470	425	693	0	417
Change of land use to hoteling per block by 2018	1379	695	0	1683	755	0
Change of land use to storage irrelevant uses per_block_by_2018	0	0	0	0	0	0

Change of land use to infrastructure per block by 2018	356	0	0	0	1872	0
Change of land use to carpark per block by 2018	0	0	0		0	0
Local mosque or religious center per block by 2018	0	757	0	745	1282	521
Listed Heritage building per block by 2018	0	263	674	422	0	0
Newly built houses per block by 2018	1648	3666	5783	3003	6476	6029
Roads and urban spaces	1484	3449	2909	2013	4625	1374

Six urban blocks of Kashan	Darb_i_Is fahan_B_1	Darb_i_Is fahan_B_2	Mohtash am_B_1 5	Moht asham -B-16	Posht-i-Mashhad-i-paeen-B-3	Posht_i_Mashhad_i_paeen_B_5
All block area(m2)	100%	100%	100%	100%	100%	100%
Dilapidation abandonment per block by 2008	45%	22%	20%	13%	13%	11%
New dilapidation by 2018	15%	26%	26%	12%	22%	14%
Reinstated dilapidation by 2018	30%	16%	18%	9%	11%	5%
Dilapidation abandonment per block by 2018	45%	42%	44%	21%	33%	19%
Active urban areas per block 2018	42%	51%	53%	77%	64%	79%
Area accommodating old housings per block by 2018	23%	34%	32%	52%	37%	42%
Area accommodating foreign refugees or illegal migrants by 2018	12%	7%	2%	2%	4%	2%
Area accommodating single elderly or died per block by 2018	2%	1%	1%	2%	0%	2%
Change of land use to hoteling per block by 2018	5%	1%	0%	5%	1%	0%
Change of land use storage irrelevant uses per block by 2018	0%	0%	0%	0%	0%	0%
Change of land use to infrastructure per block by 2018	1%	0%	0%	0%	3%	0%
Change of land use to carpark per block by 2018	0%	0%	0%	0%	0%	0%
Local mosque or religious center per block by 2018	0%	1%	0%	2%	2%	2%
Listed Heritage building per block by 2018	0%	0%	1%	1%	0%	0%
Newly built houses per block by 2018	6%	7%	12%	9%	12%	27%
Roads and urban spaces	5%	6%	6%	6%	8%	6%

B-4: Conditions of land use within the three surveyed urban tissues of historic Yazd

Three urban tissues of Yazd	Godal-i-Mosalla	Dolat-Abad	Gonbad-i-Sabz
All block area(m2)	72037	41020	49232
Dilapidation abandonment per block by 2008	24009	8742	5687
New dilapidation by 2018	10843	8968	7234
Reinstated dilapidation by 2018	18037	4839	4452
Dilapidation abandonment per block by 2018	28880	13807	11686
Active urban areas per block 2018	36741	26745	31770
Area accommodating old housings per block by 2018	22472	16949	11701
Area accommodating foreign refugees or illegal migrants by 2018	6416	468	5776
Area accommodating single elderly or died per block by 2018	2224	1650	1162
Change of land use to hoteling per block by 2018	5198	382	421
Change of land use to storage/irrelevant uses per block by 2018	1227	0	0
Change of land use to infrastructure per block by 2018	0	133	12421
Change of land use to carpark per block by 2018	1729	131	0
Local mosque or religious centre per block by 2018	0	0	0
Listed Heritage building per block by 2018	622	0	0
Newly built houses per block by 2018	869	5951	3975
Roads and urban spaces	2400	1549	2090

Three urban tissues of Yazd (%)	Godal-i-Mosalla	Dolat-Abad	Gonbad-i-Sabz
All block area (%)	100%	100%	100%
Dilapidation abandonment per block by 2008	33%	21%	12%
New dilapidation by 2018	15%	22%	15%
Reinstated dilapidation by 2018	25%	12%	9%
Dilapidation abandonment per block by 2018	40%	34%	24%
Active urban areas per block 2018	51%	65%	65%
Area accommodating old housings per block by 2018	31%	41%	24%
Area accommodating foreign refugees or illegal migrants by 2018	9%	1%	12%
Area accommodating single elderly or died per block by 2018	3%	4%	2%
Change of land use to hoteling per block by 2018	7%	1%	1%
Change of land use to storage/irrelevant uses per block by 2018	2%	0%	0%
Change of land use to infrastructure per block by 2018	0%	0%	25%
Change of land use to carpark per block by 2018	2%	0%	0%
Local mosque or religious center per block by 2018	0%	0%	0%
Listed Heritage building per block by 2018	1%	0%	0%
Newly built houses per block by 2018	1%	15%	8%

Roads and urban spaces	3%	4%	4%
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B-5: Conditions of land use in six sample blocks of historical Yazd

Six urban blocks of Yazd	Godal-i-Mosalla-B-30	Godal-i-Mosalla-B-43	Dolat-abad-B-9	Dolat-abad-B-28	Gonbad-i-sabz-B-8	Gonbad-i-sabz-B-47
All block area(m2)	36058	35979	24066	16954	20838	28394
Dilapidation abandonment per block by 2008	14351	9658	6183	2559	4889	798
New dilapidation by 2018	3034	7809	5058	3910	3649	3585
Reinstated DABs by 2018	9980	8057	2573	2266	4452	0
Dilapidation abandonment per block by 2018	13014	15866	7631	6176	8101	3585
Active urban areas per block 2018	21588	15153	15967	10778	8643	23127
Area accommodating old housings per block by 2018	12052	10420	9020	7929	3917	7784
Area accommodating foreign refugees or illegal migrants by 2018	1456	4960	468	0	4094	1682
Area accommodating single elderly or died per block by 2018	2143	81	749	901	485	677
Change of land use to hoteling per block by 2018	2994	2204	0	382	421	0
Change of land use to storage/irrelevant uses per block by 2018	1227	0	0	0	0	0
Change of land use to infrastructure per block by 2018	0	0	133	0	0	12421
Change of land use to carpark per block by 2018	560	1169	131	0	0	0
Local mosque or religious center per block by 2018	0	0	0	0	0	0
Listed Heritage building per block by 2018	0	622	0	0	0	0
Newly built houses per block by 2018	869	0	5166	785	2330	1645

Roads and in-between spaces	1743	657	768	781	1490	600
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Six urban blocks of Yazd (%)	Godal-i-Mosalla-B-30	Godal-i-Mosalla-B-43	Dolat-abad-B-9	Dolat-abad-B-28	Gonb ad-i-sabz-B-8	Gonb ad-i-sabz-B-47
All block area (%)	100%	100%	100%	100%	100%	100%
Dilapidation abandonment per block by 2008	40%	27%	26%	15%	23%	3%
New dilapidation by 2018	8%	22%	21%	23%	18%	13%
Reinstated DABs by 2018	28%	22%	11%	13%	21%	0%
Dilapidation abandonment per block by 2018	36%	44%	32%	36%	39%	13%
Active urban areas per block 2018	60%	42%	66%	64%	41%	81%
Area accommodating old housings per block by 2018	33%	29%	37%	47%	19%	27%
Area accommodating foreign refugees or illegal migrants_by_2018	4%	14%	2%	0%	20%	6%
Area accommodating single elderly or died per block by 2018	6%	0%	3%	5%	2%	2%
Change of land use to hoteling per block by 2018	8%	6%	0%	2%	2%	0%
Change of land use to storage/irrelevant uses per block by 2018	3%	0%	0%	0%	0%	0%
Change of land use to infrastructure per block by 2018	0%	0%	1%	0%	0%	44%
Change of land use to carpark per block by 2018	2%	3%	1%	0%	0%	0%
Local mosque or religious center per block by 2018	0%	0%	0%	0%	0%	0%
Listed Heritage building per block by 2018	0%	2%	0%	0%	0%	0%
Newly built houses per block by 2018	2%	0%	21%	5%	11%	6%
Roads and in-between spaces	5%	2%	3%	5%	7%	2%

B-6: Conditions of land use in three sample blocks of historic Isfahan

Three urban blocks in Isfahan	B-2	B-1	B-7
All surveyed areas (m2)	34004	33844	13244
Dilapidation abandonment per block by 2008	6122	5379	569
New dilapidation by 2018	4910	12068	3299
Reinstated dilapidation by 2018	1649	1466	331
Dilapidation abandonment per block by 2018	6559	13534	3630
Active urban areas per block 2018	26864	19999	9504
Area accommodating old housings per block by 2018	4388	2502	2702
Area accommodating foreign refugees or illegal migrants by 2018	581	311	110
Area accommodating single elderly or died per block by 2018	0	462	1275
Change of land use to hoteling per block by 2018	0	0	0
Change of land use to storage/irrelevant uses per block by 2018	5982	5088	325
Change of land use to infrastructure per block by 2018	0	4875	0
Change of land use to carpark per block by 2018	0	0	0
Local mosque or religious centre per block by 2018	1311	240	0

Listed Heritage building per block by 2018	1241	466	2360
Newly built houses per block by 2018	6618	4207	2360
Roads and in-between spaces	2246	1428	482
Change of land use to commercial	5078	731	0

Three urban blocks in Isfahan (%)	B-2	B-1	B-7
All surveyed areas (%)	100%	100%	100%
Dilapidation abandonment per block by 2008	18%	16%	4%
New dilapidation by 2018	14%	36%	25%
Reinstated dilapidation by 2018	5%	4%	2%
Dilapidation abandonment per block by 2018	19%	40%	27%
Active urban areas per block 2018	79%	59%	72%
Area accommodating local residents per block by 2018	13%	7%	20%
Area accommodating foreign refugees or illegal migrants by 2018	2%	1%	1%
Area accommodating single elderly or died per block by 2018	0%	1%	10%
Change of land use to hoteling per block by 2018	0%	0%	0%
Change of land use to storage/irrelevant uses per block by 2018	18%	15%	2%
Change of land use to infrastructure per block by 2018	0%	14%	0%
Change of land use to carpark per block by 2018	0%	0%	0%
Local mosque or religious centre per block by 2018	4%	1%	0%
Listed Heritage building per block by 2018	4%	1%	18%
Newly built houses per block by 2018	19%	12%	18%
Roads and in-between spaces	7%	4%	4%
Change of land use to commercial	15%	2%	0%

Appendix C: Demographic results and analysis

Street surveys; tabulated results in sample urban blocks: In Appendix C and D individual responses to street surveys are processed and tabulated in three Iranian historic cities. Each table represents attitudinal and demographic results of the survey conducted in six urban blocks in Kashan, six urban blocks in Yazd and three blocks in Isfahan, during April-May 2018 by the student researcher. Outcomes are documented within five categories, namely (1) Frequency, i.e. the number of participants who have a similar demographic condition, (2) Number of responses, i.e. the number of times that a specific (attitudinal) answer is repeated by participants in a block, (2) percentage of cases, i.e. the percentage of recurring answers among all received responses in a block (3) valid percentage, i.e. percentage of recurring answers among all actual participants in a block (4), and cumulative percentage of responses, i.e. the result of successive additions of each level of recurring responses to previous one (only if applicable). Dichotomy groups in relevant questions in each case study is been tabulated at value 'Yes' to the relevant question (if applicable). In the current research the valid percentage of responses are practically used for the purpose of analysis and discussion as further deliberated in section two and within the current research.

Appendix C-1. Comparing period of residency in historic cities (2018)

C-1-1. Comparing average period of residency in three Iranian historic cities (2018)

All historic cities		Frequency	Percent	Cumulative Percent	Valid Percent
Periods of residency	Less than one year	18	11.2	11.2	11.2
	Between one and five years	35	21.7	32.9	21.7
	Between five and ten years	14	8.7	41.6	8.7
	Between ten and sixty years	67	41.6	83.2	41.6
	Original resident or inherited house	27	16.8	100.0	16.8
	Total	161	100.0		100.0

Frequencies of responses to a dichotomy group tabulated at value 'Yes'.

C-1-2. Comparing overall period of residency in historical Kashan, Yazd and Isfahan (2018)

Kashan		Frequency	Percent	Cumulative Percent	Valid Percent
Period of residency	Less than one year	5	8.2	8.2	8.2
	Between one and five years	11	18.0	26.2	18.0
	Between five and ten years	7	11.5	37.7	11.5
	Between ten and sixty years	31	50.8	88.5	50.8
	Original resident or inherited house	7	11.5	100.0	11.5
	Total	61	100.0		100.0
Yazd		Frequency	Percent	Cumulative Percent	Valid Percent
Period of residency	Less than one year	11	13.8	13.8	13.8
	Between one and five years	18	22.5	36.3	22.5
	Between five and ten years	7	8.8	45.0	8.8
	Between ten and sixty years	30	37.5	82.5	37.5
	Original resident or inherited house	14	17.5	100.0	17.5
	Total	80	100.0		100.0
Isfahan		Frequency	Percent	Cumulative Percent	Valid Percent
Period of residency	Less than one year	2	10.0	10.0	10.0
	Between one and five years	6	30.0	40.0	30.0
	Between ten and sixty years	6	30.0	70.0	30.0
	Original resident or inherited house	6	30.0	100.0	30.0

Total	20	100.0		100.0
Frequencies of responses to a dichotomy group tabulated at value 'Yes'.				

C-1-3. Comparing period of residency in fifteen urban blocks of three historic cities among all residents (2018)

Kashan, period of residency among all residents					
		Frequency	Percent	Cumulative Percent	Valid Percent
Darb-I-Isfahan B-1					
Period of residency	Between one and five years	3	33.3	33.3	33.3
	Between five and ten years	1	11.1	44.4	11.1
	Between ten and sixty years	5	55.6	100.0	55.6
	Total	9	100.0		100.0
Darb-I-Isfahan B-2					
Period of residency	Between five and ten years	3	27.3	27.3	27.3
	Between ten and sixty years	7	63.6	90.9	63.6
	Original resident or inherited house	1	9.1	100.0	9.1
	Total	11	100.0		100.0
Mohtasham urban tissue, B-15					
Period of residency	Less than one year	3	30.0	30.0	30.0
	Between one and five years	2	20.0	50.0	20.0
	Between ten and sixty years	3	30.0	80.0	30.0
	Original resident or inherited house	2	20.0	100.0	20.0
	Total	10	100.0		100.0
Mohtasham urban tissue, B-16					
Period of residency	Less than one year	1	9.1	9.1	9.1
	Between one and five years	1	9.1	18.2	9.1
	Between ten and sixty years	7	63.6	81.8	63.6
	Original resident or inherited house	2	18.2	100.0	18.2
	Total	11			100.0
Posht-i-Mashhad-i-paean urban tissue, B-3					
Period of residency	Less than one year	1	10.0	10.0	10.0
	Between one and five years	2	20.0	30.0	20.0
	Between five and ten years	3	30.0	60.0	30.0
	Between ten and sixty years	2	20.0	80.0	20.0
	Original resident or inherited house	2	20.0	100.0	20.0
	Total	10	100.0		100.0
Posht-i-Mashhad-i-paean urban tissue, B-5					
Period of residency	Between one and five years	3	30.0	30.0	30.0
	Between ten and sixty years	7	70.0	100.0	70.0
	Total	10	100.0		100.0
Yazd, period of residency among all residents					
		Frequency	Percent	Cumulative Percent	Valid Percent
Godal-i-Mosalla, B-30					
Period of residency	Less than one year	2	16.7	16.7	16.7
	Between one and five years	3	25.0	41.7	25.0
	Between ten and sixty years	4	33.3	75.0	33.3
	Original resident or inherited house	3	25.0	100.0	25.0
	Total	12	100.0		100.0
Godal-i-Mosalla, B-43					
Period of residency	Less than one year	3	21.4	21.4	21.4
	Between one and five years	5	35.7	57.1	35.7
	Between five and ten years	1	7.1	64.3	7.1
	Between ten and sixty years	3	21.4	85.7	21.4
	Original resident or inherited house	2	14.3	100.0	14.3
	Total	14	100.0		100.0

Dolat-abad, B-9		Frequency	Percent	Cumulative Percent	Valid Percent
Period of residency	Less than one year	1	7.1	7.1	7.1
	Between one and five years	2	14.3	21.4	14.3
	Between five and ten years	1	7.1	28.6	7.1
	Between ten and sixty years	8	57.1	85.7	57.1
	Original resident or inherited house	2	14.3	100.0	14.3
Total		14	100.0		100.0
Dolat-abad, B-28		Frequency	Percent	Cumulative Percent	Valid Percent
Period of residency	Less than one year	3	23.1	23.1	23.1
	Between one and five years	2	15.4	38.5	15.4
	Between five and ten years	2	15.4	53.8	15.4
	Between ten and sixty years	5	38.5	92.3	38.5
	Original resident or inherited house	1	7.7	100.0	7.7
Total		13	100.0		100.0
Gonbad-i-sabz, B-8		Frequency	Percent	Cumulative Percent	Valid Percent
Period of residency	Less than one year	2	11.1	11.1	11.1
	Between one and five years	5	27.8	38.9	27.8
	Between five and ten years	1	5.6	44.4	5.6
	Between ten and sixty years	4	22.2	66.7	22.2
	Original resident or inherited house	6	33.3	100.0	33.3
Total		18	100.0		100.0
Gonbad-i-sabz, B-47		Frequency	Percent	Cumulative Percent	Valid Percent
Period of residency	Between one and five years	1	11.1	11.1	11.1
	Between five and ten years	2	22.2	33.3	22.2
	Between ten and sixty years	6	66.7	100.0	66.7
	Total	9	100.0		100.0
Isfahan, period of residency among all residents					
Masjid Ali, B-7		Frequency	Percent	Cumulative Percent	Valid Percent
Period of residency	Less than one year	2	40.0	40.0	40.0
	Between one and five years	1	20.0	60.0	20.0
	Between ten and sixty years	2	40.0	100.0	40.0
	Total	5	100.0		100.0
Masjid Ali, B-1					
Period of residency	Between one and five years	2	25.0	25.0	25.0
	Between ten and sixty years	2	25.0	50.0	25.0
	Original resident or inherited house	4	50.0	100.0	50.0
	Total	8	100.0		100.0
Masjid Ali, B-2					
Period of residency	Between one and five years	3	42.9	42.9	42.9
	Between ten and sixty years	2	28.6	71.4	28.6
	Original resident or inherited house	2	28.6	100.0	28.6
	Total	7	100.0		100.0

C-1-4. Comparing period of residency in fifteen urban blocks of three historic cities among local residents (2018)

Crosstab (Period of residency, Kashan)						
Count (local residents)						
		Period of residency				Total
		Between one and five years	Between five and ten years	Between ten and sixty years	Original resident or inherited house	
Area of DABs 2018	45%	1	1	4	0	6

	44%	2	0	3	2	7
	42%	0	2	7	1	10
	33%	1	2	2	2	7
	21%	1	0	7	2	10
	19%	2	0	7	0	9
Total		7	5	30	7	49

Crosstab (Period of residency, Yazd)

Count (Local residents)		Period of residency					Total
		Less than one year	Between one and five years	Between five and ten years	Between ten and sixty years	Original resident inherited house	
Area of DABs 2018	44%	0	2	1	3	2	8
	39%	0	1	0	4	6	11
	36%	1	2	0	4	3	10
	36%	3	2	2	5	1	13
	32%	0	2	1	8	2	13
	13%	0	0	1	6	0	7
Total		4	9	5	30	14	62

Crosstab (Period of residency, Isfahan)

Count (local residents)		Period of residency				Total
		Less than one year	Between one and five years	Between ten and sixty years	Original resident inherited house	
Area of DABs 2018	40%	0	0	2	4	6
	27%	1	0	2	0	3
	19%	0	2	2	2	6
Total		1	2	6	6	15

	1-5 Ys	5-10 Ys	10-60 Ys	Original resident	0-5Ys	over 5 Ys
Kashan						
DABs=45%	2%	2%	8%	0%	2%	10%
DABs=44%	4%	0%	6%	4%	4%	10%
DABs=42%	0%	4%	14%	2%	0%	20%
DABs=33%	2%	4%	4%	4%	2%	12%
DABs=21%	2%	0%	14%	4%	2%	18%
DABs=19%	4%	0%	14%	0%	4%	14%

Yazd	0-1 Ys	1-5 Ys	5-10 Ys	10-60 Ys	Original resident	0-5Ys	over 5 Ys
DABs=44%	0%	3%	2%	5%	3%	3%	10%
DABs=39%	0%	2%	0%	6%	10%	2%	16%
DABs=36%	2%	3%	0%	6%	5%	5%	11%
DABs=36%	5%	3%	3%	8%	2%	8%	13%
DABs=32%	0%	3%	2%	13%	3%	3%	18%
DABs=13%	0%	0%	2%	10%	0%	0%	11%

Isfahan	0-1 Ys	1-5 Ys	10-60 Ys	Original resident	0-5Ys	over 5 Ys
DABs=40%	0%	0%	13%	27%	0%	40%
DABs=27%	7%	0%	13%	0%	7%	13%
DABs=19%	0%	13%	13%	13%	13%	27%

C-1-5. Comparing period of residency in fifteen urban blocks of three historic cities among refugees (2018)

Crosstab (Period of residency, Kashan)						
Count (refugees)						
		Period of residency				Total
		Less than one year	Between one and five years	Between five and ten years	Between ten and sixty years	
Area of DABs 2018	45%	0	2	0	1	3
	44%	3	0	0	0	3
	42%	0	0	1	0	1
	33%	1	1	1	0	3
	21%	1	0	0	0	1
	19%	0	1	0	0	1
Total		5	4	2	1	12
Crosstab (Period of residency, Yazd)						
Count (Refugees)						
		Period of residency			Total	
		Less than one year	Between one and five years	Between five and ten years		
Area of DABs 2018	44%	3	3	0	6	
	39%	2	4	1	7	
	36%	1	1	0	2	
	36%	0	0	0	0	
	32%	1	0	0	1	
	13%	0	1	1	2	
Total		7	9	2	18	

Crosstab (Period of residency, Isfahan)				
Count (refugees)				
		Period of residency		Total
		Less than one year	Between one and five years	
Aera_of_DABs_2018	40%	0	2	2
	27%	1	1	2
	19%	0	1	1
Total		1	4	5

	0-5 Ys	1-5 Ys	5-10 Ys	10-60 Ys	0-5Ys	over 5 Ys
Kashan						
DABs=45%	0%	17%	0%	8%	17%	8%
DABs=44%	25%	0%	0%	0%	25%	0%
DABs=42%	0%	0%	8%	0%	0%	8%
DABs=33%	8%	8%	8%	0%	17%	8%
DABs=21%	8%	0%	0%	0%	8%	0%
DABs=19%	0%	8%	0%	0%	8%	0%

	0-1 Ys	1-5 Ys	5-10 Ys	0-5Ys	over 5 Ys
Yazd					
DABs=44%	17%	17%	0%	33%	0%
DABs=39%	11%	22%	6%	33%	6%
DABs=36%	6%	6%	0%	11%	0%
DABs=36%	0%	0%	0%	0%	0%
DABs=32%	6%	0%	0%	6%	0%
DABs=13%	0%	6%	6%	6%	6%

	0-1 Ys	1-5 Ys	0-5Ys	over 5 Ys
Isfahan				
DABs=40%		40%	40%	0%
DABs=27%		20%	40%	0%
DABs=19%		20%	20%	0%

Appendix C-2. Comparing types of house tenure in historic cities (2018)

C-2-1. Comparing the average type of home tenure in three Iranian historic cities (2018)

All historic areas		Frequency	Percent	Cumulative Percent	Valid Percent
Type of home tenure	Rent	45	28.0	28.0	28.0
	Owned	116	72.0	100.0	72.0
	Total	161	100.0		100.0

Frequencies of responses to a dichotomy group tabulated at value 'Yes'.

C-2-2. Comparing the type of home tenure in historic Kashan, Yazd and Isfahan (2018)

Kashan		Frequency	Percent	Cumulative Percent	Valid Percent
Type of home tenure	Rent	15	24.6	24.6	24.6
	Owned	46	75.4	100.0	75.4
	Total	61	100.0		100.0
Yazd		Frequency	Percent	Cumulative Percent	Valid Percent
Type of home tenure	Rent	24	30.0	30.0	30.0
	Owned	56	70.0	100.0	70.0
	Total	80	100.0		100.0
Isfahan		Frequency	Percent	Cumulative Percent	Valid Percent
Type of home tenure	Rent	6	30.0	30.0	30.0
	Owned	14	70.0	100.0	70.0
	Total	20	100.0		100.0

Frequencies of responses to a dichotomy group tabulated at value 'Yes'.

C-2-3. Comparing type of house tenure in fifteen urban blocks of three historic cities among all residents (2018)

Kashan, type of house tenure among all residents					
Darb-I-Isfahan B-1		Frequency	Percent	Cumulative Percent	Valid Percent
Types of home tenure	Rent	2	22.2	22.2	22.2
	Owned	7	77.8	100.0	77.8
	Total	9	100.0		100.0
Darb-i-Isfahan urban tissue, B-2		Frequency	Percent	Cumulative Percent	Valid Percent
Types of home tenure	Rent	1	9.1	9.1	9.1
	Owned	10	90.9	100.0	90.9
	Total	11	100.0		100.0

Mohtasham urban tissue, B-15		Frequency	Percent	Cumulative Percent	Valid Percent
Types of home tenure	Rent	4	40.0	40.0	40.0
	Owned	6	60.0	100.0	60.0
	Total	10	100.0		100.0
Mohtasham urban tissue, B-16		Frequency	Percent	Cumulative Percent	Valid Percent
Types of home tenure	Rent	2	18.2	18.2	18.2
	Owned	9	81.8	100.0	81.8
	Total	11	100.0		100.0
Posht-i-Mashhad-i-paeen urban tissue, B-3		Frequency	Percent	Cumulative Percent	Valid Percent
Types of home tenure	Rent	4	40.0	40.0	40.0
	Owned	6	60.0	100.0	60.0
	Total	10	100.0		100.0
Posht-i-Mashhad-i-paeen urban tissue, B-5		Frequency	Percent	Cumulative Percent	Valid Percent
Types of home tenure	Rent	2	20.0	20.0	20.0
	Owned	8	80.0	100.0	80.0
	Total	10	100.0		100.0
Yazd, type of house tenure among all residents					
Godal-i-Mosalla, B-30		Frequency	Percent	Cumulative Percent	Valid Percent
Types of home tenure	Rent	2	16.7	16.7	16.7
	Owned	10	83.3	100.0	83.3
	Total	12	100.0		100.0
Godal-i-Mosalla, B-43		Frequency	Percent	Cumulative Percent	Valid Percent
Types of home tenure	Rent	7	50.0	50.0	50.0
	Owned	7	50.0	100.0	50.0
	Total	14	100.0		100.0
Dolat-abad, B-9		Frequency	Percent	Cumulative Percent	Valid Percent
Types of home tenure	Rent	2	14.3	14.3	14.3
	Owned	12	85.7	100.0	85.7
	Total	14	100.0		100.0
Dolat-abad, B-28		Frequency	Percent	Cumulative Percent	Valid Percent
Types of home tenure	Rent	3	23.1	23.1	23.1
	Owned	10	76.9	100.0	76.9
	Total	13	100.0		100.0
Gonbad-i-sabz, B-8		Frequency	Percent	Cumulative Percent	Valid Percent
Types of home tenure	Rent	6	33.3	33.3	33.3
	Owned	12	66.7	100.0	66.7
	Total	18	100.0		100.0
Gonbad-i-sabz, B-47		Frequency	Percent	Cumulative Percent	Valid Percent
Types of home tenure	Rent	4	44.4	44.4	44.4
	Owned	5	55.6	100.0	55.6
	Total	9	100.0		100.0
Isfahan, type of house tenure among all residents					
Masjid Ali, B-7		Frequency	Percent	Cumulative Percent	Valid Percent
Types of home tenure	Rent	3	60.0	60.0	60.0
	Owned	2	40.0	100.0	40.0
	Total	5	100.0		100.0
Masjid Ali, B-1		Frequency	Percent	Cumulative Percent	Valid Percent
Types of home tenure	Rent	2	25.0	25.0	25.0

	Owned	6	75.0	100.0	75.0
	Total	8	100.0		100.0
Masjid Ali, B-2		Frequency	Percent	Cumulative Percent	Valid Percent
Types of home tenure	Rent	1	14.3	14.3	14.3
	Owned	6	85.7	100.0	85.7
	Total	7	100.0		100.0

C-2-4. Comparing the type of home tenure in fifteen urban blocks of three historic cities among local residents (2018)

Crosstab (Type of house tenure, Kashan)				
Count (local residents)				
		Type of house tenure		Total
		Rent	Owned	
Aera_of_DABs_2018	45%	0	6	6
	44%	1	6	7
	42%	0	10	10
	33%	1	6	7
	21%	1	9	10
	19%	1	8	9
Total		4	45	49
Crosstab (Type of house tenure, Yazd)				
Count (Local residents)				
		Type of house tenure		Total
		Rent	Owned	
Area of DABs 2018	44%	1	7	8
	39%	0	11	11
	36%	0	10	10
	36%	3	10	13
	32%	1	12	13
	13%	2	5	7
Total		7	55	62
Crosstab (Type of house tenure, Isfahan)				
Count (local residents)				
		Type of house tenure		Total
		Rent	Owned	
Area of DABs 2018	40%	0	6	6
	27%	1	2	3
	19%	0	6	6
Total		1	14	15

Kashan	Rent	Owned
DABs=45%	0%	12%
DABs=44%	2%	12%
DABs=42%	0%	20%

DABs=33%	2%	12%
DABs=21%	2%	18%
DABs=19%	2%	16%

Yazd	Rent	Owned
DABs=44%	2%	11%
DABs=39%	0%	18%
DABs=36%	5%	32%
DABs=32%	2%	19%
DABs=13%	3%	8%

Isfahan	Rent	Owned
DABs=40%	0%	40%
DABs=27%	7%	13%
DABs=19%	0%	40%

C-2-5. Comparing the type of home tenure in fifteen urban blocks of three historic cities among refugee residents (2018)

Crosstab (Types of house tenure, Kashan)				
Count (refugees)				
		Type of house tenure		Total
		Rent	Owned	
Area of DABs 2018	45%	2	1	3
	44%	3	0	3
	42%	1	0	1
	33%	3	0	3
	21%	1	0	1
	19%	1	0	1
Total		11	1	12
Crosstab (Types of house tenure, Yazd)				
Count (Refugees)				
		Type of house tenure		Total
		Rent	Owned	
Area of DABs 2018	44%	6	0	6
	39%	6	1	7
	36%	2	0	2
	36%	0	0	0
	32%	1	0	1
	13%	2	0	2
Total		17	1	18
Crosstab (Types of house tenure, Isfahan)				

Count (refugees)			
		Type of house tenure	Total
		Rent	
Area of DABs 2018	40%	2	2
	27%	2	2
	19%	1	1
Total		5	5

Kashan	Rent	Owned
DABs=45%	17%	8%
DABs=44%	25%	0%
DABs=42%	8%	0%
DABs=33%	25%	0%
DABs=21%	8%	0%
DABs=19%	8%	0%

Yazd	Rent	Owned
DABs=44%	33%	0%
DABs=39%	33%	6%
DABs=36%	11%	0%
DABs=32%	6%	0%
DABs=13%	11%	0%

Isfahan	Rent	Owned
DABs=40%	40%	0%
DABs=27%	40%	0%
DABs=19%	20%	0%

Appendix C-3. Comparing the ratio of building deterioration inside historic cities (2018)

C-4-1. Comparing the average percentage of deteriorated houses in three Iranian historic cities (2018)

All historic cities		Frequency	Percent	Cumulative Percent	Valid Percent
Ratio of building deterioration	Yes	123	76.4	76.4	76.4
	No	38	23.6	100.0	23.6
	Total	161	100.0		100.0

Frequencies of responses to a dichotomy group tabulated at values 'Yes or No'.

C-4-2. Comparing the average percentage of deteriorated houses in historic Kashan, Yazd and Isfahan (2018)

Kashan		Frequency	Percent	Cumulative Percent	Valid Percent
Ratio of building deterioration	Yes	46	75.4	75.4	75.4
	No	15	24.6	100.0	24.6
	Total	61	100.0		100.0
Yazd		Frequency	Percent	Cumulative Percent	Valid Percent
Ratio of building deterioration	Yes	58	72.5	72.5	72.5
	No	22	27.5	100.0	27.5
	Total	80	100.0		100.0
Isfahan		Frequency	Percent	Cumulative Percent	Valid Percent
Ratio of building deterioration	Yes	19	95.0	95.0	95.0
	No	1	5.0	100.0	5.0
	Total	20	100.0		100.0

Frequencies of responses to a dichotomy group tabulated at values 'Yes or No'.

C-4-3. Comparing the average percentage of deteriorated houses in fifteen urban blocks of three historic cities among all residents (2018)

Kashan					
Darb-I-Isfahan B-1		Frequency	Percent	Cumulative Percent	Valid Percent
Rate of building deterioration	Yes	7	77.8	77.8	77.8
	No	2	22.2	100.0	22.2
	Total	9	100.0		100.0
Darb-i-Isfahan urban tissue, B-2		Frequency	Percent	Cumulative Percent	Valid Percent
Rate of building deterioration	Yes	8	72.7	72.7	72.7
	No	3	27.3	100.0	27.3
	Total	11	100.0		100.0
Mohtasham urban tissue, B-15		Frequency	Percent	Cumulative Percent	Valid Percent
Rate of building deterioration	Yes	7	70.0	70.0	70.0
	No	3	30.0	100.0	30.0
	Total	10	100.0		100.0
Mohtasham urban tissue, B-16		Frequency	Percent	Cumulative Percent	Valid Percent
Rate of building deterioration	Yes	7	63.6	63.6	63.6
	No	4	36.4	100.0	36.4
	Total	11	100.0		100.0
Posht-i-Mashhad-i-paen urban tissue, B-3		Frequency	Percent	Cumulative Percent	Valid Percent
Rate of building deterioration	Yes	9	90.0	90.0	90.0
	No	1	10.0	100.0	10.0
	Total	10	100.0		100.0
Posht-i-Mashhad-i-paen urban tissue, B-5		Frequency	Percent	Cumulative Percent	Valid Percent
Rate of building deterioration	Yes	8	80.0	80.0	80.0
	No	2	20.0	100.0	20.0
	Total	10	100.0		100.0

Yazd					
Godal-i-Mosalla, B-30		Frequency	Percent	Cumulative Percent	Valid Percent
Rate of building deterioration	Yes	9	75.0	75.0	75.0
	No	3	25.0	100.0	25.0
	Total	12	100.0		100.0
Godal-i-Mosalla urban tissue, B-43		Frequency	Percent	Cumulative Percent	Valid Percent
Rate of building deterioration	Yes	10	71.4	71.4	71.4
	No	4	28.6	100.0	28.6
	Total	14	100.0		100.0
Dolat-abad, B-9		Frequency	Percent	Cumulative Percent	Valid Percent
Rate of building deterioration	Yes	12	85.7	85.7	85.7
	No	2	14.3	100.0	14.3
	Total	14	100.0		100.0
Dolat-abad, B-28		Frequency	Percent	Cumulative Percent	Valid Percent
Rate of building deterioration	Yes	7	53.8	53.8	53.8
	No	6	46.2	100.0	46.2
	Total	13	100.0		100.0
Gonbad-i-sabz, B-8		Frequency	Percent	Cumulative Percent	Valid Percent
Rate of building deterioration	Yes	15	83.3	83.3	83.3
	No	3	16.7	100.0	16.7
	Total	18	100.0		100.0
Gonbad-i-sabz, B-47		Frequency	Percent	Cumulative Percent	Valid Percent
Rate of building deterioration	Yes	5	55.6	55.6	55.6
	No	4	44.4	100.0	44.4
	Total	9	100.0		100.0
Isfahan					
Masjid Ali, B-7		Frequency	Percent	Cumulative Percent	Valid Percent
Rate of building deterioration	Yes	5	100.0	100.0	100.0
Masjid Ali, B-1		Frequency	Percent	Cumulative Percent	Valid Percent
Rate of building deterioration	Yes	8	100.0	100.0	100.0
Masjid Ali, B-2		Frequency	Percent	Cumulative Percent	Valid Percent
Rate of building deterioration	Yes	6	85.7	85.7	85.7
	No	1	14.3	100.0	14.3
	Total	7	100.0		100.0

C-4-4. Comparing the average percentage of deteriorated houses in fifteen urban blocks of three historic cities among local residents (2018)

Crosstab (House needs repair , Kashan)					
Count (Local residents)					
		House needs repair		Total	
		Yes	No		
Area of DABs 2018	45%	4	2		6
	44%	4	3		7
	42%	7	3		10
	33%	6	1		7

	21%	6	4	10
	19%	7	2	9
Total		34	15	49
Crosstab (House needs repair, Yazd)				
Count (Local residents)				
		House needs repair		
		Yes	No	Total
Area of DABs 2018	44%	5	3	8
	39%	8	3	11
	36%	7	3	10
	36%	7	6	13
	32%	11	2	13
	13%	3	4	7
Total		41	21	62
Crosstab (House needs repair, Isfahan)				
Count (Local residents)				
		House needs repair		
		Yes		Total
Area of DABs 2018	40%	6		6
	27%	3		3
	19%	6		6
Total		15		15

Kashan	Yes	No
DABs=45%	8%	4%
DABs=44%	8%	6%
DABs=42%	14%	6%
DABs=33%	12%	2%
DABs=21%	12%	8%
DABs=19%	14%	4%

Yazd	Yes	No
DABs=44%	8%	5%
DABs=39%	13%	5%
DABs=36%	11%	5%
DABs=36%	11%	10%
DABs=32%	18%	3%
DABs=13%	5%	6%

Isfahan	Yes	No
DABs=40%	40%	0%
DABs=27%	20%	0%
DABs=19%	40%	0%

C-4-5. Comparing the average percentage of deteriorated houses in fifteen urban blocks of three historic cities among refugee residents (2018)

Crosstab (Deteriorated houses, Kashan)				
Count (Refugees)				
		House needs repair		Total
		Yes		
Area of DABs 2018	45%	3		3
	44%	3		3
	42%	1		1
	33%	3		3
	21%	1		1
	19%	1		1
Total		12		12
Crosstab (Deteriorated houses, Yazd)				
Count (Refugees)				
		House needs repair		Total
		Yes	No	
Area of DABs 2018	44%	5	1	6
	39%	7	0	7
	36%	2	0	2
	36%	0	0	0
	32%	1	0	1
	13%	2	0	2
Total		17	1	18
Crosstab (Deteriorated houses, Isfahan)				
Count (refugees)				
		House needs repair		Total
		Yes	No	
Area of DABs 2018	40%	2	0	2
	27%	2	0	2
	19%	0	1	1
Total		4	1	5

Kashan	Yes	No
DABs=45%	25%	0%
DABs=44%	25%	0%
DABs=42%	8%	0%
DABs=33%	25%	0%
DABs=21%	8%	0%
DABs=19%	8%	0%

Yazd	Yes	No
DABs=44%	28%	6%
DABs=39%	39%	0%
DABs=36%	11%	0%
DABs=36%	0%	0%

DABs=32%	6%	0%
DABs=13%	11%	0%

Isfahan	Yes	No
DABs=40%	40%	0%
DABs=27%	40%	0%
DABs=19%	0%	20%

Appendix C-4. Comparing the type of employment in historic cities (2018)

C-5-1. Comparing the types of employment in three Iranian historic cities (2018)

All historic areas		Frequency	Percent	Cumulative Percent	Valid Percent
Employment per block	Retired laborer	27	16.8	16.8	16.8
	Casual laborer	57	35.4	52.2	35.4
	Retired clerical	13	8.1	60.2	8.1
	Clerical	9	5.6	65.8	5.6
	Unemployed	10	6.2	72.0	6.2
	Self employed	45	28.0	100.0	28.0
	Total	161	100.0		100.0

Frequencies of responses to a dichotomy group tabulated at values 'Yes'

C-5-2. Comparing the type of employment in historic Kashan, Yazd and Isfahan (2018)

Kashan		Frequency	Percent	Cumulative Percent	Valid Percent
Employment per block	Retired laborer	15	24.6	24.6	24.6
	Casual laborer	25	41.0	65.6	41.0
	Retired clerical	3	4.9	70.5	4.9
	Clerical	2	3.3	73.8	3.3
	Unemployed	3	4.9	78.7	4.9
	Self employed	13	21.3	100.0	21.3
	Total	61	100.0		100.0

Yazd		Frequency	Percent	Cumulative Percent	Valid Percent
Employment per block	Retired laborer	8	10.0	10.0	10.0
	laborer	27	33.8	43.8	33.8
	Retired clerical	9	11.3	55.0	11.3
	Clerical	6	7.5	62.5	7.5
	Unemployed	5	6.3	68.8	6.3
	Self-employed	25	31.3	100.0	31.3
	Total	80	100.0		100.0

Isfahan		Frequency	Percent	Cumulative Percent	Valid Percent
Employment per block	Retired laborer	4	20.0	20.0	20.0
	Casual laborer	5	25.0	45.0	25.0
	Retired clerical	1	5.0	50.0	5.0
	Clerical	1	5.0	55.0	5.0
	Unemployed	2	10.0	65.0	10.0
	Self employed	7	35.0	100.0	35.0
	Total	20	100.0		100.0

Frequencies of responses to a dichotomy group tabulated at values 'Yes'

C-5-3. Comparing the type of employment in fifteen urban blocks of three historic cities among all residents (2018)

Kashan					
Darb-I-Isfahan B-1		Frequency	Percent	Cumulative Percent	Valid Percent
Employment per block	Retired laborer	2	22.2	22.2	22.2
	laborer	4	44.4	66.7	44.4
	Retired clerical	1	11.1	77.8	11.1
	Unemployed	1	11.1	88.9	11.1
	Self employed	1	11.1	100.0	11.1
	Total	9	100.0		100.0
Darb-i-Isfahan urban tissue, B-2		Frequency	Percent	Cumulative Percent	Valid Percent
Employment per block	Retired laborer	3	27.3	27.3	27.3
	laborer	5	45.5	72.7	45.5
	Self employed	3	27.3	100.0	27.3
	Total	11	100.0		100.0
Mohtasham urban tissue, B-15		Frequency	Percent	Cumulative Percent	Valid Percent
Employment per block	Retired laborer	2	20.0	20.0	20.0
	laborer	6	60.0	80.0	60.0
	Retired clerical	1	10.0	90.0	10.0
	Self-employed	1	10.0	100.0	10.0
	Total	10	100.0		100.0
Mohtasham urban tissue, B-16		Frequency	Percent	Cumulative Percent	Valid Percent
Employment per block	Retired laborer	4	36.4	36.4	36.4
	laborer	1	9.1	45.5	9.1
	Clerical	1	9.1	54.5	9.1
	Unemployed	1	9.1	63.6	9.1
	Self employed	4	36.4	100.0	36.4
	Total	11	100.0		100.0
Posht-i-Mashhad-i-paen urban tissue, B-3		Frequency	Percent	Cumulative Percent	Valid Percent
Employment per block	Retired laborer	2	20.0	20.0	20.0
	laborer	5	50.0	70.0	50.0
	Clerical	1	10.0	80.0	10.0
	Unemployed	1	10.0	90.0	10.0
	Self employed	1	10.0	100.0	10.0
	Total	10	100.0		100.0
Posht-i-Mashhad-i-paen urban tissue, B-5		Frequency	Percent	Cumulative Percent	Valid Percent

Employment per block	Retired laborer	2	20.0	20.0	20.0
	laborer	4	40.0	60.0	40.0
	Retired clerical	1	10.0	70.0	10.0
	Self employed	3	30.0	100.0	30.0
	Total	10	100.0		100.0
Yazd					
Godal-i-Mosalla, B-30		Frequency	Percent	Cumulative Percent	Valid Percent
Employment per block	laborer	3	25.0	25.0	25.0
	Retired clerical	2	16.7	41.7	16.7
	Unemployed	1	8.3	50.0	8.3
	Self employed	6	50.0	100.0	50.0
	Total	12	100.0		100.0
Godal-i-Mosalla urban tissue, B-43		Frequency	Percent	Cumulative Percent	Valid Percent
Employment per block	Retired laborer	1	7.1	7.1	7.1
	laborer	8	57.1	64.3	57.1
	Unemployed	1	7.1	71.4	7.1
	Self employed	4	28.6	100.0	28.6
	Total	14	100.0		100.0
Dolat-abad, B-9		Frequency	Percent	Cumulative Percent	Valid Percent
Employment per block	Retired laborer	1	7.1	7.1	7.1
	laborer	4	28.6	35.7	28.6
	Retired clerical	3	21.4	57.1	21.4
	Clerical	1	7.1	64.3	7.1
	Unemployed	2	14.3	78.6	14.3
	Self employed	3	21.4	100.0	21.4
	Total	14	100.0		100.0
Dolat-abad, B-28		Frequency	Percent	Cumulative Percent	Valid Percent
Employment per block	Retired laborer	2	15.4	15.4	15.4
	laborer	2	15.4	30.8	15.4
	Retired clerical	1	7.7	38.5	7.7
	Clerical	2	15.4	53.8	15.4
	Self employed	6	46.2	100.0	46.2
	Total	13	100.0		100.0
Gonbad-i-sabz, B-8		Frequency	Percent	Cumulative Percent	Valid Percent
Employment per block	Retired laborer	2	11.1	11.1	11.1
	laborer	6	33.3	44.4	33.3
	Retired clerical	2	11.1	55.6	11.1
	Clerical	2	11.1	66.7	11.1
	Unemployed	1	5.6	72.2	5.6
	Self employed	5	27.8	100.0	27.8
	Total	18	100.0		100.0
Gonbad-i-sabz, B-47		Frequency	Percent	Cumulative Percent	Valid Percent
Employment per block	Retired laborer	2	22.2	22.2	22.2
	laborer	4	44.4	66.7	44.4
	Retired clerical	1	11.1	77.8	11.1
	Clerical	1	11.1	88.9	11.1
	Self employed	1	11.1	100.0	11.1
	Total	9	100.0		100.0
Isfahan					
Masjid Ali, B-7		Frequency	Percent	Cumulative Percent	Valid Percent
Employment per block	laborer	3	60.0	60.0	60.0
	Clerical	1	20.0	80.0	20.0
	Self employed	1	20.0	100.0	20.0

		Total	5	100.0		100.0
Masjid Ali, B-1			Frequency	Percent	Cumulative Percent	Valid Percent
Employment per block	Retired laborer		2	25.0	25.0	25.0
	laborer		1	12.5	37.5	12.5
	Retired clerical		1	12.5	50.0	12.5
	Unemployed		2	25.0	75.0	25.0
	Self employed		2	25.0	100.0	25.0
Total			8	100.0		100.0
Masjid Ali, B-2			Frequency	Percent	Cumulative Percent	Valid Percent
Employment per block	Retired laborer		2	28.6	28.6	28.6
	laborer		1	14.3	42.9	14.3
	Self-employed		4	57.1	100.0	57.1
	Total		7	100.0		100.0

C-5-4. Comparing the type of employment in fifteen urban blocks of three historic cities among local residents (2018)

Crosstab (types of occupation, Kashan)								
Count (local residents)								
		Type of occupation						Total
		Retired labourer	labourer	Retired clerical	Clerical	Unemployed	Self employed	
Area of DABs 2018	45%	2	2	1	0	0	1	6
	44%	2	3	1	0	0	1	7
	42%	3	4	0	0	0	3	10
	33%	2	2	0	1	1	1	7
	21%	4	0	0	1	1	4	10
	19%	2	3	1	0	0	3	9
Total		15	14	3	2	2	13	49
Crosstab (types of occupation, Yazd)								
Count (Local residents)								
		Type of occupation						Total
		Retired labourer	labourer	Retired clerical	Clerical	Unemployed	Self employed	
Area of DABs 2018	44%	1	2	0	0	1	4	8
	39%	2	0	2	2	0	5	11
	36%	0	1	2	0	1	6	10
	36%	2	2	1	2	0	6	13
	32%	1	3	3	1	2	3	13
	13%	2	2	1	1	0	1	7
Total		8	10	9	6	4	25	62
Crosstab (types of occupation, Isfahan)								
Count (local residents)								
		Type of occupation						Total

		Retired labourer	labourer	Retired clerical	Clerical	Unemployed	Self employed	
Area of DABs 2018	40%	2	0	1	0	1	2	6
	27%	0	1	0	1	0	1	3
	19%	2	1	0	0	0	3	6
Total		4	2	1	1	1	6	15

Kashan	Retired labourer	labourer	Retired clerical	Clerical	Unemployed	Self employed	Simple labourers and unemployed	Clerical and self employed
DABs=45%	4%	4%	2%	0%	0%	2%	8%	4%
DABs=44%	4%	6%	2%	0%	0%	2%	10%	4%
DABs=42%	6%	8%	0%	0%	0%	6%	14%	6%
DABs=33%	4%	4%	0%	2%	2%	2%	10%	4%
DABs=21%	8%	0%	0%	2%	2%	8%	10%	10%
DABs=19%	4%	6%	2%	0%	0%	6%	10%	8%

Yazd	Retired labourer	labourer	Retired clerical	Clerical	Unemployed	Self employed	Simple labourers and unemployed	Clerical and self employed
DABs=44%	2%	3%	0%	0%	2%	6%	6%	6%
DABs=39%	3%	0%	3%	3%	0%	8%	3%	15%
DABs=36%	0%	2%	3%	0%	2%	10%	3%	13%
DABs=36%	3%	3%	2%	3%	0%	10%	6%	15%
DABs=32%	2%	5%	5%	2%	3%	5%	10%	11%
DABs=13%	3%	3%	2%	2%	0%	2%	6%	5%

Isfahan	Retired labourer	labourer	Retired clerical	Clerical	Unemployed	Self employed	Simple labourers and unemployed	Clerical and self employed
DABs=40%	13%	0%	7%	0%	7%	13%	20%	20%
DABs=27%	0%	7%	0%	7%	0%	7%	7%	13%
DABs=19%	13%	7%	0%	0%	0%	20%	20%	20%

C-5-5. Comparing the type of employment in fifteen urban blocks of three historic cities among refugee residents (2018)

Crosstab (types of occupation, Kashan)					
Count (refugees)					
		Type of occupation		Total	
		labourer	Unemployed		
Area of DABs 2018	45%	2	1	3	
	44%	3	0	3	
	42%	1	0	1	
	33%	3	0	3	
	21%	1	0	1	
	19%	1	0	1	
Total		11	1	12	
Crosstab (types of occupation, Yazd)					
Count (Refugees)					
		Type of occupation		Total	
		labourer	Unemployed		
Area of DABs 2018	44%	6	0	6	
	39%	6	1	7	
	36%	2	0	2	
	36%	0	0	0	
	32%	1	0	1	
	13%	2	0	2	
Total		17	1	18	
Crosstab (type of occupation, Isfahan)					
Count (refugees)					
		Type of occupation			Total
		laborer	Unemployed	Self employed	
Area of DABs 2018	40%	1	1	0	2
	27%	2	0	0	2
	19%	0	0	1	1
Total		3	1	1	5

Kashan	labourer	Unemployed	Simple labourers and unemployed	Clerical and self employed
DABs=45%	17%	8%	25%	0%
DABs=44%	25%	0%	25%	0%
DABs=42%	8%	0%	8%	0%
DABs=33%	25%	0%	25%	0%
DABs=21%	8%	0%	8%	0%
DABs=19%	8%	0%	8%	0%

Yazd	labourer	Unemployed	Simple labourers and unemployed	Clerical and self employed
DABs=44%	33%	0%	33%	0%
DABs=39%	33%	6%	39%	0%
DABs=36%	11%	0%	11%	0%
DABs=36%	0%	0%	0%	0%
DABs=32%	6%	0%	6%	0%
DABs=13%	11%	0%	11%	0%

Isfahan	labourer	Unemployed	Self employed	Simple labourers and unemployed	Clerical and self employed
DABs=40%	20%	20%	0%	40%	0%
DABs=27%	40%	0%	0%	40%	0%
DABs=19%	0%	0%	20%	0%	20%

Appendix C-5. Comparing the ratio of foreign refugees in historic cities (2018)

C-6-1. Comparing the average ratio of foreign refugees in three Iranian historic cities (2018)

All historic areas		Frequency	Percent	Cumulative Percent	Valid Percent
Ratio of ethnic groups	Local residents	115	71.4	71.4	71.4
	Foreign refugees or illegal migrants	35	21.7	93.2	21.7
	Single elderly	11	6.8	100.0	6.8
	Total	161	100.0		100.0

Frequencies of responses to a dichotomy group tabulated at values 'Yes'.

C-6-2. Comparing the average ratio of foreign refugees in historic Kashan, Yazd and Isfahan (2018)

Kashan		Frequency	Percent	Cumulative Percent	Valid Percent
Ratio of ethnic groups	Local residents	44	72.1	72.1	72.1
	Foreign refugees or illegal migrants	12	19.7	91.8	19.7
	Single elderly	5	8.2	100.0	8.2
	Total	61	100.0		100.0
Yazd		Frequency	Percent	Cumulative Percent	Valid Percent
Ratio of ethnic groups	Local residents	59	73.8	73.8	73.8
	Foreign refugees or illegal migrants	18	22.5	96.3	22.5
	Single elderly	3	3.8	100.0	3.8

		Total	80	100.0		100.0
Isfahan		Frequency	Percent	Cumulative Percent	Valid Percent	
Ratio of ethnic groups	Local residents	12	60.0	60.0	60.0	
	Foreign refugees or illegal migrants	5	25.0	85.0	25.0	
	Single elderly	3	15.0	100.0	15.0	
	Total	20	100.0		100.0	
Frequencies of responses to a dichotomy group tabulated at values 'Yes'.						

C-6-3. Comparing the average ratio of foreign refugees in historic Kashan, Yazd and Isfahan (2018)

Kashan					
Darb-I-Isfahan B-1		Frequency	Percent	Cumulative Percent	Valid Percent
Ratio of ethnic groups	Local residents	6	66.7	66.7	66.7
	Foreign refugees or illegal migrants	3	33.3	100.0	33.3
	Total	9	100.0		100.0
Darb-i-Isfahan urban tissue, B-2		Frequency	Percent	Cumulative Percent	Valid Percent
Ratio of ethnic groups	Local residents	10	90.9	90.9	90.9
	Foreign refugees or illegal migrants	1	9.1	100.0	9.1
	Total	11	100.0		100.0
Mohtasham urban tissue, B-15		Frequency	Percent	Cumulative Percent	Valid Percent
Ratio of ethnic groups	Local residents	5	50.0	50.0	50.0
	Foreign refugees or illegal migrants	3	30.0	80.0	30.0
	Single elderly	2	20.0	100.0	20.0
	Total	10	100.0		100.0
Mohtasham urban tissue, B-16		Frequency	Percent	Cumulative Percent	Valid Percent
Ratio of ethnic groups	Local residents	8	72.7	72.7	72.7
	Foreign refugees or illegal migrants	1	9.1	81.8	9.1
	Single elderly	2	18.2	100.0	18.2
	Total	11	100.0		100.0
Posht-i-Mashhad-i-paen urban tissue, B-3		Frequency	Percent	Cumulative Percent	Valid Percent
Ratio of ethnic groups	Local residents	6	60.0	60.0	60.0
	Foreign refugees or illegal migrants	3	30.0	90.0	30.0
	Single elderly	1	10.0	100.0	10.0
	Total	10	100.0		100.0
Posht-i-Mashhad-i-paen urban tissue, B-5		Frequency	Percent	Cumulative Percent	Valid Percent
Ratio of ethnic groups	Local residents	9	90.0	90.0	90.0
	Foreign refugees or illegal migrants	1	10.0	100.0	10.0
	Total	10	100.0		100.0
Yazd					
Godal-i-Mosalla, B-30		Frequency	Percent	Cumulative Percent	Valid Percent
Ratio of ethnic groups	Local residents	10	83.3	83.3	83.3
	Foreign refugees or illegal migrants	2	16.7	100.0	16.7
	Total	12	100.0		100.0
Godal-i-Mosalla urban tissue, B-43		Frequency	Percent	Cumulative Percent	Valid Percent
	Local residents	8	57.1	57.1	57.1

Ratio of ethnic groups	Foreign refugees or illegal migrants	6	42.9	100.0	42.9
	Total	14	100.0		100.0
Dolat-abad, B-9		Frequency	Percent	Cumulative Percent	Valid Percent
Ratio of ethnic groups	Local residents	12	85.7	85.7	85.7
	Foreign refugees or illegal migrants	1	7.1	92.9	7.1
	Single elderly	1	7.1	100.0	7.1
	Total	14	100.0		100.0
Dolat-abad, B-28		Frequency	Percent	Cumulative Percent	Valid Percent
Ratio of ethnic groups	Local residents	13	100.0	100.0	100.0
Gonbad-i-sabz, B-8		Frequency	Percent	Cumulative Percent	Valid Percent
Ratio of ethnic groups	Local residents	9	50.0	50.0	50.0
	Foreign refugees or illegal migrants	7	38.9	88.9	38.9
	Single elderly	2	11.1	100.0	11.1
	Total	18	100.0		100.0
Gonbad-i-sabz, B-47		Frequency	Percent	Cumulative Percent	Valid Percent
Ratio of ethnic groups	Local residents	7	77.8	77.8	77.8
	Foreign refugees or illegal migrants	2	22.2	100.0	22.2
	Total	9	100.0		100.0
Isfahan					
Masjid Ali, B-7		Frequency	Percent	Cumulative Percent	Valid Percent
Ratio of ethnic groups	Local residents	2	40.0	40.0	40.0
	Foreign refugees or illegal migrants	2	40.0	80.0	40.0
	Single elderly	1	20.0	100.0	20.0
	Total	5	100.0		100.0
Masjid Ali, B-1		Frequency	Percent	Cumulative Percent	Valid Percent
Ratio of ethnic groups	Local residents	4	50.0	50.0	50.0
	Foreign refugees or illegal migrants	2	25.0	75.0	25.0
	Single elderly	2	25.0	100.0	25.0
	Total	8	100.0		100.0
Masjid Ali, B-2		Frequency	Percent	Cumulative Percent	Valid Percent
Ratio of ethnic groups	Local residents	6	85.7	85.7	85.7
	Foreign refugees or illegal migrants	1	14.3	100.0	14.3
	Total	7	100.0		100.0

C-6-4. Comparing the average ratio of refugees and local residents in historic Kashan, Yazd and Isfahan (2018)

Crosstab (ethnicity of residents, Kashan)				
Count (local residents)				
		Type of residents		
		Local residents	Total	
Area of DABs 2018	45%	6	6	
	44%	7	7	
	42%	10	10	
	33%	7	7	
	21%	10	10	

	19%	9	9
Total		49	49
Count (refugees)			
		Type of residents	
		Foreign refugees or illegal migrants	Total
Area of DABs 2018	45%	3	3
	44%	3	3
	42%	1	1
	33%	3	3
	21%	1	1
	19%	1	1
Total		12	12
Crosstab (ethnicity of residents, Yazd)			
Count (Local residents)			
		Type of residents	
		Local residents	Total
Area of DABs 2018	44%	8	8
	39%	11	11
	36%	10	10
	36%	13	13
	32%	13	13
	13%	7	7
Total		62	62
Count (Refugees)			
		Type of residents	
		Foreign refugees or illegal migrants	Total
Area of DABs 2018	44%	6	6
	39%	7	7
	36%	2	2
	36%	0	0
	32%	1	1
	13%	2	2
Total		18	18
Crosstab (ethnicity of residents, Isfahan)			
Count			
		Type of residents	
		Local residents	Total
Area of DABs 2018	40%	6	6
	27%	3	3
	19%	6	6
Total		15	15
Count (refugees)			

		Type of residents	
		Local residents	Total
Area of DABs 2018	40%	6	6
	27%	3	3
	19%	6	6
Total		15	15

Kashan	Local residents	Foreign refugees or illegal migrants
DABs=45%	14%	25%
DABs=44%	16%	25%
DABs=42%	23%	8%
DABs=33%	16%	25%
DABs=21%	23%	8%
DABs=19%	21%	8%

Yazd	Local residents	Foreign refugees or illegal migrants
DABs=44%	13%	33%
DABs=39%	18%	39%
DABs=36%	16%	11%
DABs=36%	21%	0%
DABs=32%	21%	6%
DABs=13%	11%	11%

Isfahan	Local residents	Foreign refugees or illegal migrants
DABs=40%	40%	40%
DABs=27%	20%	40%
DABs=19%	40%	20%

Appendix D: Attitudinal results and analysis

Appendix D-1. Comparing the frequency of responses regarding individuals' motivations to immigrate to historic cities (2018)

D-1-1. Comparing individuals' motivation for immigration to three historic Iranian cities (2018)

	Valid Cases		Missing Cases		Total	
	N	Percent	N	Percent	N	Percent
Three historic cities	124	77.0	37	23.0	161	100.0

Survey summary based on 'replied and unreplied' cases in response to the question

Three historic cities		Number of responses	Percent	Percent of Cases	Valid percent
Resident's motivation for immigration	Reaching cheapest housing options	81	52.6	65.3	50.3
	Closeness to work or friends or families	40	26.0	32.3	24.8
	Accessibility to other urban districts	22	14.3	17.7	13.7
	Other reasons	11	7.1	8.9	6.8
Total		154	100.0	124.2	95.6

Frequencies of responses to a dichotomy group tabulated at value 'Yes'.

D-1-2. Comparing individuals' motivation for immigration to historic Kashan, Yazd and Isfahan (2018)

	Valid Cases		Missing Cases		Total	
	N	Percent	N	Percent	N	Percent
	Historic Kashan	47	77.0	14	23.0	61	100.0

Survey summary based on 'replied and unreplied' cases in response to the question

Historic Kashan		Number of responses	Percent	Percent of Cases	Valid percent
Resident's motivation for immigration	Reaching cheaper housing options	40	65.6	85.1	65.6
	Closeness to work or friends or families	14	23.0	29.8	23.0
	Accessibility to other urban districts	5	8.2	10.6	8.2
	Other reasons	2	3.3	4.3	3.3
Total		61	100.0	129.8	100.0

Frequencies of responses to a dichotomy group tabulated at value 'Yes'.

	Valid Cases		Missing Cases		Total	
	N	Percent	N	Percent	N	Percent
	Historic Yazd	62	77.5	18	22.5	80	100.0

Survey summary based on 'replied and unreplied' cases in response to the question

Historic Yazd		Number of responses	Percent	Percent of Cases	Valid percent
Resident's motivation for immigration	Reaching cheaper housing options	35	46.1	56.5	43.8
	Closeness to work or friends or families	18	23.7	29.0	22.5
	Accessibility to other urban districts	15	19.7	24.2	18.8
	Other reasons	8	10.5	12.9	10.0

Total	76	100.0	122.6	95.1
Frequencies of responses to a dichotomy group tabulated at value 'Yes'.				

	Valid Cases		Missing Cases		Total	
	N	Percent	N	Percent	N	Percent
Historic Isfahan	15	75.0%	5	25%	20	100.0
Survey summary based on 'replied and unreplied' cases in response to the question						

		Number of responses	Percent	Percent of Cases	Valid percent
Historic Isfahan					
Resident's motivation for immigration	Reaching cheaper housing options	6	35.3	40.0	30.0
	Closeness to work or friends or families	8	47.1	53.3	40.0
	Accessibility to other urban districts	2	11.8	13.3	10.0
	Other reasons	1	5.9	6.7	5.0
Total		17	100.0	113.3	85.0
Frequencies of responses to a dichotomy group tabulated at value 'Yes'.					

D-1-3. Comparing individuals' motivation for immigration to fifteen urban blocks in three historic cities among all residents (2018)

Kashan					
Darb-I-Isfahan B-1		Number of responses	Percent	Percent of Cases	Valid percent
Motivations for immigration ^a	Reaching cheapest housing options	7	77.8	87.5	77.8
	Closeness to work or friends and families	2	22.2	25.0	22.2
Total		9	100.0	112.5	100.0
a. Dichotomy group tabulated at value 'Yes' to the question.					
Darb-i-Isfahan urban tissue, B-2		Number of responses	Percent	Percent of Cases	Valid percent
Motivations for immigration ^a	Reaching cheapest housing options	6	54.5	75.0	54.5
	Closeness to work or friends and families	2	18.2	25.0	18.2
	Accessibility to other districts	2	18.2	25.0	18.2
	Other factors	1	9.1	12.5	9.1
Total		11	100.0	137.5	100.0
a. Dichotomy group tabulated at value 'Yes' to the question.					
Mohtasham urban tissue, B-15		Number of responses	Percent	Percent of Cases	Valid percent
Motivations for immigration ^a	Reaching cheapest housing options	8	66.7%	100.0%	80.0
	Closeness to work or friends and families	4	33.3%	50.0%	40.0
Total		12	100.0%	150.0%	120.0
a. Dichotomy group tabulated at value 'Yes' to the question.					
Mohtasham urban tissue, B-16		Number of responses	Percent	Percent of Cases	Valid percent

Motivations for immigration ^a	Reaching cheapest housing options	3	33.3	50.0	27.3
	Closeness to work or friends and families	3	33.3	50.0	27.3
	Accessibility to other districts	2	22.2	33.3	18.2
	Other factors	1	11.1	16.7	9.1
Total		9	100.0	150.0	81.9
a. Dichotomy group tabulated at value 'Yes' to the question.					
Posht-i-Mashhad-i-paen urban tissue, B-3		Number of responses	Percent	Percent of Cases	Valid percent
Motivations for immigration ^a	Reaching cheapest housing options	8	88.9%	100.0%	80.0
	Closeness to work or friends and families	1	11.1%	12.5%	10.0
Total		9	100.0%	112.5%	90.0
a. Dichotomy group tabulated at value 'Yes' to the question.					
Posht-i-Mashhad-i-paen urban tissue, B-5		Number of responses	Percent	Percent of Cases	Valid percent
Motivations for immigration ^a	Reaching cheapest housing options	8	72.7%	88.9%	80.0
	Closeness to work or friends and families	2	18.2%	22.2%	20.0
	Accessibility to other districts	1	9.1%	11.1%	10.0
Total		11	100.0%	122.2%	110.0
a. Dichotomy group tabulated at value 'Yes' to the question.					
Yazd					
Godal-i-Mosalla, B-30		Number of responses	Percent	Percent of Cases	Valid percent
Motivations for immigration ^a	Reaching cheapest housing options	4	28.6%	40.0%	33.3
	Closeness to work or friends and families	4	28.6%	40.0%	33.3
	Accessibility to other districts	3	21.4%	30.0%	25.0
	Other factors	3	21.4%	30.0%	25.0
Total		14	100.0%	140.0%	116.6
a. Dichotomy group tabulated at value 'Yes' to the question.					
Godal-i-Mosalla urban tissue, B-43		Number of responses	Percent	Percent of Cases	Valid percent
Motivations for immigration ^a	Reaching cheapest housing options	9	52.9%	69.2%	64.3
	Closeness to work or friends and families	6	35.3%	46.2%	42.9
	Accessibility to other districts	2	11.8%	15.4%	14.3
Total		17	100.0%	130.8%	121.5
a. Dichotomy group tabulated at value 'Yes' to the question.					
Dolat-abad, B-9		Number of responses	Percent	Percent of Cases	Valid percent
Motivations for immigration ^a	Reaching cheapest housing options	10	66.7%	76.9%	71.4
	Closeness to work or friends and families	1	6.7%	7.7%	7.1
	Accessibility to other districts	3	20.0%	23.1%	21.4
	Other factors	1	6.7%	7.7%	7.1
Total		15	100.0%	115.4%	107
a. Dichotomy group tabulated at value 'Yes' to the question.					
Dolat-abad, B-28		Number of responses	Percent	Percent of Cases	Valid percent
Motivations for immigration ^a	Reaching cheapest housing options	4	30.8%	36.4%	30.8

	Closeness to work or friends and families	5	38.5%	45.5%	38.5
	Accessibility to other districts	2	15.4%	18.2%	15.4
	Other factors	2	15.4%	18.2%	15.4
Total		13	100.0%	118.2%	100.1
a. Dichotomy group tabulated at value 'Yes' to the question.					
Gonbad-i-sabz, B-8		Number of responses	Percent	Percent of Cases	Valid percent
Motivations for immigration ^a	Reaching cheapest housing options	5	35.7%	41.7%	27.8
	Closeness to work or friends and families	2	14.3%	16.7%	11.1
	Accessibility to other districts	5	35.7%	41.7%	27.8
	Other factors	2	14.3%	16.7%	11.1
Total		14	100.0%	116.7%	77.8
a. Dichotomy group tabulated at value 'Yes' to the question.					
Gonbad-i-sabz, B-47		Number of responses	Percent	Percent of Cases	Valid percent
Motivations for immigration ^a	Reaching cheapest housing options	3	100.0%	100.0%	33.3
Total		3	100.0%	100.0%	33.3
a. Dichotomy group tabulated at value 'Yes' to the question.					
Isfahan					
Masjid Ali, B-7		N	Percent	Percent of Cases	Valid percent
Motivations for immigration ^a	Reaching cheapest housing options	3	42.9%	60.0%	60.0
	Closeness to work or friends and families	2	28.6%	40.0%	40.0
	Accessibility to other districts	2	28.6%	40.0%	40.0
Total		7	100.0%	140.0%	140.0
a. Dichotomy group tabulated at value 'Yes' to the question.					
Masjid Ali, B-1		Number of responses	Percent	Percent of Cases	Valid percent
Motivations for immigration ^a	Reaching cheapest housing options	2	40.0%	40.0%	25.0
	Closeness to work or friends and families	2	40.0%	40.0%	25.0
	Other factors	1	20.0%	20.0%	12.5
Total		5	100.0%	100.0%	62.5
a. Dichotomy group tabulated at value 'Yes' to the question.					
Masjid Ali, B-2		Number of responses	Percent	Percent of Cases	Valid percent
Motivations for immigration ^a	Reaching cheapest housing options	1	20.0%	20.0%	14.3
	Closeness to work or friends and families	4	80.0%	80.0%	57.1
Total		5	100.0%	100.0%	71.4
a. Dichotomy group tabulated at value 'Yes' to the question.					

D-1-4. Comparing individuals' motivation for immigration to fifteen urban blocks in three historic cities among local residents (2018)

Crosstab (reason for residents' immigration, Kashan)				
Count (local residents)				
		Reaching cheapest housing options		Total
		Yes	Other options	
Area of DABs 2018	45%	4	2	6
	44%	5	2	7

	42%	5	5	10
	33%	5	2	7
	21%	2	8	10
	19%	7	2	9
Total		28	21	49
		Closeness to work or friends and families		
		Yes	No answer	Total
Area of DABs 2018	45%	2	4	6
	44%	3	4	7
	42%	2	8	10
	33%	1	6	7
	21%	3	7	10
	19%	2	7	9
Total		13	36	49
		Accessibility to other districts		
		Yes	No answer	Total
Area of DABs 2018	45%	0	6	6
	44%	0	7	7
	42%	2	8	10
	33%	0	7	7
	21%	2	8	10
	19%	1	8	9
Total		5	44	49
		Other factors		
		Yes	No answer	Total
Area of DABs 2018	45%	0	6	6
	44%	0	7	7
	42%	1	9	10
	33%	0	7	7
	21%	1	9	10
	19%	0	9	9
Total		2	47	49
Crosstab (reason for residents' immigration, Yazd)				
Count (Local residents)				
		Reaching cheapest housing options		
		Yes	No answer	Total
Area of DABs 2018	44%	4	4	8
	39%	2	9	11
	36%	2	8	10
	36%	4	9	13
	32%	9	4	13
	13%	1	6	7
Total		22	40	62

		Closeness to work or friends and families		Total
		Yes	No answer	
Aera_of_DABs_2018	44%	3	5	8
	39%	1	10	11
	36%	2	8	10
	36%	5	8	13
	32%	0	13	13
	13%	0	7	7
Total		11	51	62
		Accessibility to other districts		Total
		Yes	No answer	
Area of DABs 2018	44%	1	7	8
	39%	2	9	11
	36%	3	7	10
	36%	2	11	13
	32%	2	11	13
	13%	0	7	7
Total		10	52	62
		Other factors		Total
		Yes	No answer	
Area of DABs 2018	44%	0	8	8
	39%	1	10	11
	36%	3	7	10
	36%	2	11	13
	32%	1	12	13
	13%	0	7	7
Total		7	55	62
Crosstab (reason for residents' immigration, Isfahan)				
Count (local residents)				
		Reaching cheapest housing options		Total
		Yes	No answer	
Area of DABs 2018	40%	0	6	6
	27%	1	2	3
	19%	1	5	6
Total		2	13	15
		Closeness to work or friends and families		Total
		Yes	No answer	
Area of DABs 2018	40%	2	4	6
	27%	2	1	3
	19%	3	3	6
Total		7	8	15

		Accessibility to other districts		Total
		Yes	No answer	
Area of DABs 2018	40%	0	6	6
	27%	2	1	3
	19%	0	6	6
Total		2	13	15
		Other factors		Total
		Yes	No answer	
Aera_of_DABs_2018	40%	1	5	6
	27%	0	3	3
	19%	0	6	6
Total		1	14	15

Kashan	Reaching to cheap housing options	Closeness to work or friends and families	Better accessibility to other districts	Other factors
44%<DABs	69%	38%	0%	0%
DABs=45% (B-1)	67%	33%	0%	0%
DABs=44% (B-15)	71%	43%	0%	0%
21%<DABs<44%	61%	17%	10%	5%
DABs=42% (B-2)	50%	20%	20%	10%
DABs=33% (B-3)	71%	14%	0%	0%
DABs<21%	49%	26%	16%	5%
DABs=21% (B-16)	20%	30%	20%	10%
DABs=19% (B-5)	78%	22%	11%	0%
Mean	60%	27%	9%	3%

Yazd	Reaching to cheap housing options	Closeness to work or friends and families	Better accessibility to other districts	Other factors
39%<DABs	34%	24%	16%	5%
DABs=44% (B-43)	50%	38%	13%	0%
DABs=39% (B-8)	18%	9%	18%	9%
32%<DABs<39%	26%	29%	23%	23%
DABs=36% (B-30)	20%	20%	30%	30%
DABs=36% (B-28)	31%	38%	15%	15%
DABs<32%	42%	0%	8%	4%
DABs=32% (B-9)	69%	0%	15%	8%
DABs=13% (B-47)	14%	0%	0%	0%
Mean	34%	18%	15%	10%

Isfahan	Reaching to cheap housing options	Closeness to work or friends and families	Better accessibility to other districts	Other factors
DABs=40% (B-1)	0%	33%	0%	17%
DABs=27% (B-7)	33%	67%	67%	0%
DABs=19% (B-2)	17%	50%	0%	0%
Mean	17%	50%	22%	6%

D-1-5. Comparing individuals' motivation for immigrating to fifteen urban blocks in three historic cities among refugees (2018)

Crosstab (reason for residents' immigration, Kashan)				
Count (Refugees)				
		Reaching cheapest housing options		Total
		Yes		
Area of DABs 2018	45%	3		3
	44%	3		3
	42%	1		1
	33%	3		3
	21%	1		1
	19%	1		1
Total		12		12
		Closeness to work or friends and families		Total
		Yes	No answer	
Area of DABs 2018	45%	0	3	3
	44%	1	2	3
	42%	0	1	1
	33%	0	3	3
	21%	0	1	1
	19%	0	1	1
Total		1	11	12
		Accessibility to other districts		Total
		No answer		
Area of DABs 2018	45%	3		3
	44%	3		3
	42%	1		1
	33%	3		3
	21%	1		1
	19%	1		1
Total		12		12
		Other factors		Total

		No answer		
Area of DABs 2018	45%	3		3
	44%	3		3
	42%	1		1
	33%	3		3
	21%	1		1
	19%	1		1
Total		12		12
Crosstab (reason for residents' immigration, Yazd)				
Count (Refugees)				
		Reaching cheapest housing options		Total
		Yes	No answer	
Area of DABs 2018	44%	5	1	6
	39%	3	4	7
	36%	2	0	2
	36%	0	0	0
	32%	1	0	1
	13%	2	0	2
Total		13	5	18
		Closeness to work or friends and families		Total
		Yes	No answer	
Area of DABs 2018	44%	3	3	6
	39%	1	6	7
	36%	2	0	2
	36%	0	0	0
	32%	1	0	1
	13%	0	2	2
Total		7	11	18
		Accessibility to other districts		Total
		Yes	No answer	
Area of DABs 2018	44%	1	5	6
	39%	3	4	7
	36%	0	2	2
	36%	0	0	0
	32%	1	0	1
	13%	0	2	2
Total		5	13	18
		Other factors		Total
		Yes	No answer	
Area of DABs 2018	44%	0	6	6
	39%	1	6	7
	36%	0	2	2
	36%	0	0	0

	32%	0	1	1
	13%	0	2	2
Total		1	17	18
Crosstab (reason for residents' immigration, Isfahan)				
Count (Refugees)				
		Reaching cheapest housing options		Total
		Yes	No answer	
Aera_of_DABs_2018	40%	2	0	2
	27%	2	0	2
	19%	0	1	1
Total		4	1	5
		Closeness to work or friends and families		Total
		Yes	No answer	
Area of DABs 2018	40%	0	2	2
	27%	0	2	2
	19%	1	0	1
Total		1	4	5
		Accessibility to other districts		Total
		No answer		
Area of DABs 2018	40%	2		2
	27%	2		2
	19%	1		1
Total		5		5
		Other factors		Total
		No answer		
Area of DABs 2018	40%	2		2
	27%	2		2
	19%	1		1
Total		5		5

	Reaching to cheap housing options	Closeness to work or friends and families	Better accessibility to other districts	Other factors
Kashan				
44%<DABs	100%	17%	0%	0%
DABs=45%	100%	0%	0%	0%
DABs=44%	100%	33%	0%	0%
21%<DABs<44%	100%	0%	0%	0%
DABs=42%	100%	0%	0%	0%
DABs=33%	100%	0%	0%	0%
DABs<21%	100%	0%	0%	0%

DABs=21%	100%	0%	0%	0%
DABs=19%	100%	0%	0%	0%
Mean	100%	6%	0%	0%

Yazd	Reaching to cheap housing options	Closeness to work or friends and families	Better accessibility to other districts	Other factors
39%<DABs	63%	32%	30%	7%
DABs=44%	83%	50%	17%	0%
DABs=39%	43%	14%	43%	14%
32%<DABs<39%	50%	50%	0%	0%
DABs=36%	100%	100%	0%	0%
DABs=36%	0%	0%	0%	0%
DABs <32%	100%	50%	50%	0%
DABs=32%	100%	100%	100%	0%
DABs=13%	100%	0%	0%	0%
Mean	71%	44%	27%	2%

Isfahan	Reaching to cheap housing options	Closeness to work or friends and families	Better accessibility to other districts	Other factors
DABs=40%	100%	0%	0%	0%
DABs=27%	100%	0%	0%	0%
DABs=19%	0%	100%	0%	0%
Mean	67%	33%	0%	0%

Appendix D-2. Comparing the frequency of responses regarding larger socio-spatial problems in three historic Iranian (2018)

D-2-1. Comparing larger problems as expressed by all residents in three Iranian historic cities (2018)

Three historic cities	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Larger problems	147	91.3	14	8.7	161	100.0

Survey summary based on 'replied and unreplied' cases in response to the question

Three historic cities		Number of responses	Percent	Percent of Cases	Valid percent
Larger problems	Lack of vehicular accessibility	124	43.7	84.4	77.0
	The existence of dilapidated, abandoned or deteriorated buildings	109	38.4	74.1	67.7
	Lack of public security	41	14.4	27.9	25.5
	Other reasons	10	3.5	6.8	6.2

Total	284	100.0	193.2	176.4
Frequencies of responses to a dichotomy group tabulated at value 'Yes'.				

D-2-2. Comparing larger problems as expressed by all residents in historic Kashan, Yazd and Isfahan (2018)

Historic Kashan	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Larger problems	51	83.6	10	16.4	61	100.0
Survey summary based on 'replied and unreplied' cases in response to the question						

Historic Kashan		Number of responses	Percent	Percent of Cases	Valid percent
Larger problems	Lack of vehicular accessibility	43	43.9	84.3	70.5
	The existence of dilapidated, abandoned or deteriorated buildings	42	42.9	82.4	68.9
	Lack of public security	10	10.2	19.6	16.4
	Other reasons	3	3.1	5.9	4.9
Total		98	100.0	192.2	160.7
Frequencies of responses to a dichotomy group tabulated at value 'Yes'.					

Historic Yazd	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Larger problems	77	96.3	3	3.8	80	100.0
Survey summary based on 'replied and unreplied' cases in response to the question						

Historic Yazd		Number of responses	Percent	Percent of Cases	Valid percent
Larger problems	Lack of vehicular accessibility	64	41.6	83.1	80.0
	The existence of dilapidated, abandoned or deteriorated buildings	56	36.4	72.7	70.0
	Lack of public security	28	18.2	36.4	35.0
	Other reasons	6	3.9	7.8	7.5
Total		154	100.0	200.0	192.5
Frequencies of responses to a dichotomy group tabulated at value 'Yes'.					

Historic Isfahan	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Larger problems	19	95.0	1	5.0	20	100.0

Survey summary based on 'replied and unreplied' cases in response to the question

Historic Isfahan		Number of responses	Percent	Percent of Cases	Valid percent
Large scale problems	Lack of vehicular accessibility	17	53.1	89.5	85.0
	The existence of dilapidated, abandoned or deteriorated buildings	11	34.4	57.9	55.0
	Lack of public security	3	9.4	15.8	15.0
	Other reasons	1	3.1	5.3	5.0
Total		32	100.0	168.4	160.0
Frequencies of responses to a dichotomy group tabulated at value 'Yes'.					

D-2-3. Comparing larger problems as expressed by all residents in fifteen urban blocks of three historic cities (2018)

Kashan					
		Number of responses	Percent	Percent of Case	Valid percent
Darb-I-Isfahan B-1					
Large scale problems ^a	Lack of vehicular accessibility	7	41.2	87.5	77.8
	The existence of dilapidated abandoned or deteriorated buildings	7	41.2	87.5	77.8
	Lack of public security	2	11.8	25.0	22.2
	Other reasons	1	5.9	12.5	11.1
Total		17	100.0	212.5	188.9
a. Dichotomy group tabulated at value 'Yes' to the question.					
		Number of responses	Percent	Percent of Cases	Valid percent
Darb-i-Isfahan urban tissue, B-2					
Large scale problems ^a	Lack of vehicular accessibility	8	44.4	80.0	72.7
	The existence of dilapidated abandoned or deteriorated buildings	8	44.4	80.0	72.7
	Other reasons	2	11.1	20.0	18.2
Total		18	100.0	180.0	162.6
a. Dichotomy group tabulated at value 'Yes' to the question.					
		Number of responses	Percent	Percent of Cases	Valid percent
Mohtasham urban tissue, B-15					
Large scale problems ^a	Lack of vehicular accessibility	5	33.3%	62.5%	50.0
	The existence of dilapidated abandoned or deteriorated buildings	7	46.7%	87.5%	70.0
	Lack of public security	3	20.0%	37.5%	30.0
Total		15	100.0%	187.5%	150.0
a. Dichotomy group tabulated at value 'Yes' to the question.					
		Number of responses	Percent	Percent of Cases	Valid percent
Mohtasham urban tissue, B-16					
Large scale problems ^a	Lack of vehicular accessibility	7	46.7	87.5	63.6
	The existence of dilapidated abandoned or deteriorated buildings	6	40.0	75.0	54.5
	Lack of public security	2	13.3	25.0	18.2
Total		15	100.0	187.5	136.3
a. Dichotomy group tabulated at value 'Yes' to the question.					

		Number of responses	Percent	Percent of Cases	Valid percent
Posht-i-Mashhad-i-paeen urban tissue, B-3					
Large scale problems ^a	Lack of vehicular accessibility	7	50.0%	100.0%	70.0
	The existence of dilapidated abandoned or deteriorated buildings	5	35.7%	71.4%	50.0
	Lack of public security	2	14.3%	28.6%	20.0
Total		14	100.0%	200.0%	140.0
a. Dichotomy group tabulated at value 'Yes' to the question.					
Posht-i-Mashhad-i-paeen urban tissue, B-5					
Large scale problems ^a	Lack of vehicular accessibility	9	47.4%	90.0%	90.0
	The existence of dilapidated abandoned or deteriorated buildings	9	47.4%	90.0%	90.0
	Lack of public security	1	5.3%	10.0%	10.0
Total		19	100.0%	190.0%	190.0
a. Dichotomy group tabulated at value 'Yes' to the question.					
Yazd					
Godal-i-Mosalla, B-30					
Large scale problems ^a	Lack of vehicular accessibility	9	37.5%	75.0%	75.0
	The existence of dilapidated abandoned or deteriorated buildings	8	33.3%	66.7%	66.7
	Lack of public security	6	25.0%	50.0%	50.0
	Other reasons	1	4.2%	8.3%	8.3
Total		24	100.0%	200.0%	200
a. Dichotomy group tabulated at value 'Yes' to the question.					
Godal-i-Mosalla urban tissue, B-43					
Large scale problems ^a	Lack of vehicular accessibility	13	46.4%	92.9%	92.9
	The existence of dilapidated abandoned or deteriorated buildings	8	28.6%	57.1%	57.1
	Lack of public security	6	21.4%	42.9%	42.9
	Other reasons	1	3.6%	7.1%	7.1
Total		28	100.0%	200.0%	200.0
a. Dichotomy group tabulated at value 'Yes' to the question.					
Dolat-abad, B-9					
Large scale problems ^a	Lack of vehicular accessibility	9	37.5%	69.2%	64.3
	The existence of dilapidated abandoned or deteriorated buildings	11	45.8%	84.6%	78.6
	Lack of public security	4	16.7%	30.8%	28.6
Total		24	100.0%	184.6%	171.5
a. Dichotomy group tabulated at value 'Yes' to the question.					
Dolat-abad, B-28					
Large scale problems ^a	Lack of vehicular accessibility	9	39.1%	75.0%	69.2
	The existence of dilapidated abandoned or deteriorated buildings	8	34.8%	66.7%	61.5
	Lack of public security	4	17.4%	33.3%	30.8
	Other reasons	2	8.7%	16.7%	15.4
Total		23	100.0%	191.7%	176.9
a. Dichotomy group tabulated at value 'Yes' to the question.					
Gonbad-i-sabz, B-8					
		Number of responses	Percent	Percent of Cases	Valid percent

Large scale problems ^a	Lack of vehicular accessibility	15	39.5%	88.2%	83.3
	The existence of dilapidated abandoned or deteriorated buildings	14	36.8%	82.4%	77.8
	Lack of public security	7	18.4%	41.2%	38.9
	Other reasons	2	5.3%	11.8%	11.1
Total		38	100.0%	223.5%	211.1
a. Dichotomy group tabulated at value 'Yes' to the question.					
Gonbad-i-sabz, B-47		Number of responses	Percent	Percent of Cases	Valid percent
Large scale problems ^a	Lack of vehicular accessibility	9	52.9%	100.0%	100.0
	The existence of dilapidated abandoned or deteriorated buildings	7	41.2%	77.8%	77.8
	Lack of public security	1	5.9%	11.1%	11.1
Total		17	100.0%	188.9%	188.9
a. Dichotomy group tabulated at value 'Yes' to the question.					
Isfahan					
Masjid Ali, B-7		Number of responses	Percent	Percent of Cases	Valid percent
Large scale problems ^a	Lack of vehicular accessibility	5	62.5%	100.0%	100.0
	The existence of dilapidated abandoned or deteriorated buildings	1	12.5%	20.0%	20.0
	Lack of public security	1	12.5%	20.0%	20.0
	Other reasons	1	12.5%	20.0%	20.0
Total		8	100.0%	160.0%	160.0
a. Dichotomy group tabulated at value 'Yes' to the question.					
Masjid Ali, B-1		Number of responses	Percent	Percent of Cases	Valid percent
Large scale problems ^a	Lack of vehicular accessibility	6	50.0%	85.7%	75.0
	The existence of dilapidated abandoned or deteriorated buildings	5	41.7%	71.4%	62.5
	Lack of public security	1	8.3%	14.3%	12.5
Total		12	100.0 %	171.4%	150
a. Dichotomy group tabulated at value 'Yes' to the question.					
Masjid Ali, B-2		Number of responses	Percent	Percent of Cases	Valid percent
Large scale problems ^a	Lack of vehicular accessibility	6	50.0%	85.7%	85.7
	The existence of dilapidated abandoned or deteriorated buildings	5	41.7%	71.4%	71.4
	Lack of public security	1	8.3%	14.3%	14.3
Total		12	100.0 %	171.4%	171.4
a. Dichotomy group tabulated at value 'Yes' to the question.					

D-2-4. Comparing larger problems as expressed by local residents in fifteen urban blocks of three historic cities (2018)

Crosstab (socio-spatial local problems in historic cities, Kashan)				
Count (local residents)				
Lack of vehicular accessibility		Yes	No answer	
Area of DABs 2018	45%	5	1	6
	44%	4	3	7
	42%	8	2	10
	33%	6	1	7

	21%	6	4	10
	19%	8	1	9
Total		37	12	49
The existence of dilapidated abandoned or deteriorated buildings		Yes	No answer	
Area of DABs 2018	45%	5	1	6
	44%	6	1	7
	42%	7	3	10
	33%	4	3	7
	21%	5	5	10
	19%	8	1	9
Total		35	14	49
Lack of public security		Yes	No answer	
Area of DABs 2018	45%	2	4	6
	44%	2	5	7
	42%	0	10	10
	33%	2	5	7
	21%	1	9	10
	19%	1	8	9
Total		8	41	49
Other reasons		Yes	No answer	
Area of DABs 2018	45%	1	5	6
	44%	0	7	7
	42%	2	8	10
	33%	0	7	7
	21%	0	10	10
	19%	0	9	9
Total		3	46	49
Crosstab (socio-spatial local problems in historic cities, Yazd)				
Count (Local residents)				
		Lack of vehicular accessibility		Total
		Yes	No answer	
Area of DABs 2018	44%	7	1	8
	39%	9	2	11
	36%	7	3	10
	36%	9	4	13
	32%	9	4	13
	13%	7	0	7
Total		48	14	62
		The existence of dilapidated abandoned or deteriorated buildings		Total
		Yes	No answer	

Area of DABs 2018	44%	6	2	8
	39%	10	1	11
	36%	8	2	10
	36%	8	5	13
	32%	10	3	13
	13%	5	2	7
Total		47	15	62
		Lack of public security		Total
		Yes	No answer	
Area of DABs 2018	44%	5	3	8
	39%	7	4	11
	36%	6	4	10
	36%	4	9	13
	32%	4	9	13
	13%	1	6	7
Total		27	35	62
		Other reasons		Total
		Yes	No answer	
Area of DABs 2018	44%	1	7	8
	39%	2	9	11
	36%	1	9	10
	36%	2	11	13
	32%	0	13	13
	13%	0	7	7
Total		6	56	62
Crosstab (socio-spatial local problems in historic cities, Isfahan)				

Count (local residents)				
		Lack of vehicular accessibility		Total
		Yes	No answer	
Area of DABs 2018	40%	4	2	6
	27%	3	0	3
	19%	5	1	6
		The existence of dilapidated abandoned or deteriorated buildings		Total
		Yes	No answer	
Area of DABs 2018	40%	4	2	6
	27%	0	3	3
	19%	4	2	6
Total		8	7	15
Total		12	3	15
		Lack of public security		Total
		Yes	No answer	
Area of DABs 2018	40%	1	5	6

	27%	1	2	3
	19%	1	5	6
Total		3	12	15
		Other reasons		Total
		Yes	No answer	
Area of DABs 2018	40%	0	6	6
	27%	1	2	3
	19%	0	6	6
Total		1	14	15

Kashan	Lack of vehicular access	The existence of DABs	Lack of public security	Other reasons (e.g. pests and vermin)
44%<DABs	70%	85%	31%	9%
DABs=45%	83%	83%	33%	17%
DABs=44%	57%	86%	29%	0%
21%<DABs<44%	83%	64%	15%	10%
DABs=42%	80%	70%	0%	20%
DABs=33%	86%	57%	29%	0%
DABs<21%	75%	70%	11%	0%
DABs=21%	60%	50%	10%	0%
DABs=19%	89%	89%	11%	0%
Mean	76%	73%	19%	6%

Yazd	Lack of vehicular access	The existence of DABs	Lack of public security	Other reasons (e.g. pests and vermin)
39%<DABs	85%	83%	64%	16%
DABs=44%	88%	75%	63%	13%
DABs=39%	82%	91%	64%	18%
32%<DABs<39%	70%	71%	46%	13%
DABs=36%	70%	80%	60%	10%
DABs=36%	69%	62%	31%	15%
DABs<32%	85%	74%	23%	0%
DABs=32%	69%	77%	31%	0%
DABs=13%	100%	71%	14%	0%
Mean	80%	76%	44%	9%

Isfahan	Lack of vehicular access	The existence of DABs	Lack of public security	Other reasons (e.g. pests and vermin)
DABs=40%	67%	67%	17%	0%
DABs=27%	100%	0%	33%	33%
DABs=19%	83%	67%	17%	0%
Mean	83%	45%	22%	11%

D-2-5. Comparing larger problems as expressed by refugees in fifteen urban blocks of three historic cities (2018)

Crosstab (socio-spatial local problems in historic cities, Kashan)				
Count (refugees)				
Lack of vehicular accessibility		Yes	No answer	
Area of DABs 2018	45%	2	1	3
	44%	1	2	3
	42%	0	1	1
	33%	1	2	3
	21%	1	0	1
	19%	1	0	1
Total		6	6	12
The existence of dilapidated abandoned or deteriorated buildings		Yes	No answer	
Area of DABs 2018	45%	2	1	3
	44%	1	2	3
	42%	1	0	1
	33%	1	2	3
	21%	1	0	1
	19%	1	0	1
Total		7	5	12
Lack of public security		Yes	No answer	
Area of DABs 2018	45%	0	3	3
	44%	1	2	3
	42%	0	1	1
	33%	0	3	3
	21%	1	0	1
	19%	0	1	1
Total		2	10	12
Other reasons		No answer		
Area of DABs 2018	45%	3		3
	44%	3		3
	42%	1		1
	33%	3		3
	21%	1		1
	19%	1		1
Total		12		12
Crosstab (socio-spatial local problems in historic cities, Yazd)				
Count (Refugees)				
		Lack of vehicular accessibility		
		Yes	No answer	Total
Area of DABs 2018	44%	6	0	6
	39%	6	1	7
	36%	2	0	2

	36%	0	0	0
	32%	0	1	1
	13%	2	0	2
Total		16	2	18
		The existence of dilapidated abandoned or deteriorated buildings		
		Yes	No answer	Total
Area of DABs 2018	44%	2	4	6
	39%	4	3	7
	36%	0	2	2
	36%	0	0	0
	32%	1	0	1
	13%	2	0	2
Total		9	9	18
		Lack of public security		
		Yes	No answer	Total
Area of DABs 2018	44%	1	5	6
	39%	0	7	7
	36%	0	2	2
	36%	0	0	0
	32%	0	1	1
	13%	0	2	2
Total		1	17	18
		Other reasons		
		No answer		Total
Area of DABs 2018	44%	6		6
	39%	7		7
	36%	2		2
	36%	0		0
	32%	1		1
	13%	2		2
Total		18		18
Crosstab (socio-spatial local problems in historic cities, Isfahan)				
Count (refugees)				
		Lack of vehicular accessibility		
		Yes	Total	
Area of DABs 2018	40%	2	2	
	27%	2	2	
	19%	1	1	
Total		5	5	

		The existence of dilapidated abandoned or deteriorated buildings		Total
		Yes	No answer	
Area of DABs 2018	40%	1	1	2
	27%	1	1	2
	19%	1	0	1
Total		3	2	5
		Lack of public security		Total
		No answer		
Area of DABs 2018	40%	2		2
	27%	2		2
	19%	1		1
Total		5		5
		Other reasons		Total
		No answer		
Area of DABs 2018	40%	2		2
	27%	2		2
	19%	1		1
Total		5		5

Kashan	Lack of vehicular access	The existence of DABs	Lack of public security	Other reasons (e.g. pests and vermin)
44%<DABs	50%	50%	17%	0%
DABs=45%	67%	67%	0%	0%
DABs=44%	33%	33%	33%	0%
21%<DABs<44%	17%	67%	0%	0%
DABs=42%	0%	100%	0%	0%
DABs=33%	33%	33%	0%	0%
DABs<21%	100%	100%	50%	0%
DABs=21%	100%	100%	100%	0%
DABs=19%	100%	100%	0%	0%
Mean	56%	72%	22%	0%

Yazd	Lack of vehicular access	The existence of DABs	Lack of public security	Other reasons (e.g. pests and vermin)
39%<DABs	93%	45%	9%	0%
DABs=44%	100%	33%	17%	0%
DABs=39%	86%	57%	0%	0%
32%<DABs<39%	50%	0%	0%	0%
DABs=36%	100%	0%	0%	0%
DABs=36%	0%	0%	0%	0%
DABs<32%	50%	100%	0%	0%
DABs=32%	0%	100%	0%	0%
DABs=13%	100%	100%	0%	0%
Mean	64%	48%	3%	0%

Isfahan	Lack of vehicular access	The existence of DABs	Lack of public security	Other reasons (e.g. pests and vermin)
DABs=40%	100%	50%	0%	0%
DABs=27%	100%	50%	0%	0%
DABs=19%	100%	100%	0%	0%
Mean	100%	67%	0%	0%

Appendix D-3. Comparing the frequency of responses regarding local socio-spatial problems in three historical Iranian cities (2018)

D-3-1. Comparing local problems as expressed by all residents in three Iranian historic cities (2018)

Three historic cities	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Enduring local problems	136	84.5	25	15.5	161	100.0

Survey summary based on 'replied and unreplied' cases in response to the question

Three historic cities		Number of responses	Percent	Percent of Cases	Valid percent
What are your local problems?	I feel unsafe here	50	14.7	36.8	31.1
	Local deteriorated-abandoned and dilapidated buildings	90	26.5	66.2	56
	Cultural-hygienic problems	54	15.9	39.7	33.5
	Lack of civic service infrastructure	44	13.0	32.4	27.3
	Low access road widths	99	29.2	72.8	61.5
	Other problems	2	0.6	1.5	1.2
Total		339	100.0	249.3	210.6

Frequencies of responses to a dichotomy group tabulated at value 'Yes'.

D-3-2. Comparing local problems as expressed by all residents in historic Kashan, Yazd and Isfahan (2018)

Historic Kashan	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Enduring local problems	47	77.0	14	23.0	61	100.0

Survey summary based on 'replied and unreplied' cases in response to the question

Historic Kashan		Number of responses	Percent	Percent of Cases	Valid percent
What are your local problems?	I feel unsafe here	12	11.7	25.5	19.7
	Local deteriorated-abandoned and dilapidated buildings	28	27.2	59.6	46.0
	Cultural-hygienic problems	15	14.6	31.9	24.6
	Lack of civic service infrastructure	12	11.7	25.5	19.7
	Low access road widths	36	35.0	76.6	59.0
Total		103	100.0	219.1	168.9
Frequencies of responses to a dichotomy group tabulated at value 'Yes'.					

	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
What are your local problems?	69	86.3	11	13.8%	80	100.0%
Survey summary based on 'replied and unreplied' cases in response to the question						

		Number of responses	Percent	Percent of Cases	Valid percent
What are your local problems?	I feel unsafe here	32	17.4	46.4	40.0
	Local deteriorated-abandoned and dilapidated buildings	47	25.5	68.1	58.8
	Cultural-hygienic problems	28	15.2	40.6	35
	Lack of civic service infrastructure	24	13.0	34.8	40
	Low access road widths	51	27.7	73.9	63.8
	Other problems	2	1.1	2.9	3.3
Total		184	100.0	266.7	240.9
Frequencies of responses to a dichotomy group tabulated at value 'Yes'.					

	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
What are your local problems?	20	100.0	0	0.0	20	100.0
Survey summary based on 'replied and unreplied' cases in response to the question						

		Number of responses	Percent	Percent of Cases	Valid percent
What are your local problems?	I feel unsafe here	6	11.5	30.0	30.0
	Local deteriorated-abandoned and dilapidated buildings	15	28.8	75.0	75.0
	Cultural-hygienic problems	11	21.2	55.0	55.0
	Lack of civic service infrastructure	8	15.4	40.0	40.0
	Low access road widths	12	23.1	60.0	60.0
Total		52	100.0	260.0	260.0
Frequencies of responses to a dichotomy group tabulated at value 'Yes'.					

D-3-3. Comparing local problems as expressed by all residents in fifteen urban blocks of three historic cities (2018)

Kashan					
		Number of responses	Percent	Percent of Cases	Valid percent
Darb-I-Isfahan B-1					
What are your local problems? ^a	I feel unsafe here	2	16.7	28.6	22.2
	Local deteriorated-abandoned and dilapidated buildings	3	25.0	42.9	33.3
	Cultural-hygienic problems	1	8.3	14.3	11.1
	Lack of civic service infrastructure	1	8.3	14.3	11.1
	Low access road widths	5	41.7	71.4	55.6
Total		12	100.0	171.4	133.3
a. Dichotomy group tabulated at value '1=Yes'.					
		Number of responses	Percent	Percent of Cases	Valid percent
Darb-i-Isfahan urban tissue, B-2					
What are your local problems? ^a	I feel unsafe here	1	5.9	11.1	9.1
	Local deteriorated-abandoned and dilapidated buildings	3	17.6	33.3	27.3
	Cultural-hygienic problems	2	11.8	22.2	18.2
	Lack of civic service infrastructure	2	11.8	22.2	18.2
	Low access road widths	9	52.9	100.0	81.8
Total		17	100.0	188.9	154.6
a. Dichotomy group tabulated at value '1=Yes'.					
		Number of responses	Percent	Percent of Cases	Valid percent
Mohtasham urban tissue, B-15					
What are your local problems? ^a	I feel unsafe here	2	16.7	25.0	20.0
	Local deteriorated-abandoned and dilapidated buildings	4	33.3	50.0	40.0
	Cultural-hygienic problems	3	25.0	37.5	30.0
	Lack of civic service infrastructure	1	8.3	12.5	10.0
	Low access road widths	2	16.7	25.0	20.0
Total		12	100.0	150.0	120.0
a. Dichotomy group tabulated at value '1=Yes'.					

		Number of responses	Percent	Percent of Cases	Valid percent
Mohtasham urban tissue, B-16					
What are your local problems? ^a	I feel unsafe here	4	19.0	57.1	36.4
	Local deteriorated-abandoned and dilapidated buildings	6	28.6	85.7	54.5
	Cultural-hygienic problems	3	14.3	42.9	27.3
	Lack of civic service infrastructure	2	9.5	28.6	18.2
	Low access road widths	6	28.6	85.7	54.5
Total		21	100.0	300.0	190.9
a. Dichotomy group tabulated at value '1=Yes'.					
Posht-i-Mashhad-i-paen urban tissue, B-3					
What are your local problems? ^a	I feel unsafe here	2	9.5%	28.6%	20.0
	Local deteriorated-abandoned and dilapidated buildings	7	33.3%	100.0%	70.0
	Cultural-hygienic problems	3	14.3%	42.9%	30.0
	Lack of civic service infrastructure	3	14.3%	42.9%	30.0
	Low access road widths	6	28.6%	85.7%	60.0
Total		21	100.0%	300.0%	210.0
a. Dichotomy group tabulated at value '1=Yes'.					
Posht-i-Mashhad-i-paen urban tissue, B-5					
What are your local problems? ^a	I feel unsafe here	1	5.0%	11.1%	10.0
	Local deteriorated-abandoned and dilapidated buildings	5	25.0%	55.6%	50.0
	Cultural-hygienic problems	3	15.0%	33.3%	30.0
	Lack of civic service infrastructure	3	15.0%	33.3%	30.0
	Low access road widths	8	40.0%	88.9%	80.0
Total		20	100.0%	222.2%	200.0
a. Dichotomy group tabulated at value '1=Yes'.					
Yazd					
Godal-i-Mosalla, B-30					
What are your local problems? ^a	I feel unsafe here	7	30.4%	70.0%	58.3
	Local deteriorated-abandoned and dilapidated buildings	6	26.1%	60.0%	50.0
	Cultural-hygienic problems	3	13.0%	30.0%	25.0
	Lack of civic service infrastructure	1	4.3%	10.0%	8.3
	Low access road widths	5	21.7%	50.0%	41.7
	Other problems	1	4.3%	10.0%	8.3
Total		23	100.0%	230.0%	191.6
a. Dichotomy group tabulated at value '1=Yes'.					
Godal-i-Mosalla urban tissue, B-43					
What are your local problems? ^a	I feel unsafe here	8	24.2%	80.0%	57.1
	Local deteriorated-abandoned and dilapidated buildings	6	18.2%	60.0%	42.9
	Cultural-hygienic problems	5	15.2%	50.0%	35.7
	Lack of civic service infrastructure	6	18.2%	60.0%	42.9
	Low access road widths	8	24.2%	80.0%	57.1
Total		33	100.0%	330.0%	235.7
a. Dichotomy group tabulated at value '1=Yes'.					
Dolat-abad, B-9					
	I feel unsafe here	5	16.1%	45.5%	35.7

What are your local problems? ^a	Local deteriorated-abandoned and dilapidated buildings	10	32.3%	90.9%	71.4
	Cultural-hygienic problems	4	12.9%	36.4%	28.6
	Lack of civic service infrastructure	4	12.9%	36.4%	28.6
	Low access road widths	8	25.8%	72.7%	57.1
Total		31	100.0%	281.8%	221.4

a. Dichotomy group tabulated at value '1=Yes'.

Dolat-abad, B-28		Number of responses	Percent	Percent of Cases	Valid percent
What are your local problems? ^a	I feel unsafe here	3	12.0%	25.0%	23.1
	Local deteriorated-abandoned and dilapidated buildings	7	28.0%	58.3%	53.8
	Cultural-hygienic problems	2	8.0%	16.7%	15.4
	Lack of civic service infrastructure	3	12.0%	25.0%	23.1
	Low access road widths	10	40.0%	83.3%	76.9
Total		25	100.0%	208.3%	192.3

a. Dichotomy group tabulated at value '1=Yes'.

Gonbad-i-sabz, B-8		Number of responses	Percent	Percent of Cases	Valid percent
What are your local problems? ^a	I feel unsafe here	8	15.7%	44.4%	44.4
	Local deteriorated-abandoned and dilapidated buildings	14	27.5%	77.8%	77.8
	Cultural-hygienic problems	9	17.6%	50.0%	50.0
	Lack of civic service infrastructure	5	9.8%	27.8%	27.8
	Low access road widths	14	27.5%	77.8%	77.8
	Other problems	1	2.0%	5.6%	5.6
Total		51	100.0%	283.3%	283.4

a. Dichotomy group tabulated at value '1=Yes'.

Gonbad-i-sabz, B-47		Number of responses	Percent	Percent of Cases	Valid percent
What are your local problems? ^a	I feel unsafe here	1	4.8%	12.5%	11.1
	Local deteriorated-abandoned and dilapidated buildings	4	19.0%	50.0%	44.4
	Cultural-hygienic problems	5	23.8%	62.5%	55.6
	Lack of civic service infrastructure	5	23.8%	62.5%	55.6
	Low access road widths	6	28.6%	75.0%	66.7
Total		21	100.0%	262.5%	233.4

a. Dichotomy group tabulated at value '1=Yes'.

Isfahan					
Masjid Ali, B-7		Number of responses	Percent	Percent of Cases	Valid percent
What are your local problems? ^a	I feel unsafe here	2	14.3%	40.0%	40.0
	Local deteriorated-abandoned and dilapidated buildings	3	21.4%	60.0%	60.0
	Cultural-hygienic problems	3	21.4%	60.0%	60.0
	Lack of civic service infrastructure	2	14.3%	40.0%	40.0
	Low access road widths	4	28.6%	80.0%	80.0
Total		14	100.0%	280.0%	280.0

a. Dichotomy group tabulated at value '1=Yes'.

Masjid Ali, B-1		Number of responses	Percent	Percent of Cases	Valid percent
What are your local problems? ^a	I feel unsafe here	2	9.5%	25.0%	25.0
	Local deteriorated-abandoned and dilapidated buildings	7	33.3%	87.5%	87.5
	Cultural-hygienic problems	5	23.8%	62.5%	62.5

	Lack of civic service infrastructure	3	14.3%	37.5%	37.5
	Low access road widths	4	19.0%	50.0%	50.0
Total		21	100.0%	262.5%	262.5
a. Dichotomy group tabulated at value '1=Yes'.					
Masjid Ali, B-2		Number of responses	Percent	Percent of Cases	Valid percent
What are your local problems? ^a	I feel unsafe here	2	11.8%	28.6%	28.6
	Local deteriorated-abandoned and dilapidated buildings	5	29.4%	71.4%	71.4
	Cultural-hygienic problems	3	17.6%	42.9%	42.9
	Lack of civic service infrastructure	3	17.6%	42.9%	42.9
	Low access road widths	4	23.5%	57.1%	57.1
Total		17	100.0%	242.9%	242.9
a. Dichotomy group tabulated at value '1=Yes'.					

D-3-4. Comparing local problems as expressed by local residents in fifteen urban blocks of three historic cities (2018)

Crosstab (socio-spatial local problems in your urban block, Kashan)					
Count (local residents)					
		I Feel unsafe here		Total	
		Yes	No answer		
Area of DABs 2018	45%	2	4	6	
	44%	2	5	7	
	42%	1	9	10	
	33%	2	5	7	
	21%	4	6	10	
	19%	1	8	9	
Total		12	37	49	
		Local deteriorated abandoned and dilapidated buildings		Total	
		Yes	No answer		
Area of DABs 2018	45%	3	3	6	
	44%	4	3	7	
	42%	3	7	10	
	33%	7	0	7	
	21%	6	4	10	
	19%	4	5	9	
Total		27	22	49	
		Cultural hygienic problems		Total	
		Yes	No answer		
Area of DABs 2018	45%	1	5	6	
	44%	2	5	7	
	42%	2	8	10	
	33%	3	4	7	
	21%	3	7	10	
	19%	2	7	9	

Total		13	36	49
		Lack of civic service infrastructure		Total
		Yes	No answer	
Area of DABs 2018	45%	1	5	6
	44%	0	7	7
	42%	2	8	10
	33%	3	4	7
	21%	2	8	10
	19%	2	7	9
Total		10	39	49
		Low access road widths		Total
		Yes	No answer	
Area of DABs 2018	45%	3	3	6
	44%	1	6	7
	42%	9	1	10
	33%	6	1	7
	21%	6	4	10
	19%	7	2	9
Total		32	17	49
Crosstab (socio-spatial local problems in your urban block, Yazd)				
Count (Local residents)				
		I Feel unsafe here		Total
		Yes	No answer	
Area of DABs 2018	44%	6	2	8
	39%	8	3	11
	36%	7	3	10
	36%	3	10	13
	32%	5	8	13
	13%	1	6	7
Total		30	32	62
		Local deteriorated abandoned and dilapidated buildings		Total
		Yes	No answer	
Area of DABs 2018	44%	4	4	8
	39%	9	2	11
	36%	6	4	10
	36%	7	6	13
	32%	10	3	13
	13%	2	5	7
Total		38	24	62
		Cultural hygienic problems		Total
		Yes	No answer	
Area of DABs 2018	44%	2	6	8

	39%	8	3	11
	36%	3	7	10
	36%	2	11	13
	32%	4	9	13
	13%	3	4	7
Total		22	40	62
		Lack of civic service infrastructure		
		Yes	No answer	Total
Area of DABs 2018	44%	3	5	8
	39%	4	7	11
	36%	1	9	10
	36%	3	10	13
	32%	4	9	13
	13%	4	3	7
Total		19	43	62
		Low access road widths		
		Yes	No answer	Total
Area of DABs 2018	44%	5	3	8
	39%	8	3	11
	36%	5	5	10
	36%	10	3	13
	32%	8	5	13
	13%	4	3	7
Total		40	22	62
Crosstab (socio-spatial local problems in your urban block, Isfahan)				
Count (local residents)				
		I Feel unsafe here		
		Yes	No answer	Total
Area of DABs 2018	40%	2	4	6
	27%	2	1	3
	19%	2	4	6
Total		6	9	15
		Local deteriorated abandoned and dilapidated buildings		
		Yes	No answer	Total
Area of DABs 2018	40%	5	1	6
	27%	1	2	3
	19%	4	2	6
Total		10	5	15
		Cultural hygienic problems		
		Yes	No answer	Total
Area of DABs 2018	40%	3	3	6
	27%	2	1	3
	19%	3	3	6

Total		8	7	15
		Lack of civic service infrastructure		Total
		Yes	No answer	
Area of DABs 2018	40%	2	4	6
	27%	1	2	3
	19%	3	3	6
Total		6	9	15
		Low access road widths		Total
		Yes	No answer	
Area of DABs 2018	40%	4	2	6
	27%	3	0	3
	19%	3	3	6
Total		10	5	15

	I feel unsafe here	Local DABs and deteriorated buildings in my neighbourhood	Cultural hygienic problems	Lack of civic services and infrastructure	Low widths of my access road
Kashan					
44%<DABs	31%	54%		9%	32%
DABs=45%	33%	50%	17%	17%	50%
DABs=44%	29%	57%	29%	0%	14%
21%<DABs<44%	20%	65%		32%	88%
DABs=42%	10%	30%	20%	20%	90%
DABs=33%	29%	100%	43%	43%	86%
DABs<21%	26%	52%	26%	21%	69%
DABs=21%	40%	60%	30%	20%	60%
DABs=19%	11%	44%	22%	22%	78%
Mean	25%	57%	27%	20%	63%

	I feel unsafe here	Local DABs and deteriorated buildings in my neighbourhood	Cultural hygienic problems	Lack of civic services and infrastructure	Low widths of my access road
Yazd					
39%<DABs	74%	66%	49%	37%	68%
DABs=44%	75%	50%	25%	38%	63%
DABs=39%	73%	82%	73%	36%	73%
32%<DABs<39%	47%	57%	23%	17%	64%
DABs=36%	70%	60%	30%	10%	50%
DABs=36%	23%	54%	15%	23%	77%
DABs<32%	26%	53%	37%	44%	60%
DABs=32%	38%	77%	31%	31%	62%
DABs=13%	14%	29%	43%	57%	57%
Mean	49%	59%	37%	33%	64%

Isfahan	I feel unsafe here	Local DABs and deteriorated buildings in my neighbourhood	Cultural hygienic problems	Lack of civic services and infrastructure	Low widths of my access road
DABs=40%	33%	83%	50%	33%	67%
DABs=27%	67%	33%	67%	33%	100%
DABs=19%	33%	67%	50%	50%	50%
Mean	44%	61%	56%	39%	72%

D-3-5. Comparing local problems as expressed by refugees in fifteen urban blocks of three historic cities (2018)

Crosstab (socio-spatial local problems in your urban block, Kashan)					
Count (refugees)					
		I Feel unsafe here		Total	
		No answer			
Area of DABs 2018	45%	3		3	
	44%	3		3	
	42%	1		1	
	33%	3		3	
	21%	1		1	
	19%	1		1	
Total		12		12	
		Local deteriorated abandoned and dilapidated buildings		Total	
		Yes	No answer		
Area of DABs 2018	45%	0	3	3	
	44%	0	3	3	
	42%	0	1	1	
	33%	0	3	3	
	21%	0	1	1	
	19%	1	0	1	
Total		1	11	12	
		Cultural hygienic problems		Total	
		Yes	No answer		
Area of DABs 2018	45%	0	3	3	
	44%	1	2	3	
	42%	0	1	1	
	33%	0	3	3	
	21%	0	1	1	
	19%	1	0	1	
Total		2	10	12	
		Lack of civic service infrastructure		Total	
		Yes	No answer		
Area of DABs 2018	45%	0	3	3	

	44%	1	2	3
	42%	0	1	1
	33%	0	3	3
	21%	0	1	1
	19%	1	0	1
Total		2	10	12
		Low access road widths		Total
		Yes	No answer	
Area of DABs 2018	45%	2	1	3
	44%	1	2	3
	42%	0	1	1
	33%	0	3	3
	21%	0	1	1
	19%	1	0	1
Total		4	8	12
Crosstab (socio-spatial local problems in your urban block, Yazd)				
Count (Refugees)				
		I Feel unsafe here		Total
		Yes	No answer	
Area of DABs 2018	44%	2	4	6
	39%	0	7	7
	36%	0	2	2
	36%	0	0	0
	32%	0	1	1
	13%	0	2	2
Total		2	16	18
		Local deteriorated abandoned and dilapidated buildings		Total
		Yes	No answer	
Area of DABs 2018	44%	2	4	6
	39%	5	2	7
	36%	0	2	2
	36%	0	0	0
	32%	0	1	1
	13%	2	0	2
Total		9	9	18
		Cultural hygienic problems		Total
		Yes	No answer	
Area of DABs 2018	44%	3	3	6
	39%	1	6	7
	36%	0	2	2
	36%	0	0	0
	32%	0	1	1

	13%	2	0	2
Total		6	12	18
		Lack of civic service infrastructure		Total
		Yes	No answer	
Area of DABs 2018	44%	3	3	6
	39%	1	6	7
	36%	0	2	2
	36%	0	0	0
	32%	0	1	1
	13%	1	1	2
Total		5	13	18
		Low access road widths		Total
		Yes	No answer	
Area of DABs 2018	44%	3	3	6
	39%	6	1	7
	36%	0	2	2
	36%	0	0	0
	32%	0	1	1
	13%	2	0	2
Total		11	7	18
Crosstab (socio-spatial local problems in your urban block, Isfahan)				
Count (refugees)				
		I Feel unsafe here		Total
		No answer		
Area of DABs 2018	40%	2		2
	27%	2		2
	19%	1		1
Total		5		5
		Local deteriorated abandoned and dilapidated buildings		Total
		Yes		
Area of DABs 2018	40%	2		2
	27%	2		2
	19%	1		1
Total		5		5
		Cultural hygienic problems		Total
		Yes	No answer	
Area of DABs 2018	40%	2	0	2
	27%	1	1	2
	19%	0	1	1
Total		3	2	5

		Lack of civic service infrastructure		Total
		Yes	No answer	
Area of DABs 2018	40%	1	1	2
	27%	1	1	2
	19%	0	1	1
Total		2	3	5
		Low access road widths		Total
		Yes	No answer	
Area of DABs 2018	40%	0	2	2
	27%	1	1	2
	19%	1	0	1
Total		2	3	5

Kashan	I feel unsafe here	Local DABs and deteriorated buildings in my neighbourhood	Cultural hygienic problems	Lack of civic services and infrastructure	Low widths of my access road
44%<DABs	0%	0%	17%	17%	50%
DABs=45%	0%	0%	0%	0%	67%
DABs=44%	0%	0%	33%	33%	33%
21%<DABs<44%	0%	0%	0%	0%	0%
DABs=42%	0%	0%	0%	0%	0%
DABs=33%	0%	0%	0%	0%	0%
DABs<21%	0%	50%	50%	50%	50%
DABs=21%	0%	0%	0%	0%	0%
DABs=19%	0%	100%	100%	100%	100%
Mean	0%	17%	22%	22%	33%

Yazd	I feel unsafe here	Local DABs and deteriorated buildings in my neighbourhood	Cultural hygienic problems	Lack of civic services and infrastructure	Low widths of my access road
39%<DABs	17%	52%	32%	32%	68%
DABs=44%	33%	33%	50%	50%	50%
DABs=39%	0%	71%	14%	14%	86%
32%<DABs<39%	0%	0%	0%	0%	0%
DABs=36%	0%	0%	0%	0%	0%
DABs=36%	0%	0%	0%	0%	0%
DABs<32%	0%	50%	50%	25%	50%
DABs=32%	0%	0%	0%	0%	0%
DABs=13%	0%	100%	100%	50%	100%
Mean	6%	34%	27%	19%	39%

Isfahan	I feel unsafe here	Local DABs and deteriorated buildings in my neighbourhood	Cultural hygienic problems	Lack of civic services and infrastructure	Low widths of my access road
DABs=40%	0%	100%	100%	50%	0%
DABs=27%	0%	100%	50%	50%	50%
DABs=19%	0%	100%	0%	0%	100%
Mean	0%	100%	50%	33%	50%

Appendix D-4. Comparing the frequency of responses regarding preferred methods of participation for revitalising historic areas in three Iranian cities (2018)

D-4-1. Comparing the preferred methods of revitalization as expressed by all residents in three Iranian historic cities (2018)

Three historic cities	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Sense of belonging to the place	116	72.0	45	28.0	161	100.0
Survey summary based on 'replied and unreplied' cases in response to the question						

Three historic cities		Number of responses	Percent	Percent of Cases	Valid percent
What are your preferred methods of participation for revitalizing historic areas?	Implementation by personal, private funds	12	9.2	10.	7.5
	Implementation by mutual funds via local trusts	33	25.4	28.4	20.5
	Exchanging my property with external land or apartment	12	9.2	10.3	7.5
	Not interested in participation	33	25.4	28.4	20.5
	Selling my property	40	30.8	34.5	24.8
Total		130	100.0	112.1	80.7
Frequencies of responses to a dichotomy group tabulated at value 'Yes'.					

D-4-2. Comparing the preferred methods of revitalization as expressed by all residents in historic Kashan, Yazd and Isfahan (2018)

Historic Kashan	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Sense of belonging to the place	44	72.1	17	27.9	61	100.0
Survey summary based on 'replied and unreplied' cases in response to the question						

Historic Kashan		Number of responses	Percent	Percent of Cases	Valid percent
What are your preferred methods of participation for revitalizing historic areas?	Implementation by personal, private funds	3	6.3	6.8	4.9
	Implementation by mutual funds via local trusts	6	12.5	13.6	9.8
	Exchanging my property with external land or apartment	6	12.5	13.6	9.8
	Not interested in participation	12	25.0	27.3	19.7

	Selling my property	21	43.8	47.7	34.4
Total		48	100.0	109.1	78.7
Frequencies of responses to a dichotomy group tabulated at value 'Yes'.					

Historic Yazd	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Sense of belonging to the place	56	70.0	24	30.0	80	100.0
Survey summary based on 'replied and unreplied' cases in response to the question						

Historic Yazd		Number of responses	Percent	Percent of Cases	Valid percent
What are your preferred methods of participation for revitalizing historic areas?	Implementation by personal, private funds	8	13.1	14.3	10
	Implementation by mutual funds via local trusts	24	39.3	42.9	30
	Exchanging my property with external land or apartment	4	6.6	7.1	5
	Not interested in participation	16	26.2	28.6	20
	Selling my property	9	14.8	16.1	11.3
Total		61	100.0	108.9	76.3
Frequencies of responses to a dichotomy group tabulated at value 'Yes'.					

Historic Isfahan	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Sense of belonging to the place	16	80.0	4	20.0	20	100.0
Survey summary based on 'replied and unreplied' cases in response to the question						

Historic Isfahan		Number of responses	Percent	Percent of Cases	Valid percent
What are your preferred methods of participation for revitalizing historic areas?	Implementation by personal, private funds	1	4.8	6.3	5.0
	Implementation by mutual funds via local trusts	3	14.3	18.8	15.0
	Exchanging my property with external land or apartment	2	9.5	12.5	10.0
	Not interested in participation	5	23.8	31.3	25.0
	Selling my property	10	47.6	62.5	50.0
Total		21	100.0	131.3	105.0
Frequencies of responses to a dichotomy group tabulated at value 'Yes'.					

D-4-3. Comparing the preferred methods of revitalisation as expressed by all residents in fifteen urban blocks of three historic cities (2018)

Kashan					
Darb-I-Isfahan B-1		Number of responses	Percent	Percent of Cases	Valid percent
What are your preferred methods of participation for revitalizing historic areas? ^a	Implementation by personal private funds	2	25.0	28.	22.2.
	Implementation by mutual funding via local trusts	2	25.0	28.6	22.2
	Not interested in participation	2	25.0	28.6	22.2
	Selling my property	2	25.0	28.6	22.2
Total		8	100.0	114.3	88.8
a. Dichotomy group tabulated at value 'Yes' to the question.					
Darb-i-Isfahan urban tissue, B-2		Number of responses	Percent	Percent of Cases	Valid percent
What are your preferred methods of participation for revitalizing historic areas? ^a	Implementation by mutual funding via local trusts	1	10.0	10.0	9.1
	Exchanging my property with external land or apartment	3	30.0	30.0	27.3
	Not interested in participation	2	20.0	20.0	18.2
	Selling my property	4	40.0	40.0	36.4
Total		10	100.0	100.0	91.0
a. Dichotomy group tabulated at value 'Yes' to the question.					
Mohtasham urban tissue, B-15		Number of responses	Percent	Percent of Cases	Valid percent
What are your preferred methods of participation for revitalizing historic areas? ^a	Implementation by mutual funding via local trusts	1	20.0%	20.0%	10.0
	Exchanging my property with external land or apartment	1	20.0%	20.0%	10.0
	Not interested in participation	1	20.0%	20.0%	10.0
	Selling my property	2	40.0%	40.0%	20.0
Total		5	100.0%	100.0%	50.0
a. Dichotomy group tabulated at value 'Yes' to the question.					
Mohtasham urban tissue, B-16		Number of responses	Percent	Percent of Cases	Valid percent
What are your preferred methods of participation for revitalizing historic areas? ^a	Implementation by mutual funding via local trusts	1	9.1	11.1	9.1
	Exchanging my property with external land or apartment	1	9.1	11.1	9.1
	Not interested in participation	5	45.5	55.6	45.5

	Selling my property	4	36.4	44.4	36.4
Total		11	100.0	122.2	100.0
a. Dichotomy group tabulated at value 'Yes' to the question.					
Posht-i-Mashhad-i-paen urban tissue, B-3		Number of responses	Percent	Percent of Cases	Valid percent
What are your preferred methods of participation for revitalizing historic areas? ^a	Implementation by personal loan-private funds	1	16.7%	20.0%	10.0
	Exchanging my property with external land or apartment	1	16.7%	20.0%	10.0
	Selling my property	4	66.7%	80.0%	40.0
Total		6	100.0%	120.0%	60.0
a. Dichotomy group tabulated at value 'Yes' to the question.					
Posht-i-Mashhad-i-paen urban tissue, B-5		Number of responses	Percent	Percent of Cases	Valid percent
What are your preferred methods of participation for revitalizing historic areas? ^a	Implementation by personal private funds	1	12.5%	12.5%	10.0
	Not interested in participation	2	25.0%	25.0%	20.0
	Selling my property	5	62.5%	62.5%	50.0
Total		8	100.0%	100.0%	80.0
a. Dichotomy group tabulated at value 'Yes' to the question.					
Yazd					
Godal-i-Mosalla urban tissue, B-30		Number of responses	Percent	Percent of Cases	Valid percent
What are your preferred methods of participation for revitalizing historic areas? ^a	Implementation by personal private funds	1	10.0%	11.1%	8.3
	Implementation by mutual funding via local trusts	2	20.0%	22.2%	16.7
	Not interested in participation	5	50.0%	55.6%	41.7
	Selling my property	2	20.0%	22.2%	16.7
Total		10	100.0%	111.1%	83.4
a. Dichotomy group tabulated at value 'Yes' to the question.					
Godal-i-Mosalla urban tissue, B-43		Number of responses	Percent	Percent of Cases	Valid percent
What are your preferred methods of participation for revitalizing historic areas? ^a	Implementation by mutual funding via local trusts	4	57.1%	57.1%	28.6
	Not interested in participation	1	14.3%	14.3%	7.1
	Selling my property	2	28.6%	28.6%	14.2
Total		7	100.0%	100.0%	49.9
a. Dichotomy group tabulated at value 'Yes' to the question.					
Dolat-abad, B-9		Number of responses	Percent	Percent of Cases	Valid percent
What are your preferred methods of participation for revitalizing historic areas? ^a	Implementation by personal private funds	1	7.7%	8.3%	7.1
	Implementation by mutual funding via local trusts	8	61.5%	66.7%	57.1
	Not interested in participation	3	23.1%	25.0%	21.4
	Selling my property	1	7.7%	8.3%	7.1
Total		13	100.0%	108.3%	92.7
a. Dichotomy group tabulated at value 'Yes' to the question.					
Dolat-abad, B-28		Number of responses	Percent	Percent of Cases	Valid percent
What are your preferred methods of participation for revitalizing historic areas? ^a	Implementation by personal private funds	2	15.4%	18.2%	15.4
	Implementation by mutual funding via local trusts	5	38.5%	45.5%	38.5
	Exchanging my property with external land or apartment	1	7.7%	9.1%	7.7
	Not interested in participation	2	15.4%	18.2%	15.4
	Selling my property	3	23.1%	27.3%	23.1
Total		13	100.0%	118.2%	100.0

a. Dichotomy group tabulated at value 'Yes' to the question.					
Gonbad-i-sabz, B-8		Number of responses	Percent	Percent of Cases	Valid percent
What are your preferred methods of participation for revitalizing historic areas? ^a	Implementation by personal private funds	4	33.3%	33.3%	22.2
	Implementation by mutual funding via local trusts	3	25.0%	25.0%	16.7
	Exchanging my property with external land or apartment	2	16.7%	16.7%	11.1
	Not interested in participation	3	25.0%	25.0%	16.7
Total		12	100.0%	100.0%	66.7
a. Dichotomy group tabulated at value 'Yes' to the question.					
Gonbad-i-sabz, B-47		Number of responses	Percent	Percent of Cases	Valid percent
What are your preferred methods of participation for revitalizing historic areas? ^a	Implementation by mutual funding via local trusts	2	33.3%	40.0%	22.2
	Exchanging my property with external land or apartment	1	16.7%	20.0%	11.1
	Not interested in participation	2	33.3%	40.0%	22.2
	Selling my property	1	16.7%	20.0%	11.1
Total		6	100.0%	120.0%	66.6
Isfahan					
Masjid Ali, B-7		Number of responses	Percent	Percent of Cases	Valid percent
What are your preferred methods of participation for revitalizing historic areas? ^a	Implementation by mutual funding via local trusts	2	40.0%	100.0%	40.0
	Exchanging my property with external land or apartment	1	20.0%	50.0%	20.0
	Not interested in participation	1	20.0%	50.0%	20.0
	Selling my property	1	20.0%	50.0%	20.0
Total		5	100.0%	250.0%	110.0
a. Dichotomy group tabulated at value 'Yes' to the question.					
Masjid Ali, B-1		Number of responses	Percent	Percent of Cases	Valid percent
What are your preferred methods of participation for revitalizing historic areas? ^a	Implementation by personal private funds	1	14.3%	14.3%	12.5
	Not interested in participation	1	14.3%	14.3%	12.5
	Selling my property	5	71.4%	71.4%	62.5
Total		7	100.0%	100.0%	87.5
a. Dichotomy group tabulated at value 'Yes' to the question.					
Masjid Ali, B-2		Number of responses	Percent	Percent of Cases	Valid percent
What are your preferred methods of participation for revitalizing historic areas? ^a	Implementation by mutual funding via local trusts	1	11.1%	14.3%	14.3
	Exchanging my property with external land or apartment	1	11.1%	14.3%	14.3
	Not interested in participation	3	33.3%	42.9%	42.9
	Selling my property	4	44.4%	57.1%	57.1
Total		9	100.0%	128.6%	128.6
a. Dichotomy group tabulated at value 'Yes' to the question.					

D-4-4. Comparing the preferred methods of revitalisation as expressed by local residents in fifteen urban blocks of three historic cities (2018)

Crosstab (preferred methods of participations, Kashan)				
Count (local residents)				
		Implementation by personal private funds		Total
		Yes	No answer	
Area of DABs 2018	45%	2	4	6
	44%	0	7	7
	42%	0	10	10
	33%	0	7	7
	21%	0	10	10
	19%	1	8	9
Total		3	46	49
		Implementation by mutual funding via local trusts		Total
		Yes	No answer	
Area of DABs 2018	45%	2	4	6
	44%	1	6	7
	42%	1	9	10
	33%	1	6	7
	21%	1	9	10
	19%	0	9	9
Total		6	43	49
		Exchanging my property with external land or apartment		Total
		Yes	No answer	
Area of DABs 2018	45%	0	6	6
	44%	1	6	7
	42%	3	7	10
	33%	1	6	7
	21%	1	9	10
	19%	0	9	9
Total		6	43	49
		Not interested in participation		Total
		Yes	No answer	
Area of DABs 2018	45%	1	5	6
	44%	1	6	7
	42%	2	8	10
	33%	0	7	7
	21%	5	5	10
	19%	2	7	9
Total		11	38	49

		Selling my property		Total
		Yes	No answer	
Area of DABs 2018	45%	2	4	6
	44%	2	5	7
	42%	4	6	10
	33%	4	3	7
	21%	4	6	10
	19%	5	4	9
Total		21	28	49
Crosstab (preferred methods of participations, Yazd)				
Count (Local residents)				
		Implementation by personal private funds		Total
		Yes	No answer	
Area of DABs 2018	44%	0	8	8
	39%	4	7	11
	36%	1	9	10
	36%	2	11	13
	32%	1	12	13
	13%	0	7	7
Total		8	54	62
		Implementation by mutual funding via local trusts		Total
		Yes	No answer	
Area of DABs 2018	44%	4	4	8
	39%	3	8	11
	36%	2	8	10
	36%	5	8	13
	32%	8	5	13
	13%	2	5	7
Total		24	38	62
		Exchanging my property with external land or apartment		Total
		Yes	No answer	
Area of DABs 2018	44%	0	8	8
	39%	2	9	11
	36%	0	10	10
	36%	1	12	13
	32%	0	13	13
	13%	1	6	7
Total		4	58	62
		Not interested in participation		Total
		Yes	No answer	
Aera_of_DABs_2018	44%	1	7	8

	39%	2	9	11
	36%	5	5	10
	36%	2	11	13
	32%	3	10	13
	13%	2	5	7
Total		15	47	62
		Selling my property		
		Yes	No answer	Total
Area of DABs 2018	44%	2	6	8
	39%	0	11	11
	36%	2	8	10
	36%	3	10	13
	32%	1	12	13
	13%	1	6	7
Total		9	53	62
Crosstab (preferred methods of participations, Isfahan)				
Count (local residents)				
		Implementation by personal private funds		
		Yes	No answer	Total
Area of DABs 2018	40%	1	5	6
	27%	0	3	3
	19%	0	6	6
Total		1	14	15
		Implementation by mutual funding via local trusts		
		Yes	No answer	Total
Area of DABs 2018	40%	0	6	6
	27%	2	1	3
	19%	1	5	6
Total		3	12	15
		Exchanging my property with external land or apartment		
		Yes	No answer	Total
Area of DABs 2018	40%	0	6	6
	27%	1	2	3
	19%	1	5	6
Total		2	13	15
		Not interested in participation		
		Yes	No answer	Total
Area of DABs 2018	40%	1	5	6
	27%	1	2	3
	19%	3	3	6

Total		5	10	15
		Selling my property		Total
		Yes	No answer	
Area of DABs 2018	40%	4	2	6
	27%	1	2	3
	19%	3	3	6
Total		8	7	15

	I repair my house by personal fund	I participate by mutual funding via local trusts	I exchange my property with external land or apartments	Not interested in participation	I sell my property
Kashan					
44%<DABs	17%	24%	7%	16%	31%
DABs=45%	33%	33%	0%	17%	33%
DABs=44%	0%	14%	14%	14%	29%
21%<DABs<44%	0%	12%	22%	10%	49%
DABs=42%	0%	10%	30%	20%	40%
DABs=33%	0%	14%	14%	0%	57%
DABs<21%	6%	5%	5%	36%	48%
DABs=21%	0%	10%	10%	50%	40%
DABs=19%	11%	0%	0%	22%	56%
Mean	7%	14%	12%	21%	43%

	I repair my house by personal fund	I participate by mutual funding via local trusts	I exchange my property with external land or apartments	Not interested in participation	I sell my property
Yazd					
39%<DABs	18%	39%	9%	16%	13%
DABs=44%	0%	50%	0%	13%	25%
DABs=39%	36%	27%	18%	18%	0%
32%<DABs<39%	13%	29%	4%	33%	22%
DABs=36%	10%	20%	0%	50%	20%
DABs=36%	15%	38%	8%	15%	23%
DABs<32%	4%	46%	7%	26%	11%
DABs=32%	8%	62%	0%	23%	8%
DABs=13%	0%	29%	14%	29%	14%
Mean	12%	38%	7%	25%	15%

	I repair my house by personal fund	I participate by mutual funding via local trusts	I exchange my property with external land or apartments	Not interested in participation	I sell my property
Isfahan					
DABs=40%	17%	0%	0%	17%	67%
DABs=27%	0%	67%	33%	33%	33%
DABs=19%	0%	17%	17%	50%	50%
Mean	6%	28%	17%	33%	50%

D-4-5. Comparing the preferred methods of revitalisation as expressed by refugees in fifteen urban blocks of three historic cities (2018)

Crosstab (preferred methods of participations, Kashan)				
Count (Refugees)				
		Implementation by personal private funds		Total
		No answer		
Area of DABs 2018	45%	3		3
	44%	3		3
	42%	1		1
	33%	3		3
	21%	1		1
	19%	1		1
Total		12		12
		Implementation by mutual funding via local trusts		Total
		No answer		
Area of DABs 2018	45%	3		3
	44%	3		3
	42%	1		1
	33%	3		3
	21%	1		1
	19%	1		1
Total		12		12
		Exchanging my property with external land or apartment		Total
		No answer		
Area of DABs 2018	45%	3		3
	44%	3		3
	42%	1		1
	33%	3		3
	21%	1		1
	19%	1		1
Total		12		12
		Not interested in participation		Total
		Yes	No answer	
Area of DABs 2018	45%	1	2	3
	44%	0	3	3

	42%	0	1	1
	33%	0	3	3
	21%	0	1	1
	19%	0	1	1
Total		1	11	12
Crosstab (preferred methods of participations, Yazd)				
Count (Refugees)				
		Implementation by personal private funds		
		No answer		Total
Area of DABs 2018	44%	6		6
	39%	7		7
	36%	2		2
	36%	0		0
	32%	1		1
	13%	2		2
Total		18		18
		Implementation by mutual funding via local trusts		
		No answer		Total
Area of DABs 2018	44%	6		6
	39%	7		7
	36%	2		2
	36%	0		0
	32%	1		1
	13%	2		2
Total		18		18
		Exchanging my property with external land or apartment		
		No answer		Total
Area of DABs 2018	44%	6		6
	39%	7		7
	36%	2		2
	36%	0		0
	32%	1		1
	13%	2		2
Total		18		18
		Not interested in participation		
		Yes	No answer	Total

Area of DABs 2018	44%	0	6	6
	39%	1	6	7
	36%	0	2	2
	36%	0	0	0
	32%	0	1	1
	13%	0	2	2
Total		1	17	18
		Selling my property	Total	
		No answer		
Area of DABs 2018	44%	6	6	
	39%	7	7	
	36%	2	2	
	36%	0	0	
	32%	1	1	
	13%	2	2	
Total		18	18	
Crosstab (preferred methods of participations, Isfahan)				
Count (Refugees)				
		Implementatio n by personal private funds	Total	
		No answer		
Area of DABs 2018	40%	2	2	
	27%	2	2	
	19%	1	1	
Total		5	5	
		Implementatio n by mutual funding via local trusts	Total	
		No answer		
Area of DABs 2018	40%	2	2	
	27%	2	2	
	19%	1	1	
Total		5	5	
		Exchanging my property with external land or apartment	Total	
		No answer		
Area of DABs 2018	40%	2	2	
	27%	2	2	

	19%	1		1
Total		5		5
		Not interested in participation	Total	
		No answer		
Area of DABs 2018	40%	2	2	
	27%	2	2	
	19%	1	1	
Total		5	5	
		Selling my property		Total
		Yes	No answer	
Area of DABs 2018	40%	1	1	2
	27%	0	2	2
	19%	1	0	1
Total		2	3	5

Kashan	I repair my house by personal fund	I participate by mutual funding via local trusts	I exchange my property with external land or apartments	Not interested in participation	I sell my property
44%<DABs	0%	0%	0%	17%	0%
DABs=45%	0%	0%	0%	33%	0%
DABs=44%	0%	0%	0%	0%	0%
21%<DABs<44%	0%	0%	0%	0%	0%
DABs=42%	0%	0%	0%	0%	0%
DABs=33%	0%	0%	0%	0%	0%
DABs<21%	0%	0%	0%	0%	0%
DABs=21%	0%	0%	0%	0%	0%
DABs=19%	0%	0%	0%	0%	0%
Mean	0%	0%	0%	6%	0%

Yazd	I repair my house by personal fund	I participate by mutual funding via local trusts	I exchange my property with external land or apartments	Not interested in participation	I sell my property
39%<DABs	0%	0%	0%	7%	0%
DABs=44%	0%	0%	0%	0%	0%
DABs=39%	0%	0%	0%	14%	0%
32%<DABs<39%	0%	0%	0%	0%	0%
DABs=36%	0%	0%	0%	0%	0%
DABs=36%	0%	0%	0%	0%	0%
DABs<32%	0%	0%	0%	0%	0%
DABs=32%	0%	0%	0%	0%	0%
DABs=13%	0%	0%	0%	0%	0%
Mean	0%	0%	0%	2%	0%

Isfahan	I repair my house by personal fund	I participate by mutual funding via local trusts	I exchange my property with external land or apartments	Not interested in participation	I sell my property
DABs=40%	0%	0%	0%	0%	50%
DABs=27%	0%	0%	0%	0%	0%
DABs=19%	0%	0%	0%	0%	100%
Mean	0%	0%	0%	0%	50%

Appendix D-5. Comparing the frequency of responses regarding sense of social safety as expressed by residents in three Iranian cities (2018)

D-5-1. Comparing sense of social safety as expressed by all residents in three Iranian historic cities (2018)

Three historic cities	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
What does make historic areas unsafe?	93	57.8	68	42.2	161	100.0
Survey summary based on 'replied and unreplied' cases in response to the question						

Three historic cities		Number of responses	Percent	Percent of Cases	Valid percent
What does make historic areas unsafe?	Foreign refugees	19	11.2	20.4	11.8
	Abandoned or dilapidated buildings	52	30.6	55.9	32.3
	Narrow depopulated roads	54	31.8	58.1	33.5
	Addicts or criminals	44	25.9	47.3	27.3
	Other less known factors	1	0.6	1.1	0.6
Total		170	100.0	182.8	105.6
Frequencies of responses to a dichotomy group tabulated at value 'Yes'.					

D-5-2. Comparing sense of social safety as expressed by all residents in historic Kashan, Yazd and Isfahan (2018)

Historic Kashan	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
What does make historic areas unsafe?	31	50.8	30	49.2	61	100.0
Survey summary based on 'replied and unreplied' cases in response to the question						

Historic Kashan		Number of responses	Percent	Percent of Cases	Valid percent
What does make historic areas unsafe?	Foreign refugees	4	7.7	12.9	6.6
	Abandoned or dilapidated buildings	16	30.8	51.6	26.2
	Narrow depopulated roads	23	44.2	74.2	37.7
	Addicts or criminals	9	17.3	29.0	14.8
Total		52	100.0	167.7	85.2
Frequencies of responses to a dichotomy group tabulated at value 'Yes'.					

Historic Yazd	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
What does make historic areas unsafe?	51	63.8	29	36.3	80	100.0
Survey summary based on 'replied and unreplied' cases in response to the question						

Historic Yazd		Number of responses	Percent	Percent of Cases	Valid percent
What does make historic areas unsafe?	Foreign refugees	14	13.9	27.5	17.5
	Abandoned or dilapidated buildings	31	30.7	60.8	38.8
	Narrow depopulated roads	23	22.8	45.1	28.8
	Addicts or criminals	32	31.7	62.7	40.0
	Other less known factors	1	1.0	2.0	1.3
Total		101	100.0	198.0	126.3
Frequencies of responses to a dichotomy group tabulated at value 'Yes'.					

Historic Isfahan	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
What does make historic areas unsafe?	11	55.0	9	45.0	20	100.0
Survey summary based on 'replied and unreplied' cases in response to the question						

Historic Isfahan		Number of responses	Percent	Percent of Cases	Valid percent
What does make historic areas unsafe?	Foreign refugees	1	5.9	9.1	5.0
	Abandoned or dilapidated buildings	5	29.4	45.5	25.0
	Narrow depopulated roads	8	47.1	72.7	40.0
	Addicts or criminals	3	17.6	27.3	15.0
Total		17	100.0	154.5	85.0
Frequencies of responses to a dichotomy group tabulated at value 'Yes'.					

D-5-3. Comparing the sense of social safety as expressed by all residents in fifteen urban blocks of three historic cities (2018)

Kashan					
		Number of responses	Percent	Percent of Cases	Valid percent
Darb-i-Isfahan urban tissue, B-1					
What does make historic areas unsafe? ^a	Foreign refugees	2	18.2	50.0	22.2
	Abandoned or dilapidated buildings	3	27.3	75.0	33.3
	Narrow depopulated roads	4	36.4	100.0	44.4
	Addicts or criminals	2	18.2	50.0	22.2
Total		11	100.0	275.0	122.1
a. Dichotomy group tabulated at value '1=Yes'.					
		Number of responses	Percent	Percent of Cases	Valid percent
Darb-i-Isfahan urban tissue, B-2					
What does make historic areas unsafe? ^a	Foreign refugees	2	25.0	33.3	18.2
	Abandoned or dilapidated buildings	3	37.5	50.0	27.3
	Narrow depopulated roads	3	37.5	50.0	27.3
Total		8	100.0	133.3	72.8
a. Dichotomy group tabulated at value '1=Yes'.					
		Number of responses	Percent	Percent of Cases	Valid percent
Mohtasham urban tissue, B-15					
What does make historic areas unsafe? ^a	Narrow depopulated roads	1	100.0	10.0	10.0
Total		1	100.0	10.0	10.0
a. Dichotomy group tabulated at value '1=Yes'.					
		Number of responses	Percent	Percent of Cases	Valid percent
Mohtasham urban tissue, B-16					
What does make historic areas unsafe? ^a	Abandoned or dilapidated buildings	4	36.4	66.7	36.4
	Narrow depopulated roads	3	27.3	50.0	27.3
	Addicts or criminals	4	36.4	66.7	36.4
Total		11	100.0	183.3	100.1
a. Dichotomy group tabulated at value '1=Yes'.					
		Number of responses	Percent	Percent of Cases	Valid percent
Posht-i-Mashhad-i-paen urban tissue, B-3					
What does make historic areas unsafe? ^a	Abandoned or dilapidated buildings	4	33.3%	57.1%	40.0
	Narrow depopulated roads	6	50.0%	85.7%	60.0
	Addicts or criminals	2	16.7%	28.6%	20.0
Total		12	100.0%	171.4%	120.0
a. Dichotomy group tabulated at value '1=Yes'.					

		Number of responses	Percent	Percent of Cases	Valid percent
Posht-i-Mashhad-i-paeen urban tissue, B-5					
What does make historic areas unsafe? ^a	Abandoned or dilapidated buildings	2	22.2%	28.6%	20.0
	Narrow depopulated roads	6	66.7%	85.7%	60.0
	Addicts or criminals	1	11.1%	14.3%	10.0
Total		9	100.0%	128.6%	90.0
a. Dichotomy group tabulated at value '1=Yes'.					
Yazd					
		Number of responses	Percent	Percent of Cases	Valid percent
Godal-i-Mosalla, B-30					
What does make historic areas unsafe? ^a	Foreign refugees	4	22.2%	44.4%	33.3
	Abandoned or dilapidated buildings	5	27.8%	55.6%	41.7
	Narrow depopulated roads	3	16.7%	33.3%	25.0
	Addicts or criminals	6	33.3%	66.7%	50.0
Total		18	100.0%	200.0%	150.0
a. Dichotomy group tabulated at value '1=Yes'.					
		Number of responses	Percent	Percent of Cases	Valid percent
Godal-i-Mosalla urban tissue, B-43					
What does make historic areas unsafe? ^a	Foreign refugees	2	10.5%	20.0%	14.3
	Abandoned or dilapidated buildings	6	31.6%	60.0%	42.9
	Narrow depopulated roads	4	21.1%	40.0%	28.6
	Addicts or criminals	7	36.8%	70.0%	50.0
Total		19	100.0%	190.0%	135.8
a. Dichotomy group tabulated at value '1=Yes'.					
		Number of responses	Percent	Percent of Cases	Valid percent
Dolat-abad, B-9					
What does make historic areas unsafe? ^a	Abandoned or dilapidated buildings	8	44.4%	80.0%	57.1
	Narrow depopulated roads	5	27.8%	50.0%	35.7
	Addicts or criminals	5	27.8%	50.0%	35.7
Total		18	100.0%	180.0%	128.5
a. Dichotomy group tabulated at value '1=Yes'.					
		Number of responses	Percent	Percent of Cases	Valid percent
Dolat-abad, B-28					
What does make historic areas unsafe? ^a	Abandoned or dilapidated buildings	2	22.2%	25.0%	15.4
	Narrow depopulated roads	4	44.4%	50.0%	30.8
	Addicts or criminals	3	33.3%	37.5%	23.1
Total		9	100.0%	112.5%	69.3
a. Dichotomy group tabulated at value '1=Yes'.					
		Number of responses	Percent	Percent of Cases	Valid percent
Gonbad-i-sabz, B-8					
What does make historic areas unsafe? ^a	Foreign refugees	6	21.4%	60.0%	33.3
	Abandoned or dilapidated buildings	8	28.6%	80.0%	44.4
	Narrow depopulated roads	4	14.3%	40.0%	22.2
	Addicts or criminals	9	32.1%	90.0%	50.0
	Other less known factors	1	3.6%	10.0%	5.6
Total		28	100.0%	280.0%	155.5
a. Dichotomy group tabulated at value '1=Yes'.					
		Number of responses	Percent	Percent of Cases	Valid percent
Gonbad-i-sabz, B-47					
	Foreign refugees	2	22.2%	50.0%	22.2

What does make historic areas unsafe? ^a	Abandoned or dilapidated buildings	2	22.2%	50.0%	22.2
	Narrow depopulated roads	3	33.3%	75.0%	33.3
	Addicts or criminals	2	22.2%	50.0%	22.2
Total		9	100.0%	225.0%	100.0
a. Dichotomy group tabulated at value '1=Yes'.					
Isfahan					
Masjid Ali, B-7		Number of responses	Percent	Percent of Cases	Valid percent
What does make historic areas unsafe? ^a	Foreign refugees	1	25.0%	25.0%	20.0
	Narrow depopulated roads	3	75.0%	75.0%	60.0
Total		4	100.0%	100.0%	80.0
a. Dichotomy group tabulated at value '1=Yes'.					
Masjid Ali, B-1		Number of responses	Percent	Percent of Cases	Valid percent
What does make historic areas unsafe? ^a	Abandoned or dilapidated buildings	3	50.0%	75.0%	37.5
	Narrow depopulated roads	2	33.3%	50.0%	25.0
	Addicts or criminals	1	16.7%	25.0%	12.5
Total		6	100.0%	150.0%	75
a. Dichotomy group tabulated at value '1=Yes'.					
Masjid Ali, B-2		Number of responses	Percent	Percent of Cases	Valid percent
What does make historic areas unsafe? ^a	Abandoned or dilapidated buildings	2	28.6%	66.7%	28.6
	Narrow depopulated roads	3	42.9%	100.0%	42.9
	Addicts or criminals	2	28.6%	66.7%	28.6
Total		7	100.0%	233.3%	100.1
a. Dichotomy group tabulated at value '1=Yes'.					

D-5-4. Comparing sense of social safety as expressed by local residents in fifteen urban blocks of three historic cities (2018)

Crosstab (reasons for feeling of unsafety in the neighborhood, Kashan)				
Count (local residents)				
		Foreign refugees		Total
		Yes	No answer	
Area of DABs 2018	45%	2	4	6
	44%	0	7	7
	42%	2	8	10
	33%	0	7	7
	21%	0	10	10
	19%	0	9	9
Total		4	45	49
		Abandoned or dilapidated buildings		Total
		Yes	No answer	
Area of DABs 2018	45%	3	3	6
	44%	0	7	7

	42%	3	7	10
	33%	4	3	7
	21%	3	7	10
	19%	2	7	9
Total		15	34	49
		Narrow depopulated roads		
		Yes	No answer	Total
Area of DABs 2018	45%	3	3	6
	44%	1	6	7
	42%	3	7	10
	33%	6	1	7
	21%	3	7	10
	19%	5	4	9
Total		21	28	49
		Addicts or criminals		
		Yes	No answer	Total
Area of DABs 2018	45%	2	4	6
	44%	0	7	7
	42%	0	10	10
	33%	2	5	7
	21%	4	6	10
	19%	1	8	9
Total		9	40	49
Crosstab (reasons for feeling of unsafety in the neighborhood, Yazd)				
Count (Local residents)				
		Foreign refugees		
		Yes	No answer	Total
Area of DABs 2018	44%	2	6	8
	39%	6	5	11
	36%	4	6	10
	36%	0	13	13
	32%	0	13	13
	13%	2	5	7
Total		14	48	62
		Abandoned or dilapidated buildings		
		Yes	No answer	Total
Area of DABs 2018	44%	4	4	8
	39%	8	3	11
	36%	5	5	10
	36%	2	11	13
	32%	8	5	13
	13%	0	7	7
Total		27	35	62
		Narrow depopulated roads		Total

		Yes	No answer	
Area of DABs 2018	44%	2	6	8
	39%	4	7	11
	36%	3	7	10
	36%	4	9	13
	32%	5	8	13
	13%	1	6	7
Total		19	43	62
		Addicts or criminals		
		Yes	No answer	Total
Aera_of_DABs_2018	44%	5	3	8
	39%	8	3	11
	36%	6	4	10
	36%	3	10	13
	32%	5	8	13
	13%	2	5	7
Total		29	33	62
Crosstab (reasons for feeling of unsafety in the neighborhood, Isfahan)				
Count (local residents)				
		Foreign refugees		
		Yes	No answer	Total
Area of DABs 2018	40%	0	6	6
	27%	1	2	3
	19%	0	6	6
Total		1	14	15
		Abandoned or dilapidated buildings		
		Yes	No answer	Total
Area of DABs 2018	40%	3	3	6
	27%	0	3	3
	19%	2	4	6
Total		5	10	15
		Narrow depopulated roads		
		Yes	No answer	Total
Area of DABs 2018	40%	1	5	6
	27%	2	1	3
	19%	3	3	6
Total		6	9	15
		Addicts or criminals		
		Yes	No answer	Total
Area of DABs 2018	40%	1	5	6
	27%	0	3	3
	19%	2	4	6
Total		3	12	15

Kashan	Foreign refugees	DABs	Narrow depopulated roads	Addicts or criminals
44%<DABs	17%	25%	32%	17%
DABs=45%	33%	50%	50%	33%
DABs=44%	0%	0%	14%	0%
21%<DABs<44%	10%	44%	58%	15%
DABs=42%	20%	30%	30%	0%
DABs=33%	0%	57%	86%	29%
DABs<21%	0%	26%	43%	26%
DABs=21%	0%	30%	30%	40%
DABs=19%	0%	22%	56%	11%
Mean	18%	32%	45%	19%

Yazd	Foreign refugees	DABs	Narrow depopulated roads	Addicts or criminals
39%<DABs	40%	62%	31%	68%
DABs=44%	25%	50%	25%	63%
DABs=39%	55%	73%	36%	73%
32%<DABs<39%	20%	33%	31%	42%
DABs=36%	40%	50%	30%	60%
DABs=36%	0%	15%	31%	23%
DABs<32%	15%	31%	26%	34%
DABs=32%	0%	62%	38%	38%
DABs=13%	29%	0%	14%	29%
Mean	25%	42%	29%	48%

Isfahan	Foreign refugees	DABs	Narrow depopulated roads	Addicts or criminals
DABs=40%	0%	50%	17%	17%
DABs=27%	33%	0%	67%	0%
DABs=19%	0%	33%	50%	33%
Mean	11%	28%	45%	17%

D-5-5. Comparing sense of social safety as expressed by refugees in fifteen urban blocks of three historic cities (2018)

Crosstab (reasons for feeling of unsafety in the neighborhood, Kashan)				
Count (refugees)				
		Foreign refugees		Total
		No answer		
Area of DABs 2018	45%	3		3
	44%	3		3
	42%	1		1
	33%	3		3
	21%	1		1
	19%	1		1
Total		12		12
		Abandoned or dilapidated buildings		Total
		Yes	No answer	

Area of DABs 2018	45%	0	3	3
	44%	0	3	3
	42%	0	1	1
	33%	0	3	3
	21%	1	0	1
	19%	0	1	1
Total		1	11	12
		Narrow depopulated roads		
		Yes	No answer	Total
Area of DABs 2018	45%	1	2	3
	44%	0	3	3
	42%	0	1	1
	33%	0	3	3
	21%	0	1	1
	19%	1	0	1
Total		2	10	12
		Addicts or criminals		
		No answer		Total
Area of DABs 2018	45%		3	3
	44%		3	3
	42%		1	1
	33%		3	3
	21%		1	1
	19%		1	1
Total			12	12
Crosstab (reasons for feeling of unsafety in the neighborhood, Yazd)				
Count (Refugees)				
		Foreign refugees		
		No answer		Total
Area of DABs 2018	44%		6	6
	39%		7	7
	36%		2	2
	36%		0	0
	32%		1	1
	13%		2	2
Total			18	18
		Abandoned or dilapidated buildings		
		Yes	No answer	Total
Area of DABs 2018	44%	2	4	6
	39%	0	7	7
	36%	0	2	2
	36%	0	0	0

	32%	0	1	1
	13%	2	0	2
Total		4	14	18
		Narrow depopulated roads		Total
		Yes	No answer	
Area of DABs 2018	44%	2	4	6
	39%	0	7	7
	36%	0	2	2
	36%	0	0	0
	32%	0	1	1
	13%	2	0	2
Total		4	14	18
		Addicts or criminals		Total
		Yes	No answer	
Area of DABs 2018	44%	2	4	6
	39%	1	6	7
	36%	0	2	2
	36%	0	0	0
	32%	0	1	1
	13%	0	2	2
Total		3	15	18
Crosstab (reasons for feeling of unsafety in the neighborhood, Isfahan)				
Count (refugees)				
		Foreign refugees		Total
		No answer		
Area of DABs 2018	40%	2		2
	27%	2		2
	19%	1		1
Total		5		5
		Abandoned or dilapidated buildings		Total
		No answer		
Area of DABs 2018	40%	2		2
	27%	2		2
	19%	1		1
Total		5		5
		Narrow depopulated roads		Total
		Yes	No answer	
Area of DABs 2018	40%	1	1	2
	27%	1	1	2
	19%	0	1	1
Total		2	3	5
		Addicts or criminals		Total
		No answer		

Area of DABs 2018	40%	2	2
	27%	2	2
	19%	1	1
Total		5	5

Kashan	Foreign refugees	DABs	Narrow depopulated roads	Addicts or criminals
44%<DABs	0%	0%	17%	0%
DABs=45%	0%	0%	33%	0%
DABs=44%	0%	0%	0%	0%
21%<DABs<44%	0%	0%	0%	0%
DABs=42%	0%	0%	0%	0%
DABs=33%	0%	0%	0%	0%
DABs<21%	0%	50%	50%	0%
DABs=21%	0%	100%	0%	0%
DABs=19%	0%	0%	100%	0%
Mean	0%	17%	22%	0%

Yazd	Foreign refugees	DABs	Narrow depopulated roads	Addicts or criminals
39%<DABs	0%	17%	17%	24%
DABs=44%	0%	33%	33%	33%
DABs=39%	0%	0%	0%	14%
32%<DABs<39%	0%	0%	0%	0%
DABs=36%	0%	0%	0%	0%
DABs=36%	0%	0%	0%	0%
DABs<32%	0%	50%	50%	0%
DABs=32%	0%	0%	0%	0%
DABs=13%	0%	100%	100%	0%
Mean	0%	22%	22%	8%

Isfahan	Foreign refugees	DABs	Narrow depopulated roads	Addicts or criminals
DABs=40%	0%	0%	50%	0%
DABs=27%	0%	0%	50%	0%
DABs=19%	0%	0%	0%	0%
Mean	0%	0%	33%	0%

Appendix D-6. Comparing the frequency of responses regarding DABs as expressed by residents in three Iranian cities (2018)

D-6-1. Comparing the perception of residents regarding DABs in three Iranian historic cities (2018)

	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
What do you think about dilapidated-abandoned buildings?	145	90.1	16	9.9	161	100.0

		Number of responses	Percent	Percent of Cases	Valid percent
What do you think about dilapidated-abandoned buildings?	Dangerous	88	42.7	60.7	54.7
	Must be reutilized or restored	89	43.2	61.4	55.3
	Not a problem	15	7.3	10.3	9.3
	Do not know	14	6.8	9.7	8.7
Total		206	100.0	142.1	128.0

D-6-2. Comparing the perception of residents regarding DABs in historic Kashan, Yazd and Isfahan (2018)

Kashan	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
What do you think about dilapidated-abandoned buildings?	55	90.2	6	9.8	61	100.0

Kashan		Number of responses	Percent	Percent of Cases	Valid percent
What do you think about dilapidated abandoned buildings?	Dangerous	31	41.9	56.4	50.8
	Must be reutilized or restored	30	40.5	54.5	49.2
	Not a problem	9	12.2	16.4	14.8
	Do not know	4	5.4	7.3	6.7
Total		74	100.0	134.5	121.5

Yazd	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
What do you think about dilapidated abandoned buildings?	70	87.5	10	12.5	80	100.0

Yazd		Number of responses	Percent	Percent of Cases	Valid percent
What do you think about dilapidated abandoned buildings?	Dangerous	40	40.4	57.1	50.0
	Must be reutilized or restored	46	46.5	65.7	57.5
	Not a problem	5	5.1	7.1	6.3
	Do not know	8	8.1	11.4	1.3
Total		99	100.0	141.4	115.1

Isfahan	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
What do you think about dilapidated abandoned buildings?	20	100.0	0	0.0	20	100.0

Isfahan		Number of responses	Percent	Percent of Cases	Valid percent
What do you think about dilapidated-abandoned buildings?	Dangerous	17	51.5	85.0	85.0
	Must be reutilized or restored	13	39.4	65.0	65.0
	Not a problem	1	3.0	5.0	5.0
	Do not know	2	6.1	10.0	10.0
Total		33	100.0	165.0	165.0

D-6-3. Comparing perception of all residents regarding DABs in fifteen urban blocks of three historic cities (2018)

Kashan					
Darb-I-Isfahan B-1		Number of responses	Percent	Percent of Cases	Valid percent
What do you think about dilapidated abandoned buildings? ^a	Dangerous	2	22.2	28.6	22.2
	Must be reutilized or restored	4	44.4	57.1	44.4
	Not a problem	1	11.1	14.3	11.1
	Do not know	2	22.2	28.6	22.2
Total		9	100.0	128.6	100.0
a. Dichotomy group tabulated at value '1=Yes'.					
Darb-i-Isfahan urban tissue, B-2		Number of responses	Percent	Percent of Cases	Valid percent
What do you think about dilapidated abandoned buildings? ^a	Dangerous	7	46.7	63.6	63.6
	Must be reutilized or restored	6	40.0	54.5	54.5
	Not a problem	1	6.7	9.1	9.1
	Do not know	1	6.7	9.1	9.1
Total		15	100.0	136.4	136.4
a. Dichotomy group tabulated at value '1=Yes'.					
1.1. Mohtasham urban tissue, B-15		Number of responses	Percent	Percent of Cases	Valid percent
	Dangerous	6	50.0%	60.0	60.0

What do you think about dilapidated abandoned buildings? ^a	Must be reutilized or restored	5	41.7%	50.0	50.0
	Not a problem	1	8.3%	10.0	10.0
Total		12	100.0%	120.0	120.0
a. Dichotomy group tabulated at value '1=Yes'.					
Mohtasham urban tissue, B-16		Number of responses	Percent	Percent of Cases	Valid percent
What do you think about dilapidated abandoned buildings? ^a	Dangerous	5	41.7	50.0	45.5
	Must be reutilized or restored	3	25.0	30.0	27.3
	Not a problem	4	33.3	40.0	36.4
Total		12	100.0	120.0	109.2
a. Dichotomy group tabulated at value '1=Yes'.					
Posht-i-Mashhad-i-paen urban tissue, B-3		Number of responses	Percent	Percent of Cases	Valid percent
What do you think about dilapidated abandoned buildings? ^a	Dangerous	5	41.7%	62.5%	50.0
	Must be reutilized or restored	6	50.0%	75.0%	60.0
	Not a problem	1	8.3%	12.5%	10.0
Total		12	100.0%	150.0%	120.0
a. Dichotomy group tabulated at value '1=Yes'.					
Posht-i-Mashhad-i-paen urban tissue, B-5		Number of responses	Percent	Percent of Cases	Valid percent
What do you think about dilapidated abandoned buildings? ^a	Dangerous	6	42.9%	66.7%	60.0
	Must be reutilized or restored	6	42.9%	66.7%	60.0
	Not a problem	1	7.1%	11.1%	10.0
	Do not know	1	7.1%	11.1%	10.0
Total		14	100.0%	155.6%	140.0
a. Dichotomy group tabulated at value '1=Yes'.					
Yazd					
Godal-i-Mosalla, B-30		Number of responses	Percent	Percent of Cases	Valid percent
What do you think about dilapidated abandoned buildings? ^a	Dangerous	7	53.8%	70.0%	58.3
	Must be reutilized or restored	6	46.2%	60.0%	50.0
Total		13	100.0%	130.0%	108.3
a. Dichotomy group tabulated at value '1=Yes'.					
Godal-i-Mosalla urban tissue, B-43		Number of responses	Percent	Percent of Cases	Valid percent
What do you think about dilapidated abandoned buildings? ^a	Dangerous	7	43.8%	63.6%	50.0
	Must be reutilized or restored	7	43.8%	63.6%	50.0
	Not a problem	1	6.3%	9.1%	7.1
	Do not know	1	6.3%	9.1%	7.1
Total		16	100.0%	145.5%	114.2
a. Dichotomy group tabulated at value '1=Yes'.					
Dolat-abad, B-9		Number of responses	Percent	Percent of Cases	Valid percent
What do you think about dilapidated abandoned buildings? ^a	Dangerous	5	31.3%	38.5%	35.7
	Must be reutilized or restored	9	56.3%	69.2%	64.3
	Do not know	2	12.5%	15.4%	14.3
Total		16	100.0%	123.1%	114.3
a. Dichotomy group tabulated at value '1=Yes'.					
Dolat-abad, B-28		Number of responses	Percent	Percent of Cases	Valid percent
What do you think about dilapidated abandoned buildings? ^a	Dangerous	5	31.3%	41.7%	38.5
	Must be reutilized or restored	5	31.3%	41.7%	38.5
	Not a problem	3	18.8%	25.0%	23.1

	Do not know	3	18.8%	25.0%	23.1
Total		16	100.0%	133.3%	123.2
a. Dichotomy group tabulated at value '1=Yes'.					
Gonbad-i-sabz, B-8		Number of responses	Percent	Percent of Cases	Valid percent
What do you think about dilapidated abandoned buildings? ^a	Dangerous	13	44.8%	76.5%	72.2
	Must be reutilized or restored	15	51.7%	88.2%	83.3
	Do not know	1	3.4%	5.9%	5.6
Total		29	100.0%	170.6%	161.1
a. Dichotomy group tabulated at value '1=Yes'.					
1.2. Gonbad-i-sabz, B-47		Number of responses	Percent	Percent of Cases	Valid percent
What do you think about dilapidated abandoned buildings? ^a	Dangerous	3	33.3%	42.9%	33.3
	Must be reutilized or restored	4	44.4%	57.1%	44.4
	Not a problem	1	11.1%	14.3%	11.1
	Do not know	1	11.1%	14.3%	11.1
Total		9	100.0%	128.6%	100.0
a. Dichotomy group tabulated at value '1=Yes'.					
Isfahan					
Masjid Ali, B-7		Number of responses	Percent	Percent of Cases	Valid percent
What do you think about dilapidated abandoned buildings? ^a	Dangerous	5	71.4%	100.0%	100.0
	Must be reutilized or restored	2	28.6%	40.0%	40.0
Total		7	100.0%	140.0%	140.0
a. Dichotomy group tabulated at value '1=Yes'.					
Masjid Ali, B-1		Number of responses	Percent	Percent of Cases	Valid percent
What do you think about dilapidated abandoned buildings? ^a	Dangerous	7	50.0%	87.5%	87.5
	Must be reutilized or restored	5	35.7%	62.5%	62.5
	Not a problem	1	7.1%	12.5%	12.5
	Do not know	1	7.1%	12.5%	12.5
Total		14	100.0%	175.0%	175.0
a. Dichotomy group tabulated at value '1=Yes'.					
Masjid Ali, B-2		Number of responses	Percent	Percent of Cases	Valid percent
What do you think about dilapidated abandoned buildings? ^a	Dangerous	5	41.7%	71.4%	71.4
	Must be reutilized or restored	6	50.0%	85.7%	85.7
	Do not know	1	8.3%	14.3%	14.3
Total		12	100.0%	171.4%	171.4
a. Dichotomy group tabulated at value '1=Yes'.					

D-6-4. Comparing perception of local residents regarding DABs in fifteen urban blocks of three historic cities (2018)

Crosstab (what do you think about DABs, Kashan)				
Count (local residents)				
		Dangerous		Total
		Yes	No answer	
Area of DABs 2018	45%	1	5	6
	44%	4	3	7
	42%	7	3	10

	33%	5	2	7
	21%	5	5	10
	19%	5	4	9
Total		27	22	49
		Must be reutilized or restored		Total
		Yes	No answer	
Area of DABs 2018	45%	4	2	6
	44%	5	2	7
	42%	6	4	10
	33%	6	1	7
	21%	3	7	10
	19%	5	4	9
Total		29	20	49
		Not a problem		Total
		Yes	No answer	
Area of DABs 2018	45%	1	5	6
	44%	0	7	7
	42%	0	10	10
	33%	0	7	7
	21%	4	6	10
	19%	1	8	9
Total		6	43	49
		Do not know		Total
		Yes	No answer	
Area of DABs 2018	45%	0	6	6
	44%	0	7	7
	42%	1	9	10
	33%	0	7	7
	21%	0	10	10
	19%	1	8	9
Total		2	47	49
Crosstab (what do you think about DABs, Yazd)				
Count (Local residents)				
		Dangerous		Total
		Yes	No answer	
Area of DABs 2018	44%	6	2	8
	39%	8	3	11
	36%	7	3	10
	36%	5	8	13
	32%	4	9	13
	13%	1	6	7
Total		31	31	62
		Must be reutilized or restored		Total
		Yes	No answer	

Area of DABs 2018	44%	4	4	8
	39%	10	1	11
	36%	6	4	10
	36%	5	8	13
	32%	9	4	13
	13%	2	5	7
Total		36	26	62
		Not a problem		Total
		Yes	No answer	
Area of DABs 2018	44%	0	8	8
	39%	0	11	11
	36%	0	10	10
	36%	3	10	13
	32%	0	13	13
	13%	1	6	7
Total		4	58	62
		Do not know		Total
		Yes	No answer	
Area of DABs 2018	44%	0	8	8
	39%	1	10	11
	36%	0	10	10
	36%	3	10	13
	32%	2	11	13
	13%	1	6	7
Total		7	55	62
Crosstab (what do you think about DABs, Isfahan)				
Count (local residents)				
		Dangerous		Total
		Yes	No answer	
Area of DABs 2018	40%	6	0	6
	27%	3	0	3
	19%	4	2	6
Total		13	2	15
		Must be reutilized or restored		Total
		Yes	No answer	
Area of DABs 2018	40%	5	1	6
	27%	2	1	3
	19%	5	1	6
Total		12	3	15
		Not a problem		Total
		No answer		
Area of DABs 2018	40%	6		6
	27%	3		3

	19%		6	6
Total			15	15
		Do not know		Total
		Yes	No answer	
Area of DABs 2018	40%	0	6	6
	27%	0	3	3
	19%	1	5	6
Total		1	14	15

Kashan	DABs are dangerous	Must be reutilized or restored	DABs are not a problem	I do not know
44%<DABs	37%	69%	9%	0%
DABs=45%	17%	67%	17%	0%
DABs=44%	57%	71%	0%	0%
21%<DABs<44%	71%	73%	0%	5%
DABs=42%	70%	60%	0%	10%
DABs=33%	71%	86%	0%	0%
DABs<21%	53%	43%	26%	6%
DABs=21%	50%	30%	40%	0%
DABs=19%	56%	56%	11%	11%
Mean	54%	62%	11%	4%

Yazd	DABs are dangerous	Must be reutilized or restored	DABs are not a problem	I do not know
39%<DABs	74%	71%	0%	5%
DABs=44%	75%	50%	0%	0%
DABs=39%	73%	91%	0%	9%
32%<DABs<39%	54%	49%	12%	12%
DABs=36%	70%	60%	0%	0%
DABs=36%	38%	38%	23%	23%
DABs<32%	23%	49%	7%	15%
DABs=32%	31%	69%	0%	15%
DABs=13%	14%	29%	14%	14%
Mean	50%	56%	6%	10%

Isfahan	DABs are dangerous	Must be reutilized or restored	DABs are not a problem	I do not know
DABs=40%	100%	83%	0%	0%
DABs=27%	100%	67%	0%	0%
DABs=19%	67%	83%	0%	17%
Mean	89%	78%	0%	6%

D-6-5. Comparing the perception of refugee residents regarding DABs in fifteen urban blocks of three historic cities (2018)

Crosstab (what do you think about DABs, Kashan)				
Count (refugees)				
		Dangerous		Total
		Yes	No answer	
Area of DABs 2018	45%	1	2	3
	44%	2	1	3
	42%	0	1	1
	33%	0	3	3
	21%	0	1	1
	19%	1	0	1
Total		4	8	12
		Must be reutilized or restored		Total
		Yes	No answer	
Area of DABs 2018	45%	0	3	3
	44%	0	3	3
	42%	0	1	1
	33%	0	3	3
	21%	0	1	1
	19%	1	0	1
Total		1	11	12
		Not a problem		Total
		Yes	No answer	
Area of DABs 2018	45%	0	3	3
	44%	1	2	3
	42%	1	0	1
	33%	1	2	3
	21%	0	1	1
	19%	0	1	1
Total		3	9	12
		Do not know		Total
		Yes	No answer	
Area of DABs 2018	45%	2	1	3
	44%	0	3	3
	42%	0	1	1
	33%	0	3	3
	21%	0	1	1
	19%	0	1	1
Total		2	10	12
Crosstab (what do you think about DABs, Yazd)				
Count (Refugees)				
		Dangerous		Total

		Yes	No answer	
Area of DABs 2018	44%	1	5	6
	39%	5	2	7
	36%	0	2	2
	36%	0	0	0
	32%	1	0	1
	13%	2	0	2
Total		9	9	18
		Mus be reutilized or restored		
		Yes	No answer	Total
Area of DABs 2018	44%	3	3	6
	39%	5	2	7
	36%	0	2	2
	36%	0	0	0
	32%	0	1	1
	13%	2	0	2
Total		10	8	18
		Not a problem		
		Yes	No answer	Total
Area of DABs 2018	44%	1	5	6
	39%	0	7	7
	36%	0	2	2
	36%	0	0	0
	32%	0	1	1
	13%	0	2	2
Total		1	17	18
		Do not know		
		Yes	No answer	Total
Area of DABs 2018	44%	1	5	6
	39%	0	7	7
	36%	0	2	2
	36%	0	0	0
	32%	0	1	1
	13%	0	2	2
Total		1	17	18
Crosstab (what do you think about DABs, Isfahan)				
Count (refugees)				
		Dangerous		
		Yes	No answer	Total
Aera_of_DABs_2018	40%	1	1	2
	27%	2	0	2
	19%	1	0	1
Total		4	1	5
		Must be reutilized or restored		Total

		Yes	No answer	
Aera_of_DABs_2018	40%	0	2	2
	27%	0	2	2
	19%	1	0	1
Total		1	4	5
		Not a problem		Total
		Yes	No answer	
Aera_of_DABs_2018	40%	1	1	2
	27%	0	2	2
	19%	0	1	1
Total		1	4	5
		Do not know		Total
		Yes	No answer	
Aera_of_DABs_2018	40%	1	1	2
	27%	0	2	2
	19%	0	1	1
Total		1	4	5

Kashan	DABs are dangerous	Must be reutilized or restored	DABs are not a problem	I do not know
44%<DABs	50%	0%	17%	34%
DABs=45%	33%	0%	0%	67%
DABs=44%	67%	0%	33%	0%
21%<DABs<44%	0%	0%	67%	0%
DABs=42%	0%	0%	100%	0%
DABs=33%	0%	0%	33%	0%
DABs<21%	50%	50%	0%	0%
DABs=21%	0%	0%	0%	0%
DABs=19%	100%	100%	0%	0%
Mean	33%	17%	28%	11%

Yazd	DABs are dangerous	Must be reutilized or restored	DABs are not a problem	I do not know
39%<DABs	44%	61%	9%	9%
DABs=44%	17%	50%	17%	17%
DABs=39%	71%	71%	0%	0%
32%<DABs<39%	0%	0%	0%	0%
DABs=36%	0%	0%	0%	0%
DABs=36%	0%	0%	0%	0%
DABs<32%	100%	50%	0%	0%
DABs=32%	100%	0%	0%	0%
DABs=13%	100%	100%	0%	0%
Mean	48%	37%	3%	3%

Isfahan	DABs are dangerous	Must be reutilized or restored	DABs are not a problem	I do not know
DABs=40%	50%	0%	50%	50%

DABs=27%	100%	0%	0%	0%
DABs=19%	100%	100%	0%	0%
Mean	83%	33%	17%	17%

Appendix D-7. Comparing the frequency of responses regarding sense of place-identity as expressed by residents in three Iranian cities (2018)

D-7-1. Comparing the sense place-identity as expressed by all residents in three Iranian historic cities (2018)

Three historic cities		Frequency	Percent	Cumulative Percent	Valid Percent
Sense of place identity	Will leave	122	75.8	75.8	75.8
	Never leave	39	24.2	100.0	24.2
	Total	161	100.0		100.0

D-7-2. Comparing the sense place-identity as expressed by all residents in historic Kashan, Yazd and Isfahan (2018)

Historic Kashan		Frequency	Percent	Cumulative Percent	Valid Percent
Sense of place identity	Will leave	51	83.6	83.6	83.6
	Never leave	10	16.4	100.0	16.4
	Total	61	100.0		100.0

Historic Yazd		Frequency	Percent	Cumulative Percent	Valid Percent
Sense of place identity	Will leave	57	71.3	71.3	71.3
	Never leave	23	28.8	100.0	28.8
	Total	80	100.0		100.0

Historic Isfahan		Frequency	Percent	Cumulative Percent	Valid Percent
Sense of place identity	Will leave	14	70.0	70.0	70.0
	Never leave	6	30.0	100.0	30.0
	Total	20	100.0		100.0

D-7-3. Comparing the sense place-identity as expressed by all residents in fifteen urban blocks of three historic cities (2018)

Kashan				
Darb-I-Isfahan B-1	Frequency	Percent	Cumulative Percent	Valid percent

Sense of belonging to place	Will leave	8	88.9	88.9	88.9
	Never leave	1	11.1	100.0	11.1
	Total	9	100.0		100
a. Dichotomy group tabulated at value '1=Yes'.					
Darb-i-Isfahan urban tissue, B-2		Frequency	Percent	Cumulative Percent	Valid Percent
Sense of belonging to place	Will leave	9	81.8	81.8	81.8
	Never leave	2	18.2	100.0	18.2
	Total	11	100.0		100.0
a. Dichotomy group tabulated at value '1=Yes'.					
Mohtasham urban tissue, B-15		Frequency	Percent	Cumulative Percent	Valid Percent
Sense of belonging to place	Will leave	8	80.0	80.0	80.0
	Never leave	2	20.0	100.0	20.0
	Total	10	100.0		100.0
a. Dichotomy group tabulated at value '1=Yes'.					
Mohtasham urban tissue, B-16		Frequency	Percent	Cumulative Percent	Valid Percent
Sense of belonging to place	Will leave	9	81.8	81.8	81.8
	Never leave	2	18.2	100.0	18.2
	Total	11	100.0		100.0
a. Dichotomy group tabulated at value '1=Yes'.					
Posht-i-Mashhad-i-paen urban tissue, B-3		Frequency	Percent	Cumulative Percent	Valid Percent
Sense of belonging to place	Will leave	10	100.0	100.0	100.0
a. Dichotomy group tabulated at value '1=Yes'.					
Posht-i-Mashhad-i-paen urban tissue, B-5		Frequency	Percent	Cumulative Percent	Valid Percent
Sense of belonging to place	Will leave	7	70.0	70.0	70.0
	Never leave	3	30.0	100.0	30.0
	Total	10	100.0		100.0
a. Dichotomy group tabulated at value '1=Yes'.					
Yazd					
Godal-i-Mosalla, B-30		Frequency	Percent	Cumulative Percent	Valid Percent
Sense of belonging to place	Will leave	5	41.7	41.7	41.7
	Never leave	7	58.3	100.0	58.3
	Total	12	100.0		100.0
a. Dichotomy group tabulated at value '1=Yes'.					
Godal-i-Mosalla urban tissue, B-43		Frequency	Percent	Cumulative Percent	Valid Percent
Sense of belonging to place	Will leave	12	85.7	85.7	85.7
	Never leave	2	14.3	100.0	14.3
	Total	14	100.0		100.0
a. Dichotomy group tabulated at value '1=Yes'.					
Dolat-abad, B-9		Frequency	Percent	Cumulative Percent	Valid Percent
Sense of belonging to place	Will leave	11	78.6	78.6	78.6
	Never leave	3	21.4	100.0	21.4
	Total	14	100.0		100.0
a. Dichotomy group tabulated at value '1=Yes'.					
Dolat-abad, B-28		Frequency	Percent	Cumulative Percent	Valid Percent
Sense of belonging to place	Will leave	11	84.6	84.6	84.6
	Never leave	2	15.4	100.0	15.4
	Total	13	100.0		100.0
a. Dichotomy group tabulated at value '1=Yes'.					
Gonbad-i-sabz, B-8		Frequency	Percent	Cumulative Percent	Valid Percent
Sense of belonging to place	Will leave	12	66.7	66.7	66.7

	Never leave	6	33.3	100.0	33.3
	Total	18	100.0		100.0
a. Dichotomy group tabulated at value '1=Yes'.					
Gonbad-i-sabz, B-47		Frequency	Percent	Cumulative Percent	Valid Percent
Sense of belonging to place	Will leave	6	66.7	66.7	66.7
	Never leave	3	33.3	100.0	33.3
	Total	9	100.0		100.0
a. Dichotomy group tabulated at value '1=Yes'.					
Isfahan					
Masjid Ali, B-7		Frequency	Percent	Cumulative Percent	Valid Percent
Sense of belonging to place	Will leave	4	80.0	80.0	80.0
	Never leave	1	20.0	100.0	20.0
	Total	5	100.0		100.0
a. Dichotomy group tabulated at value '1=Yes'.					
Masjid Ali, B-1		Frequency	Percent	Cumulative Percent	Valid Percent
Sense of belonging to place	Will leave	6	75.0	75.0	75.0
	Never leave	2	25.0	100.0	25.0
	Total	8	100.0		100.0
a. Dichotomy group tabulated at value '1=Yes'.					
Masjid Ali, B-2		Frequency	Percent	Cumulative Percent	Valid Percent
Sense of belonging to the place	Will leave	4	57.1	57.1	57.1
	Never leave	3	42.9	100.0	42.9
	Total	7	100.0		100.0

D-7-4. Comparing the sense place-identity as expressed by local residents in fifteen urban blocks of three historic cities (2018)

Crosstab (do you leave your place if you receive a housing opportunity of equal value to your current property, Kashan)				
Count (local residents)				
		Do you leave your house for better accommodation options		Total
		Will leave	Never leave	
Area of DABs 2018	45%	5	1	6
	44%	5	2	7
	42%	8	2	10
	33%	7	0	7
	21%	8	2	10
	19%	6	3	9
Total		39	10	49
Crosstab (do you leave your place if you receive a housing opportunity of equal value to your current property, Yazd)				
Count (Local residents)				
		Do you leave your house for better accommodation options		Total
		Will leave	Never leave	

Area of DABs 2018	44%	6	2	8
	39%	6	5	11
	36%	3	7	10
	36%	11	2	13
	32%	10	3	13
	13%	4	3	7
Total		40	22	62
Crosstab (do you leave your place if you receive a housing opportunity of equal value to your current property, Isfahan)				
Count (local residents)				
		Do you leave your house for better accommodation options		Total
		Will leave	Never leave	
Area of DABs 2018	40%	4	2	6
	27%	2	1	3
	19%	3	3	6
Total		9	6	15

Kashan	Will leave	Never leave
44%<DABs	77%	23%
DABs=45%	83%	17%
DABs=44%	71%	29%
21%<DABs<44%	90%	10%
DABs=42%	80%	20%
DABs=33%	100%	0%
DABs<21%	74%	27%
DABs=21%	80%	20%
DABs=19%	67%	33%
Mean	80%	20%

Yazd	Will leave	Never leave
39%<DABs	65%	35%
DABs=44%	75%	25%
DABs=39%	55%	45%
32%<DABs<39%	58%	43%
DABs=36%	30%	70%
DABs=36%	85%	15%
DABs<32%	67%	33%
DABs=32%	77%	23%
DABs=13%	57%	43%
Mean	63%	37%

Isfahan	Will leave	Never leave
DABs=40%	67%	33%
DABs=27%	67%	33%
DABs=19%	50%	50%
Mean	61%	39%

D-7-5. Comparing the sense place-identity as expressed by refugees in fifteen urban blocks of three historic cities (2018)

Crosstab (do you leave your place if you receive a housing opportunity of equal value to your current property, Kashan)				
Count (refugees)				
		Do you Leave your house for better accommodation options		Total
		Will leave		
Area of DABs 2018	45%	3		3
	44%	3		3
	42%	1		1
	33%	3		3
	21%	1		1
	19%	1		1
Total		12		12
Crosstab (do you leave your place if you receive a housing opportunity of equal value to your current property, Yazd)				
Count (Refugees)				
		Do you Leave your house for better accommodation options		Total
		Will leave	Never leave	
Area of DABs 2018	44%	6	0	6
	39%	6	1	7
	36%	2	0	2
	36%	0	0	0
	32%	1	0	1
	13%	2	0	2
Total		17	1	18
Crosstab (do you leave your place if you receive a housing opportunity of equal value to your current property, Isfahan)				
Count (refugees)				
		Do you Leave your house for better accommodation options		Total
		Will leave		
Area of DABs 2018	40%	2		2
	27%	2		2
	19%	1		1
Total		5		5

Kashan	Will leave	Never
44%<DABs	100%	0%
DABs=45%	100%	0%
DABs=44%	100%	0%

21%<DABs<44%	100%	0%
DABs=42%	100%	0%
DABs=33%	100%	0%
DABs<21%	100%	0%
DABs=21%	100%	0%
DABs=19%	100%	0%
Mean	100%	0%

Yazd	Will leave	Never
39%<DABs	93%	7%
DABs=44%	100%	0%
DABs=39%	86%	14%
32%<DABs<39%	50%	0%
DABs=36%	100%	0%
DABs=36%	0%	0%
DABs<32%	100%	0%
DABs=32%	100%	0%
DABs=13%	100%	0%
Mean	81%	2%

Isfahan	Will leave	Never
DABs=40%	100%	0%
DABs=27%	100%	0%
DABs=19%	100%	0%
Mean	100%	0%

Appendix E: Research ethics

The student researcher: Since the historical city may attract minorities and generate poverty and criminality, then it could be a dangerous place. In this sense, numerous protocols were developed for mitigating risks, against several types of adverse situations which may be happened on the site, and for maintaining the safety of the student researcher while conducting field studies in areas of historic Kashan, Yazd, Isfahan (please see Appendix E-9, E-10 and E-13).

Street-survey participants: It is believed that vulnerable people could be among the participants, which might be socially maltreated as a result of this research, and in case if their names, ethnicities or locations would be disclosed to others. Consequently, during the implementation of street-surveys, all data were collected anonymously (Appendix E-4). Nonetheless, refugee settlements were demarcated in the produced maps, in a way that houses have shown no recognizable boundaries (see Section 5.2). Thus, a number of protocols were developed to protect resident-participants against the adverse effects of the present research

including “verbal participant information sheet” (see Appendix E-3), and “Risk assessment and mitigation plan for participants” (Appendix E-11).

In-depth interview participants: All potential interviewees (including representatives from the government agencies, practitioners, professionals, planners, academics and developers) have been contacted and briefed prior to an interview, via phone email or directly in person, by the researcher (Appendix E-14). The participant information sheet ensures that the potential participants have sufficient information to make an informed decision about whether to participate in this research or not (see Appendices E-5). Participants may opt out at any time by informing the researcher, while identities will only be disclosed according to the consent provided (see Appendix E-6). A contingency procedure was also developed regarding the possible withdrawal of participants in this research project (see Appendix E-12).

E-1. Approval letter

RESEARCH SERVICES
OFFICE OF RESEARCH ETHICS, COMPLIANCE
AND INTEGRITY
THE UNIVERSITY OF ADELAIDE

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CRICOS Provider Number 00123M

Our reference 32794

09 March 2018

Associate Professor Julian Worrall
School of Architecture & Built Environment

Dear Associate Professor Worrall

ETHICS APPROVAL No: H-2018-047
PROJECT TITLE: Application of spatial liminality in urban design, towards an approach for
revitalising unexploited land areas historical Iranian cities

The ethics application for the above project has been reviewed by the Low Risk Human Research Ethics Review Group (Faculty of Arts and Faculty of the Professions) and is deemed to meet the requirements of the *National Statement on Ethical Conduct in Human Research (2007)* involving no more than low risk for research participants.

You are authorised to commence your research on: 09/03/2018
The ethics expiry date for this project is: 31/03/2021

NAMED INVESTIGATORS:

Chief Investigator: Associate Professor Julian Worrall
Student - Postgraduate Doctorate by Research (PhD): Mr Hamed Tavakoli
Associate Investigator: Mr Ehsan Sharifi
Associate Investigator: Dr Nigel Westbrook

CONDITIONS OF APPROVAL: The revised application provided 06.03.2018 and the revised table 1 and table 7 provided 08.03.2018 have been approved.

Ethics approval is granted for three years and is subject to satisfactory annual reporting. The form titled Annual Report on Project Status is to be used when reporting annual progress and project completion and can be downloaded at <http://www.adelaide.edu.au/research-services/oreci/human/reporting/>. Prior to expiry, ethics approval may be extended for a further period.

Participants in the study are to be given a copy of the information sheet and the signed consent form to retain. It is also a condition of approval that you immediately report anything which might warrant review of ethical approval including:

- serious or unexpected adverse effects on participants,
- previously unforeseen events which might affect continued ethical acceptability of the project,
- proposed changes to the protocol or project investigators; and
- the project is discontinued before the expected date of completion.

Yours sincerely,

Dr Anna Olijnyk
Convenor

Dr Junggho Suh
Convenor

The University of Adelaide

E-2. Application for ethics approval

Human Research Ethics Committee (HREC)

2018 Application for ethics approval

Office use only	Received:	FEB 2018				
	RM No.					
	Ethics Approval No:	H-2018-047				
	HREC	EXEC	A/P	HSc	Psych	ORECI

LEVEL OF ETHICAL REVIEW:

Indicate the level of ethical review that is being sought for this application:

<input type="checkbox"/>	<p>Full HREC review</p> <p>Applies to all research involving more than “low risk research” as defined in the <u>National Statement on Ethical Conduct in Human Research</u></p>
<input checked="" type="checkbox"/>	<p>Low-risk review</p> <p>Applies to “low-risk research” as defined in the <u>National Statement on Ethical Conduct in Human Research (2007)</u> (referred to hereafter as <i>National Statement</i>). Research timetables should allow for the possibility that a project submitted as a low-risk application may be deemed to involve more than low risk, or to raise other issues, therefore requiring full review. Researchers may be requested to provide additional information.</p>

SECTION 1: PROJECT AND RESEARCHERS’ DETAILS

1.1 Project title:

Application of spatial liminality in urban design, towards an approach for revitalising unexploited land areas in historical Iranian cities

1.2 Provide a 1-2 sentence plain language summary of the project:

This summary should be in plain language and suitable for release to the public.
 The project is an inquiry into the physical dilapidation and socio-economic decline of central areas of historical Iranian cities, in search of innovative, sensitive, and viable responses in the field of urban design.

1.3 Project timeframe:

Proposed commencement date of activities that require human ethics approval:	27 March 2018	The estimated completion date of the project:	27 May 2018
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Research must not commence without the prior written approval of the HREC. Retrospective approval cannot be provided.

1.4 If this application is to extend a currently approved project, provide the HREC approval number:

HREC approval number:	N/A
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An Annual Report on Project Status Form should also be completed.

1.5 Applicant:

The application may also be referred to as the principal investigator. If the project is to be undertaken by a research student, the student’s primary or other supervisor at the University of Adelaide is the ‘applicant’.

Applicant’s name, title:	Julian Worrall	EMPLID:	1019485
School or Department:	School of Architecture & Built Environment		

Email:	julian.worrall@adelaide.edu.au	Phone:	<u>(08) 8313 4036</u>
Qualifications and research experience relevant to the project:	<p>Qualifications B.Arch (Hons1), University of Adelaide, 1997 PhD (Architecture), University of Tokyo, 2005 Registered Architect, South Australia (Reg.No.3425)</p> <p>Dr. Worrall's research interests span architectural and urban theory and criticism, and cross-cultural spatial history. Julian's research career has been broadly concerned with the construction of "alternative modernities" as seen through the lens of contemporary Japan. This orientation developed out of his doctoral research, entitled "Railway Urbanism: Commuter Rail and the Production of Public Space in 20th Century Tokyo", which examined the history and character of the public spaces associated with the rail transportation infrastructure in Tokyo. His first book, entitled "21st Century Tokyo: A Guide to Contemporary Architecture" (Kodansha International, 2010), was a portrait of contemporary Tokyo as seen through its architecture. Current research relates the formation of the built environment in Japan to larger socio-cultural phenomena such as privatisation, revitalisation, historicism, and cosmopolitanism. In his recent exhibitions and publications, Julian has contributed to "A Japanese Constellation" (New York, MoMA, 2016) and "Eastern Promises, Contemporary Architecture and Spatial Practice in East Asia" (Vienna, Hatje Cantz, 2013). Current publishing projects comprise a contemporary history of art and architecture in Japan since 1990 with Prof. Adrian Favell from Leeds University.</p> <p>Although Dr Worrall has minimal expertise in relation to Iranian urbanism, the socio-spatial transformation of non-Western cities under conditions of rapid modernization that have constituted the basic phenomena of his research inquiries also pertain in Mr Tavakoli's project, presenting a common field of broad questions amenable to similar research methodologies.</p>		
Role in the research:	Primary Supervisor		

1.6 Student projects:

If the project is to be undertaken by a research student as part of their studies, please indicate below. **Section 7** must also be completed.

Name:	Hamed Tavakoli	Student ID:	1643570	Program Level:	PHD in Architecture
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1.7 Other researchers:

List all researchers (other than the applicant and students) in the table below and if applicable their University of Adelaide EMPLID. Include all co-supervisors and researchers internal and external to the University of Adelaide. **Section 7** must also be completed.

Names:	EMPLID:
Nigel Westbrook	1751135
Ehsan Sharifi	1222578

1.8 Has or will this project be submitted for approval to other HRECs?

Include the HREC's name, the current status of the application (i.e. submitted, approved, deferred or rejected) and attach this documentation. The University of Adelaide accepts ethics approval granted by some other HRECs and does not require a separate ethics application. Researchers are encouraged to consult with information about [notification of ethical review and approval from other institutions](#) to see if this applies.

No

1.9 Has or will this project be submitted for approval to any departments or institutions?

E.g. Department of Education, prisons, government institutions, or businesses.

No

SECTION 2: NATURE OF THE PROJECT

2.1 Aims of the project:

Discuss in standard English the main research aims/hypotheses to be investigated.

1. Spatial liminality, as it is defined in microscale, could reflect conditions where exogenous individuals or none-local communities remain suspended in between two social statuses: a previous status that s/he used to be, and the desired status of becoming a citizen of the new land. The project aims to trace such similar conditions in historical Iranian cities, which is forming due to mass out-migration of original residents and in-migration of exogenous communities and foreign migrants.
2. To examine how the concept of spatial liminality could be used as an analytical tool for developing innovative/sensible approaches for revitalizing unused lands inside historic cities.
3. To investigate linkages between the formations of none-local settlement fabrics (understood as “spatial liminality”) and the generation of unused/dilapidated structures in historical Iranian cities, which would be based on field studies, semi-structured interviews and questionnaires in 3 historic Iranian cities, and as proposed in this application

2.2 Rationale of the project:

Explain in standard English the rationale for the project, i.e. how the research will fill any gaps or contribute new knowledge to the field.

- The revitalisation of historic centres in the Iranian context has had a long history, advancing after the emergence of regionalist discussions in pre-revolutionary Iran during the 1970s. In current regeneration programs, three significant deficiencies are identified and need addressing. (1) revitalization projects in Iran are mostly delivered linearly (rather than as multi-strand processes running in parallel); they are mainly based on the public sector, and they could be led fundamentally astray by using ‘physical deterioration’ as the only analytical model in urban design.
- Current urban design and policy models in Iran have limited understanding of probable linkages between rising numbers of disused structures in the one side, and an ongoing out-migration of local residents and in-migration of exogenous communities in the other. Such a theoretical grasp could facilitate the singling out of practically ‘unwanted land areas’, which might be legitimately reclaimed by design methods and policy incentives. Therefore, for the first time, this project could open discussions on how the concept of ‘spatial liminality’ applied as an analytical tool to urban space, could inform revitalisation projects and policies in Iran. Such methods may fill a significant gap for activating disused heritage fabrics, by facilitating organic and commercially feasible ‘cluster developments’ inside unexploited land areas.

2.3 Background to the project:

Briefly discuss any previous research of relevance and cite no more than four key references.

Vehicular inaccessibility versus spatial liminality: While many urbanists aim to describe a ‘deleterious circuit’ inside historic Iranian urban fabrics, vehicular inaccessibility could be seen as a particularly salient detrimental factor, which could devalue land areas, and attract low-income communities towards heritage zones. Additionally, Tavassoli (1987a, p.3) in historical Yazd suggests that due to the narrow and winding streets, the areas inside historic urban contexts could limit vehicular accessibilities. He indicates that such a

lack of modern road systems has deprived local communities of receiving reasonable public services. Furthermore, Tavassoli (1987a, p.25) argues that today formal and spatial arrangements of traditional structures in Yazd are not responding to contemporary human needs. He indicates that such a lack of spatial responsiveness could yield deteriorated fabrics and dilapidation more than ever. Behzadfar (2012e, p.4) shows how vehicular inaccessibility is strongly tied in with physical building deteriorations: in historical Yazd, he shows that about 62% of land areas with road-access widths under 6 meters contain mud-brick as the main structural element. This number considerably drops to about 26% when access road widths increase to 12 meters.

Linkages between unexploited urban structures and formations of exogenous settlement fabrics:

Inside historic Yazd, among 21,808 large and small properties, 355 cases are recognized as entirely dilapidated, and 902 structures are identified as undergoing dilapidation (Behzadfar, 2012d). Furthermore, among residential areas 412 properties, and among commercial/educational structures 228 properties are classified as abandoned (Behzadfar, 2012d). Such large proportions of the unused urban regions in historical Yazd form approximately 10% of the city. As a result of such huge building dilapidations, land price and accommodation fees have dramatically diminished. This could encourage exogenous and low-income communities to migrate in, which may culminate in further building deteriorations, and could generate unsafe urban environments (Behzadfar, 2012b). Hence, in the current research an understanding of potential correlations between dilapidated-abandoned buildings on one side, and spatial mechanisms which could attract and accommodate none-local residents, on the other, could become essential for presenting effective revitalisation projects and processes in traditional cities.

Resources

BEHZADFAR, M. 2012d. Strategic Plan for Historic Yazd Volume 6. Tehran: Ministry for Roads and Urban Developments.

BEHZADFAR, M. 2012e. Strategic Plan for Historic Yazd Volume 6-1. Tehran: Ministry for Roads and Urban Developments.

TAVASSOLI, M. 1987a. Qavaid Va Meyarhay-i Tarahi-i Fazay-i Shahri [Urban Space Design Criteria], Tehran.

TAVASSOLI, M. 1987b. Tarahi Shahri Dar Baft-I Ghadim-I Yazd [Urban design in old textures of the city of Yazd], Ministry for Housing and Urban Developments

2.4 Have there been any preliminary studies? If YES, provide the project title and HREC approval number(s):

N/A

2.5 Research methodology:

Describe how the study will be undertaken and explain what interactions will occur between researchers and participants. Include a description of the research methodology and how this will achieve the research aims. For example, you could include a justification of why the sample size/sampling method will yield valid and reliable results. Where appropriate, please refer back to the aims described in 2.1 when describing the methodological approval.

- **General method:** The general research method in this project is based on qualitative case studies. Constructed on the three tiers of the population (over 1 million, between 1-0.5 million and under 0.5 million), a threefold of heritage cites selected as case studies in Iran, which are almost exceptional for understanding spatial liminality in traditional urban fabrics.

There will be two types of interactions between the researcher and participants in historic cities

- **Questionnaires:** participants in questionnaires are preselected base on the proximity of their residential properties to dilapidated-abandoned structures. The student researcher will inspect about 800 preselected properties during field studies. Among those properties, it is expected that half of the residents (about 100-200 of residents) may participate in questionnaires. Participants of this questionnaire would not be identifiable after site visit sessions. This could correspond to the third aim of the research, as presented in 2.1.
- **Semi-structured Interviews:** Semi-structured Interviews are conducted as a method for understanding urban design/planning incentives and investment impediments/opportunities inside (the above discussed)

case studies. Through semi-structured interviews, 15 influential academics, local builders, planners and representatives of heritage agencies would be invited for discussing methods which could reutilize unused urban areas inside historic cities. This corresponds to the first and second aims of the project as presented in 2.1.

2.7 Location(s) of the research:

Include details of all sites where the project will be undertaken and locations of participants.

Three traditional Iranian cities, specifically Isfahan, Yazd and Kashan.

2.8 If research is to be conducted with or about participants living outside Australia outline any local legislation, regulations, permissions or customs that need to be addressed before the research can commence. Outline the steps taken to ensure that this has been adequately considered and addressed.

See *National Statement Chapter 4.8*. Attach authorising correspondence and/or approval documentation to the application. If you are travelling to a region classified as level 3 or 4 according to the [Department of Foreign Affairs and Trade](#), travel approval may be required. See the University’s [travel safety information in the HSW Policy and Handbook](#).

- Legal permission is already obtained for March-June 2018 filed visits/questionnaires and interviews, form ICHTO attached at the end of this application
- Since Islam and Shi’ism is the dominant religious trend in Iran, the researcher must comply with religious and meeting/social etiquettes (e.g. men are forbidden to touch or ask for a handshake with women in formal occasions)
- To interview staff in government organizations, a formal letter is presented by the principal supervisor, which would be forwarded to the relevant agencies before interviews. By following up correspondences, the head of the department would appoint expert representative/s for semi-structured interview sessions
- The respondent and interviewer may sign a consent form attached at the end of this document

SECTION 3: PARTICIPANTS AND RECRUITMENT

3.1 Who will be the participants in this project?

Participants also include data about people or human tissue samples.

- Participating with questionnaires (anonymous)**
- a. Residents of pre-selected properties, in historic areas of 3 cities
- Semi-structured interviews, including academics, planners; architects or regulators (participants could be) identifiable**
- b. At least nine building professionals (local builders, academics or practitioners (3 in each city)
 - c. At least six expert representatives from the local heritage authorities (ICHTO) or local municipalities, or planning department authorities (at least two official representatives in each city)

3.2 Does the planned or anticipated recruitment of participants target, focus on, or include as a group, any of the following population groups? Select as many as relevant.

This question is to capture the planned or foreseeable recruitment of participants from these population groups, rather than their incidental inclusion. Select as many groups as applicable to the research.

Participant group	Participant group	
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Aboriginal and Torres Strait Islander people	<input type="checkbox"/>	People who may be involved in illegal activities	<input type="checkbox"/>
Children and young people	<input type="checkbox"/>	People with a cognitive impairment, an intellectual disability or a mental illness	<input type="checkbox"/>
Defence Force personnel	<input type="checkbox"/>	Primary or secondary school students	<input type="checkbox"/>
People highly dependent on medical care who may be unable to give consent	<input type="checkbox"/>	University students	<input type="checkbox"/>
People in dependent or unequal relationships	<input type="checkbox"/>	Women who are pregnant and the human fetus	<input type="checkbox"/>
People in other countries	<input checked="" type="checkbox"/>	None of these participant groups	<input type="checkbox"/>

3.3 What is the number of participants?

- **Questionnaires:** The student researcher will inspect about 800 preselected properties during field studies. Among those properties, it is expected that about 100-200 residents may participate in questionnaires (Appendix E-4)
- **In semi-structured interviews:** The number of participants could reach to minimum 15 people: including at least six representatives from the local government agencies and nine local builder-investors, academics or planners within three traditional cites in Iran.

3.4 What is the age range of participants?

- All interviews would be conducted with people over 20 years old.
- During field visits, only persons aged 18 years old (or above) will be asked for participating in the questionnaire (Table 2).

3.5 If this research involves children under 18 years of age, describe how the researcher/s comply with the University's Child-Safe Environment Policy:

Specific requirements for research activities involving children are highlighted in Section 2.4 of the University's Child-Safe Environment Policy.

- Before starting the questionnaire (Table 2), the question is asked if participants are aged 18 years or over?
- If participants were under 18 years old, the researcher would not conduct the interview/questionnaire

3.6 What is the participant selection and exclusion criteria?

Semi-structured Interviews: Selection criteria of interviewees are directly related to their knowledge about contemporary development processes inside historic urban areas, or their information in regards to the formation-functionality of historic fabrics in Iranian cities. For selecting 15 interviewees including academics, professionals and service holders from government institutions (i.e. local municipality and ICHTO), higher authority of the organizations will be contacted, and possible knowledgeable-qualified nominees are expected to be introduced for participating in such interviews.

Questionnaires: participants in questionnaires are preselected base on the proximity of their properties to dilapidated-abandoned structures. The student researcher is expected to inspect about 800 selected properties during field studies. Among those, it is expected that half of the residents (about 400 residents) may participate in questionnaires.

3.7 Where will participants be recruited or sourced from?

Any use of snowball sampling for recruitment should only be in the passive form. That is participants may be asked to discuss the research with friends/contacts who they think may be interested in volunteering to be participants. Those new participants should then contact the research team to volunteer.

Semi-structured interviews: potential participants will be personally identified and contacted by the research student via emails or invitation letters, and based on their levels of contribution to the literature. If a person expresses his/her interests for participation, then information sheet and consent form will be sent to him/her two weeks before the interview.

Questionnaires: participants in questionnaires are preselected base on the location of their properties. It is expected that among 800 preselected properties for field studies, at least 100-200 residents voluntarily respond to this proposed questionnaire.

3.8 What materials will be used to recruit participants and how will they be used?

Provide details of any posters, flyers, participant information sheets, consent forms, advertisements, emails and letters that will be used. Include a listing of any online or physical sites the advertisements will be posted.

Please see:

1. PARTICIPANT INFORMATION SHEET(for interviews and questionnaires)
2. CONSENT FORM
3. Interview Questions
4. List of potential participants (from public directories)
5. Appendix E-4 questionnaire for local residents

attached at the end of this material. Please note that those documents are translated into Persian for actual correspondences or interviews.

3.9 How and by whom will initial contact with participants be made?

If recruitment is to be conducted by a third party, please describe how this will take place. Any use of snowball sampling for recruitment should only be in the passive form. That is participants may be asked to discuss the research with friends/contacts who they think may be interested in volunteering to be participants. Those new participants should then contact the research team to volunteer.

It is preferred initial contact is made in low-pressure ways, such as email or post. If the initial approach will be made in another way, e.g. face to face, provide a justification.

- For contacting shortlisted interviewees (e.g. academics, professionals and government representatives), emails or invitation letters would be sent to potential participants by the PhD student researcher, at least two weeks before possible interviews.
- Potential participants in questionnaires would answer a street survey at the door of their residential properties. As a procedure, the student researcher would knock the doors of a number of preselected properties, and the residents could choose to participate or not (see Tables 2 and 3).

3.10 Will any personal information including names, contact details, email addresses of participants etc. be accessed for purposes of recruitment? If yes, outline how and by whom this information will be accessed:

Researchers must ensure that personal information is not accessed without the consent of the individual.

The names, contact details and email addresses which are used to contact individuals and government organisations in this research, are available online. To contact individual professionals and academics, their public websites/weblogs/academic profiles, LinkedIn accounts and so on, may be utilized. For instance, emails and postal addresses of ICHTO staff and local councillors are obtained from the following (or similar public) websites:

<http://www.ichto.ir/>, Heritage authority and all local branches and potential contact persons in 3 proposed case studies

<http://new.isfahan.ir/>, Isfahan city council and potential contact persons

<http://www.kashan.ir/>, Kashan city council and potential contact persons

<http://www.yazd.ir/>, Yazd city council and potential contact persons

3.11 Describe how, when and what information about the proposed research activities will be provided to participants and any third parties:

A person's decision to participate in research must be based on sufficient information, an understanding of research and the implications of participation. Use of the participant information sheet (which includes contacts for complaints) and consent form templates which cover the information required by the NS is required. For online surveys, the information sheet must be incorporated into the survey preamble. Where research is being conducted overseas, it would be helpful to participants if a local, 'independent' person is also included as a contact for complaint. These documents are to be attached to the application. See *National Statement Chapter 2.2*.

Please see 'PARTICIPANT INFORMATION SHEET' attached at the end of this document, page 2: What if I have a complaint or any concerns?

3.12 How and when will consent be obtained from participants and any third parties?

See *National Statement 2.2*. Templates for consent forms should be modified to suit the nature of the project.

In interviews: Consent forms will be formally sent to shortlisted participants 2 weeks before the meeting possibly via email or Fax.

In questionnaires: consent form would be presented/obtained verbally door-to-door for every single participant, before undertaking the questionnaires

3.13 For participants not fluent in English or who have difficulty understanding English, what arrangements will be made to ensure comprehension of the research information?

All interviews are conducted in Persian (which is the native language of the researcher student and all interviewees), and later would be translated into English to complete this research project

3.14 Will the researcher(s) be taking photographs or recordings of participants using audio tape, film/video, or another electronic medium? If so, how will these be used?

This information should be provided to participants in the participant information sheet and the consent form.

Voice recordings: Interviews could be recorded using a digital voice recorder by the researcher student, and while conducting the interviews, based on individual's consents.

Photographs: During field works, photos will be taken inside the historic zones which may include dilapidated/ underutilized sites, spatial adjacencies, street views of the neighbourhoods, public places, building density orders, green areas, etc. However, this will not involve observations and photographs of any specific groups of people among interviewees or local residents who may participate in questionnaires.

Mappings: based on previous activities (fieldwork observations/questionnaires); mappings are demarcated on the spot and later would be processed and digitalized in the office.

3.15 In reference to Question 2.5, indicate all research activities in the study and where applicable outline the approximate time commitment required of participants.

Consult the definitions of research methods for guidance on selecting the method(s) applicable to the project:

Research method/activity	Participant time	Research method/activity	Participant time
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Action research	<input type="checkbox"/>		Interventional	<input type="checkbox"/>	
Biospecimen analysis	<input type="checkbox"/>		Interview	<input checked="" type="checkbox"/>	Max 1 hour
Body organs, tissues or fluids	<input type="checkbox"/>		Observational	<input checked="" type="checkbox"/>	Anytime during field visits
Clinical Trial	<input type="checkbox"/>		Phlebotomy (Blood sampling)	<input type="checkbox"/>	
Data linkage	<input type="checkbox"/>		Survey/Questionnaires	<input checked="" type="checkbox"/>	Anytime during field visits
Drugs or isotopes If this is selected, a <u>Drugs to be Administered Form</u> is to be completed.			Textual analysis (including medical records, academic records, personal documents)		
Epidemiological	<input type="checkbox"/>		Use of data sets	<input type="checkbox"/>	
Ethnographic	<input type="checkbox"/>		Other	<input type="checkbox"/>	
Focus group	<input type="checkbox"/>	Anytime during field visits			

3.16 Provide a description of each of the activities selected above in terms of what the participant will experience from taking part in the research:

Provide a summary of the focus of any research activities e.g. topics of the survey, interviews etc. and the format they will be undertaken e.g. face to face, online etc. If there are multiple methods, outline if participants are being asked to do one or all of the activities. Attach copies of surveys, interview or focus group schedules, questions and topics to be covered to the application. All attachments should be labelled with appropriate headings and referred to within the body of the application.

Interviews: Several face-to-face meetings will be conducted with a number of Iranian academics, professionals, expert representatives from the heritage authorities (ICHTO) and local municipalities, to determine the existing building problems and policy incentives inside historic urban fabrics. Questions will be proposed for investigating challenges/opportunities and appropriate responses to the rehabilitation of disused urban areas in historic cities of Iran (please see the research questions attached at the end of this application).

Questionnaire (street survey): inside a number of preselected urban blocks local residents would be invited for participating in a questionnaire (Appendix E-4).

Field observations would be based on Appendix E-9: Door-to-Door Interview/data collection procedure

- Please see Interview Questions (Appendix E-7) attached at the end of this application form

Information provided in **Question 3.16** should be incorporated into information provided to participants, either through a participant information sheet or other methods as described in **Question 3.11**. University templates for participant information sheets, consent forms and a drugs to be administered form are available at <https://www.adelaide.edu.au/research-services/oreci/human/applications/>.

SECTION 4: ETHICAL CONSIDERATIONS

In addition to the ethical considerations pertaining to all research participants, researchers should be aware of the specific issues that arise in terms of the design, conduct and ethical review of research involving various categories of participants as outlined in the *National Statement Section 4*.

4.1 Describe the likely burdens of participation and any risks to participants when undertaking the research:

Burdens include impacts on participants such as inconvenience e.g. filling in a form, participating in a street survey, or giving up time to participate in research and discomfort e.g. minor side effects of medication, the discomforts related to measuring blood pressure, and anxiety induced by an interview. Risks can be emotional, social, legal, medical or physical and can include distress and harm. See *National Statement Chapter 2.1*.

In semi-structured interviews: There is no known risk or likely burden of participation for nominated interviewees since they would be interviewed voluntarily. Meetings could be scheduled in a way that generates minimum discomfort for the potential participants.

In questionnaires: Please see Appendices E-10 to E-13 attached at the end of this application.

4.2 Describe how the risks will be minimised or mitigated. Outline any relevant protocols for management of risks including distress protocols, occupational health and safety practices, first aid procedures etc.

See *National Statement 1.7 and Chapter 2.1*.

Please see Appendices E-8 to E-13 attached at the end of this application.

4.3 Describe how the likely benefits of the research will justify the burdens and/or risks to participants:

See *National Statement 1.6 and Chapter 2.1*

This research could propose new methods for revitalising unused urban areas in Iranian cities, and as a result, may improve the public urban life in historic fabrics.

4.4 Outline the protocol that will be followed in the event of any adverse events:

It is a condition of approval that researchers **immediately** report to the HREC Secretariat any adverse events that might warrant review of ethical approval. See *National Statement 5.1 and 5.5*.

Please see Appendices E-8 to E-13

4.5 Will participants receive any reimbursement of out of pocket expenses, or financial or other rewards as a result of participation? What is the amount or nature of the reimbursement/reward and the justification for this?

See *National Statement 2.2.10 and 3.3.18*.

No

4.6 Does the research involve limited disclosure of the research aims? If YES, provide a justification.

See *National Statement Chapter 2.3*.

No

4.7 Describe any possible risks to the health or safety of the researcher(s) when undertaking the research?

Where interviews are to be held in participants' homes as opposed to public places provide a rationale other than convenience for why this is necessary (and outline the personal safety protocol for the researchers involved). See the *Australian Code of Responsible Conduct in Research 1.2*.

Please see Appendices E-10 and E-13 attached at the end of this application.

SECTION 5: DATA – CONFIDENTIALITY, ANALYSIS, REPORTING, STORAGE AND FUTURE USE

5.1 Select the option that reflects the type of data that will be accessed throughout the research:

For some research, the type of data received or collected initially may be different to the type of data that is stored. For instance, interview data with names recorded is individually identifiable data. If names are *permanently* removed when the data is stored at the completion of the project, the data will then be considered non-identifiable. Personally identifiable information is any part of someone's personal details which can be used to identify them as an individual. This can include name, birth date, home address, email, phone number and student ID.

Type of data	Initially received/ collected	Stored (at completion)
Non-identifiable: data received or collected about participants that is received in a non-identifiable form. This includes data which has never had personal identifiers e.g. an anonymous survey, or from which identifiers have been permanently removed before you received it. It is not possible for you to identify a specific individual.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Re-identifiable: data from which personal identifiers have been removed and replaced by a code. The data is either received with a code already attached and personal identifiers have been removed or you remove identifiers and replace with code. It remains possible for you or others to re-identify a specific individual by, for example, using the code or linking different data sets.	<input type="checkbox"/>	<input type="checkbox"/>
Individually Identifiable: data where the identity of an individual could be reasonably ascertained. Examples of identifiers include the individual's name, image, date of birth or address, or in some cases their position in an organisation.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

5.2 Compliance with the Guidelines under Section 95 and 95A of the Privacy Act 1988:

	YES	NO
5.2.1 Is this research relevant to public health or public safety, or to the management, funding or monitoring of a health service? This includes collecting, using or disclosing health information for the purposes of research or compiling statistics relevant to public health or public safety.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5.2.2 Does the research involve collection, use or disclosure of health information held by an organization without consent from the individual(s) the information relates to?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5.2.3 Is the information you will be <i>accessing or collecting</i> individually identifiable? i.e. the individual's identity can be reasonably ascertained. Medical case notes would generally be considered individually identifiable.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If you answer **YES** to all three questions in 5.2, you will need to provide a proposal to the HREC as to why the public interest value of your research out-weighs the public interest in the protection of privacy. The proposal must address the appropriate sections of the *Guidelines under Section 95 and 95A of the Privacy Act 1988*. The guidelines are available at: <https://www.nhmrc.gov.au/guidelines/publications/pr1> and <https://www.nhmrc.gov.au/guidelines/publications/pr2>.

In the questions below, outline how the privacy and confidentiality of participant data and samples will be protected throughout the different stages of the research, making reference to the type of data (non-identifiable, re-identifiable or individually identifiable) that will be accessed by the researcher(s).

5.3 How will researcher(s) protect the privacy and confidentiality of participant data, samples and information during the collection and/or recruitment phase?

Outline where data will be stored during data collection phase and who will have access.

- There is no confidential or sensitive information and classified data to be collected from the participants
- In case of questionnaires, personal identities would remain anonymous and would not be disclosed during or after participation
- In case of interviews, regarding disclosing participants' identity, nominated interviewees will be fully informed of this 'possibility of information disclosure' in the Participant Information Sheet, and consent will be taken in advance if names should be quoted.

5.4 How will researcher(s) protect the privacy and confidentiality of participant data, samples and information during the data analysis phase?

Outline where data will be stored during data analysis and who will have access.

Interviews

- Semi-structured interviews in this research will collect personal data that discloses participant's occupation, experiences and position along with the participant's name
- Whether their name will be revealed or not depends upon the participant's consent in Participant Information Sheet and Consent Form
- The researcher believes that a significant number of case studies may lead to interviewees being identified through their associations, which means that there is no disclosure of names in most interviews
- The inclusion of direct quotes will be carried out with great care, by obtaining prior consent from potential interviewees

Questionnaires

- All participants will remain anonymous, during and after data collections

5.5 How will participant data, samples and information be analysed and who will undertake this analysis?

- **Interview** data will be transcribed and be analysed by the researcher student, later in the office at the University of Adelaide. In this case, 'N-Vivo software' will be used for assorting interviews
- **Questionnaires** will help the researcher to identify liminal urban fabrics. Areas of interest would be delineated on paper maps, during site visits (please see Table3: Door-to-Door Interview/data collection procedure). Later in the office, by using ArcGIS, AutoCAD and other software, mapping data would be analyzed and represented.

5.6 What feedback of findings will be offered to participants e.g. access to transcripts of interviews, drafts or final reports? If no feedback will be offered, outline why.

It is good practice to provide participants with the opportunity to review any transcripts, particularly if they will be named or there is the potential for them to be identifiable in the research findings.

- If it is requested by the interviewees and participants of questionnaires, they will receive a summary and interpretation of their interviews (via email, fax or letter), and before being included in the PhD thesis or relevant publications. This could help the researcher to receive secondary feedbacks.
- The interviewees and participants may choose to review their responses, in this case, they should contact the student researcher by emailing hamed.tavakoli@adelaide.edu.au, as per PARTICIPANT INFORMATION SHEET

5.7 How will the project outcomes be made publicly accessible at the end of the project and in what forms (e.g. journal article, book, conference paper, in the media, presentations)? If they will not be made publicly accessible, explain why.

At the end of the project, outcomes would be published in forms of possible journal articles, books, conference papers, presentations, PhD thesis, recommendations and urban design solutions and so on.

5.8 How will researcher(s) protect the privacy and confidentiality of participant data, samples and information during the reporting of research results?

Outline if participants will have the option of being identified or referred to by a pseudonym. Where the sample size is very small, it may be impossible to guarantee anonymity/confidentiality of participant identity. Participants involved in such projects need to be clearly advised of this limitation in the information provided to participants. See *National Statement 3.1.10*.

In this research activity, there is neither confidential/sensitive information nor classified data to be collected from the participants. In a circumstance where there is a real need for disclosing participants' identity, interviewees will be fully informed, via letter or email as presented in the Participant Information Sheet, and consent will be provided in advance.

5.9 Outline how the records, materials and data from the project will be stored at completion. Include details of the storage location, who will have access.

Refer to Section 2 of the [Australian Code for the Responsible Conduct of Research](#).

The data will be stored in appropriate databases at the University of Adelaide (A1643570 in drive: \D) and the researcher's personal computers. Data will be restored according to the Australian Code for Responsible Conduct of Research. To achieve CCSP milestone, the researcher has also completed a data management plan submitted to graduate centre earlier in 2016.

5.10 Outline the length of time that the records and materials will be retained by the University.

Note that the minimum period for retention of research data is five years from the date of any publication and varies depending on the specific type of research. For more information refer to Section 2 of the [Australian Code for the Responsible Conduct of Research](#).

As per the university discretions- policies and at least for five years would be saved in university ID (a1643570) in drive D: /

5.11 Future use and sharing of research data:

Data collected as part of a research project can only be shared or used in future with the explicit consent of participants. The participant information sheet and consent forms need to outline if there is any potential for sharing or future use of data. You cannot share or use data in future if you do not have consent to do this.

	Yes	No
5.11.1 Do you intend or is there any possibility that the data collected in this project will be used in any future research projects?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5.11.2 Do you intend to make data collected in this project available to other researchers? This includes sharing data on platforms such as Figshare.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5.11.3 Have you outlined potential future use in the participant information sheet and consent form?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

5.12 If you answer yes to any of the questions at 5.11, describe what data will be used in future, how it will be used (i.e. for what purpose), who will have access and how participants will be informed.

If the future use or sharing of the data is intended, participants are to be fully informed of this in the Participant Information Sheet and Consent Form. For more information see [National Statement Chapter 3.2](#).

All collected data and information may be used for further research projects by the researchers or academic colleagues. Participants will be fully informed of the above statement in the Participant Information Sheet and Consent Form.

6.1 Outline the source of any project funding:

See *National Statement 5.2.7*

Australian Postgraduate Awards (APA)

6.2 Outline any ‘conflict of interest’ issues that may arise during the project:

See *National Statement 5.2.10 and Chapter 5.4*

N/A

6.3 Do the researchers expect to obtain any direct or indirect financial or other benefits from conducting this research?

Benefits must be declared to the HREC and included in the information provided to participants. See *National Statement Chapter 5.4*.

No

6.4 Outline any other ethical or relevant issues not yet discussed in this application:

N/A

SECTION 7: RESEARCHER(S)’ QUALIFICATIONS AND EXPERIENCE

7.1 Student Researcher(s):

This section should be completed for all students listed in Question 1.5. If there will be direct contact with participants by the research student/s, outline their experience and training to conduct this research.

Student’s name, title:	Mr. Hamed Tavakoli	School or Department:	School of Architecture & Built Environment
Program Level: PhD, Masters by Research/Coursework, Bachelor, Honours etc.	PhD in Architecture		
Email:	hamed.tavakoli@student.adelaide.edu.au	Phone:	+61 8 8313 2986
Qualifications and research experience relevant to the project:	<p>Qualifications</p> <p>2013 – 2016 Double degree, Masters of Landscape Architecture and Urban Design, The University of Adelaide</p> <p>1993 – 2000 Master of Architectural Engineering, University of Science and Technology, Tehran</p> <p>Hamed Tavakoli is the current student researcher on this project. He used to work in Iran as an architect. Hamed professionally experienced the dysfunctional nature of historical Iranian cities. During his studies and work experiences in Iran and Australia (2000-2017), he aimed towards developing an action-oriented approach for understanding built-environments. In a paper proposed for SAHANZ Adelaide symposium 2017, he presented research regarding the historical study of modern strategic planning in heritage Iranian city, the case of Isfahan. A study that primarily analysed the abnormal conditions in historic urban areas of Iran, which could be shaped by larger strategic plans.</p>		
Role in the research:	PhD research student		

7.2 Other Researcher(s):

This section should be completed for all researchers listed in Question 1.6.

Name, title and position:	A/Prof Dr. Nigel Westbrook	School/Department or other institution:	School of Design, The University of Western Australia (UWA)
Email:	Nigel.Westbrook@uwa.edu.au	Phone:	+61 8 6488 2592
Qualifications and research experience relevant to the project:	<p>Dr. Nigel Westbrook gained a Bachelor of Architecture from RMIT (1982), undertook the Diploma at the Architectural Association (1980-82) was awarded a Master of Architecture by Research from RMIT (1996) and obtained a PhD from the University of Western Australia (2013). He has been a member of staff since July 1993. Dr. Nigel Westbrook is currently Associate Professor of Architecture, Associate Dean (Research), and previously was the Discipline Chair of Architecture for five years. He teaches in the fields of architectural design, architectural history and urban studies, and has co-taught five international studios in Athens, Greece (1995, 1997, 2013-15), and one studio in Chicago, USA (2001). He also supervises postgraduate students in cognate fields of research. Please also see http://www.web.uwa.edu.au/person/Nigel.Westbrook.</p>		
Role in the research:	External Supervisor (20%)		

Name, title and position:	Dr. Ehsan Sharifi Lecturer	School/Department or other institution:	The University of Adelaide, School of Architecture and Built-Environment (SABE).
Email:	ehsan.sharifi@adelaide.edu.au	Phone:	+61 8 8313 5836
Qualifications and research experience relevant to the project:	<p>Dr. Ehsan Sharifi is a lecturer at the University of Adelaide, School of Architecture and Built-Environment (SABE). He achieved both his 'PhD in Architecture in Applied Science' and 'Masters of Sustainable Design' from the University of South Australia.</p> <p>Ehsan is an advocate for the application of architectural sciences in practice. He joined the School of Architecture and Built Environment after completing three post-doc Research Associate positions at UniSA (Cooling Capacity of Green Infrastructures; School of ITMS), UNSW (Urban Cooling Guidelines; School of Built Environment) and the University of Adelaide (Urban Wind Engineering and Comfort; School of Mechanical Engineering). His PhD was part of a CRC for Low Carbon Living project on Urban Microclimates of Australian Cities (RP 2005; 2012-2015). Ehsan is a member of Sustainable Built Environment research group with research interests including:</p> <ul style="list-style-type: none"> • Urban microclimates and the urban heat island effect <ul style="list-style-type: none"> • Quality of public space and public life • Outdoor thermal-wind comfort • Cultural and historical responses to thermal discomfort • Environmental assessment of buildings and urban precincts and passive design • Low carbon urban living, urban greening and climate change adaptation <p>Please see more at https://researchers.adelaide.edu.au/profile/ehsan.sharifi</p>		
Role in the research:	Second Supervisor (20%)		

SECTION 8: DECLARATION BY THE RESEARCHER(S)**8.1 Readability Review:**

Readability is the ease with which text can be read and understood. Applications are sometimes delayed when corrections due to issues with readability, especially to the participant documents (Information Sheets, Consent Forms, surveys etc.) are needed. Grammar, technical terms and language not tailored to the participant can impact on participants' understanding of the research and being able to give fully informed consent. A review for readability involves asking someone (other than the author) such as a peer outside the research team to review the application and participant documents for feedback on the ease to which the application and participant documents were read and understood. For students, the [Writing Centre](#) can provide assistance with the expression of participant documents.

Has the application, including the participant documents, undergone a readability review?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
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8.2 Declaration by the Researcher(s):

I/we have read the [National Statement on Ethical Conduct in Human Research \(2007\)](#) and the [Australian Code for the Responsible Conduct of Research](#).

I/we, the researcher(s) agree to:

- conduct the project in accordance with our responsibilities under the *National Statement on Ethical Conduct in Human Research (2007)* and the *Australian Code for the Responsible Conduct of Research*
- start this research project only after obtaining final approval from the Human Research Ethics Committee (HREC)
- only carry out this research project where adequate funding and personnel is available to enable the project to be carried out according to good research practice and in an ethical manner
- notify the HREC in writing in the event of any adverse or unforeseen events; requesting amendments for approval prior to commencement; completion; discontinuation of the project or changes to research personnel
- provide an annual progress report to the HREC for the duration of the research project
- provide the HREC with a final report
- agree to participate in an audit if requested by the HREC.

In addition, as the applicant, I:

- accept responsibility for the conduct of this research project in accordance with the *National Statement on Ethical Conduct in Human Research (2007)* and the *Australian Code for the Responsible Conduct of Research*.
- certify that all researchers and other personnel involved in this project are appropriately qualified and experienced or will undergo appropriate training and supervision to fulfil their role in this project
- will take responsibility for the confidential maintenance of the research materials as per the [University's Responsible Conduct of Research Policy](#), the [University's Records Policy](#) and as required by legislation.

All persons named in **Section 1** are required to sign below:

Applicant's signature:		Name:	Dr. Julian Worrall	Date:	12 Feb 2018
Researcher's signature:		Name:	Dr. Nigel Westbrook	Date:	25.01.2018
Researcher's signature:		Name:	Dr. Ehsan Sharifi	Date:	30/01/2018
Researcher's signature:		Name:	PhD Candidate Hamed Tavakoli	Date:	22/01/2018

SECTION 9: CHECKLIST

The following documents are attached to this application:

All documents attached should be referred to in the main body of the application and clearly labelled using appropriate headings i.e. Attachment 1, Attachment 2 etc. Documents should also be labelled with a version number and a date.

Yes	No	N/A*	Item	Attachment Label (attachment 1 etc.)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Participant information including contacts for complaints: either as information sheet, verbal script or survey preamble	Attachment 1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Standard Consent Form for a participant in a research project (written consent is required for the majority of projects)	Attachment 2
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Consent by a Third Party to Participation Form (required where participants are children under 18 years or a dependent adult)	N/A
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other recruitment documentation including advertisements, flyers, recruitment letters, emails of introduction, copy of Facebook event pages and social media event sites.	N/A
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Procedure/protocol for interviews or focus groups including topics, questions or themes	Table 1 and Interview Questions
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Survey instrument/Questionnaire (include a printed copy of online survey)	Table 2
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Adverse events procedure	Tables 1, 3, 4, 5 and 6
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Evidence of approval/rejection by other HRECs, including comments and requested alterations to the application	N/A
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Research with people outside Australia: Evidence of permissions, approvals from overseas authorities etc.	Permission letter in Persian
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Administration of Drugs Form	N/A
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Annual Report on Project Status (if extending project)	N/A

*Not applicable

SECTION 10: HOW TO SUBMIT THIS APPLICATION

1. Print the completed form and obtain signatures from all researchers.
2. Scan the signed form including all labelled attachments as **one pdf file** and email to: hrec@adelaide.edu.au. (Low Risk Applications in the School of Psychology should be sent to the chair of the review subcommittee).
3. Submission deadlines apply to applications requiring full HREC review. Applications for low risk review can be submitted at any time. Research timetables should allow for the possibility that a project submitted as a low risk application may be deemed to involve more than low risk, or to raise other issues, therefore requiring full review. Researchers may be requested to provide additional information.

NB References to the *National Statement* throughout the application form are not meant to be exhaustive but rather they aim to provide a starting point for researchers to consider. Researchers should be familiar with the *National Statement* and other relevant guidelines.



E-3. Verbal participant information sheet (Street-survey participants)

PROJECT TITLE: Application of spatial Liminality in urban design: towards an approach for revitalising unexploited land areas in historical Iranian cities

HUMAN RESEARCH ETHICS COMMITTEE APPROVAL NUMBER: H-2018-***

(This number is given once the project has been approved) **PRINCIPAL INVESTIGATOR:**

Assoc. Prof. Julian Worrall

STUDENT RESEARCHER: Mr. Hamed Tavakoli

STUDENT'S DEGREE: PhD in Architecture

Dear Participant,

You are invited to participate in a questionnaire described below.

What is the project about? Understanding of the relationship between rising numbers of unused properties in one side and an ongoing out-migration of original residents and in-migration of exogenous communities in the other.

Who is undertaking the project?

PhD candidate Mr. Hamed Tavakoli is conducting this project. This research will form the basis for the degree of PhD in Architecture at the University of Adelaide, and under the supervisions of A/Prof. Julian Worrall, A/Prof Nigel Westbrook and Dr. Ehsan Sharifi. The PhD research project is solely funded by 'APA' (i.e. Australian Postgraduate Award).

Why am I being invited to participate?

You are being invited to participate in this interview because your property is located near the most significant dilapidated areas in this traditional neighbourhood. Your property is preselected among other building blocks inside historic regions of Kashan, Yazd or Isfahan.

What am I being invited to do? You are being invited to participate in a quick questionnaire, which may take less than 5 minutes.

Digital recording (audio, video), photographs are not used in this activity.

Location for conducting questionnaires: questionnaire would be presented at the door of a number of preselected properties. The student researcher would not enter the property, and the discussion will be held outside the property in a thoroughfare.

How much time will my involvement in the project take? Maximum 5 Minutes

Are there any risks associated with participating in this project? Since this

questionnaire would be concluded in anonymous/voluntary basis, there is no risk towards you

What are the potential benefits of the research project? The research and expected interviews could improve quality of urban spaces for local communities, who are living in historic areas of your city

Can I withdraw from the project? Yes, you can choose not to participate in this questionnaire

What will happen to my information? The information would be turned into meaningful maps which may help to revive historical centres in Iranian cities

Who do I contact if I have questions about the project?

No	Name	Position	Contact Number	Email
1	A/Prof. Julian Worrall	Principal supervisor	Ph.: +61 8 8313 0683 Fax: +61 8 8313 4377	Julian.Worrall@adelaide.edu.au
2	Dr. Ehsan Sharifi	Co-supervisor	Ph.: +61 8 8313 5832 Fax: +61 8 8313 4377	ehsan.sharifi@adelaide.edu.au
3	A/Prof. Nigel Westbrook	External-supervisor	+61 8 6488 1082	Nigel.Westbrook@unwa.edu.au
4	Hamed Tavakoli	PhD Researcher	Ph: +61 8 8313 2986 Fax: +61 8 8313 4377	hamed.tavakoli@student.adelaide.edu.au

What if I have a complaint or any concerns?

The study has been approved by the Human Research Ethics Committee at the University of Adelaide (approval number **H-2018-047**). This research project will be conducted according to the NHMRC National Statement on Ethical Conduct in Human Research (2007). If you have questions or problems associated with the practical aspects of your participation in the project or wish to raise a concern or complaint about the project, then you should consult the Principal Investigator. If you wish to speak with an independent person regarding concerns or a complaint, the University's policy on research involving human participants, or your rights as a participant, please contact the Human Research Ethics Committee's Secretariat on:

Phone: +61 8 8313 6028

Email: hrec@adelaide.edu.au

Post: Level 4, Rundle Mall Plaza, 50 Rundle Mall, ADELAIDE SA 5000

Any complaint or concern will be treated with confidence and fully investigated.

You will be informed of the outcome.

Yours sincerely,

Dr. Julian Worrall

Principal supervisor

Dr. Ehsan Sharifi

Co-supervisor

Dr. Nigel Westbrook

External-supervisor

Hamed Tavakoli

PhD Researcher

E-4. Street survey (translated and original form)

Property No:		Location and descriptions:				
Are you interested in participating in an unnamed opinion poll? (explain the topic)	Yes	No, (End of discussion)				
Are you 18 years old or over?	Yes	No, (can I speak to your parents?)				
Are you interested in receiving a copy of the participant information sheet?	Yes; the researcher may present a copy of the Participant Information Sheet	No, the researcher may read out the Participant Information Sheet				
Demographic survey (Six questions)						
Question	Responses					
1. How long have you been living in your place?	Less than a year	1-5 years	5-10 years	10-60 Years	Over 60 years/ Original resident	
2. Did you rent or own this house?	Rent			Owned		
3. Does your home need urgent maintenance or not?	Yes			No		
4. What is the occupation of the head of family?	Retired labourer	Labourer	Retired clerical	Clerical	Unemployed	Self employed
5. Which ethnicity are you?	Refugees or non-Iranian disadvantaged communities			Local or Iranian residents		
Attitudinal survey (Seven questions)						
1. Why did you move inside historic areas?	Reaching cheapest housing options	Closeness to work or friends and families		Accessibility to other districts	Other factors	
2. What are the most imperative socio-spatial problems in historic areas?	Lack of vehicular accessibility	The existence of DABs or deteriorated buildings		Lack of public security	Other problems	
3. What are the most imperative socio-spatial problems in your neighbourhood?	I feel unsafe here	DABs		Cultural-hygienic problems	Lack of civic service infrastructure	Low vehicular access
4. Do you see your neighbourhood as somehow unsafe? If yes, why?	Foreign refugees	DABs		Narrow depopulated roads	Addicts or criminals	Other less known factors

5. What do you think about DABs?	DABs are dangerous	Must be reutilized or restored	Not a problem	Do not know	
6. What are your preferred methods of participation for revitalizing historic areas?	Implementation by personal, private funds	Implementation by mutual funds via local trusts	Exchanging my property with external land or apartment	Not interested in participation	Selling my property
7. Do you swap your place if you receive a housing opportunity (of equal value to your current property) outside historic areas?	Will leave		Never		
Are you interested in receiving an update on the research/ outcomes and publications	No	Yes		Please provide your name, email or phone number for future contacts.	

Version: 13.07.2018

پرسشنامه: نظرسنجی از ساکنین بافت تاریخی (بدون ذکر نام مصاحبه شونده)					
شماره بلوک / زمین:		وضعیت فعلی:		محل:	
				شهر:	
آیا اجازه دارم با شما در خصوص بافت تاریخی مصاحبه نمایم؟					
خیر		بلی			
آیا مایل هستید درباره تحقیق اینچنانپ بیشتر بدانید؟					
خیر		بلی			
1- شما چند سال است که در این ملک سکونت دارید؟		زیر یک سال		بین ۱-۵ سال	
2- وضعیت سکونت شما در این ملک چگونه است؟		اجاره ای		خریداری شده	
3- مشکلات عمده در محدوده شهری شما چیست؟		عدم دسترسی سواره		ساختمانهای مخروبه و متروکه/ فرسودگی بافت	
4- آیا مایل به انجام مشارکت در امر نوسازی ساختمان مسکونی خود هستید؟		ساخت زمین طبق طرح با سرمایه شخصی		در اختیار گذاشتن زمین از طریق شرکت تعاونی	
5- آیا از سکونت در بافت تاریخی راضی هستید؟ اگر خیر چرا؟		عدم امنیت		فرسودگی ساختمانهای بافت	
6- آیا محله تاریخی نا امن است؟ اگر بلی چرا؟		بواسطه وجود مهاجرین		بواسطه ساختمانهای مخروبه متروکه	
7- شما درباره ساختمانهای مخروبه/متروکه چه نظری دارید؟		خطرناک هستند		باید با ساختمانهای جدید جایگزین شوند یا بازسازی و مورد استفاده مجدد قرار گیرند	
8- اگر گزینه بهتری برای سکونت پیدا کنید، آیا این ملک را ترک خواهید کرد؟		بله		خیر	
اگر علاقمند هستید که از نتایج این تحقیق مطلع شوید لطفا شماره تماس یا ایمیل خود را ارائه کنید					
این قسمت توسط مصاحبه کننده تکمیل میشود					
در صورت تمایل شغل و تعداد عائله خود را بفرمایید؟					
ملک شما درب ماشین رو دارد؟ اگر خیر اتومبیل خود را کجا پارک میکنید؟					
ملک نیاز به مرمت دارد؟		بلی		خیر	
اطلاعات بدست آمده را بر اساس صحت و سقم بین 1 تا 3 نمره دهید		1		2	
				3	

E-5. Participant information sheet (In-depth Interviews)

PROJECT TITLE: Application of spatial liminality in urban design: towards an approach for revitalizing unexploited lands in historical Iranian cities

HUMAN RESEARCH ETHICS COMMITTEE APPROVAL NUMBER: H-2018-047

(This number is given once the project has been approved) **PRINCIPAL INVESTIGATOR:** Assoc. Prof Julian Worrall **STUDENT RESEARCHER:** Mr. Hamed Tavakoli
STUDENT'S DEGREE: PhD in Architecture

Dear Participant,

You are invited to participate in the research project described below.

What is the project about? This research project is about how urban design approaches informed by spatial liminality could develop policies for manipulating possible associations between unused-abandoned urban areas and the current influx of migratory settlement patterns in historical Iranian cities. This study aims to present solutions for recalibrating current methods into qualitative means, and by proposing the identification of socio-spatial deterioration as a key directive for future revitalisation projects and policies in urban heritage fabrics. Among traditional Iranian towns, today current urban design and policy models have limited understanding of the relationship between rising numbers of disused structures in one side and an ongoing out-migration of original residents and in-migration of exogenous minorities in the other. Such a theoretical grasp could single out practically 'unwanted land areas', which might be legitimately reclaimed by design methods and policy incentives. Accordingly, this research could open discussions on how 'spatial liminality' as an analytical tool could inform revitalisation projects and policies in historical Iranian cities.

Who is undertaking the project? PhD candidate Mr. Hamed Tavakoli is conducting this project. This research will form the basis for the degree of PhD in Architecture at the University of Adelaide, and under the supervisions of A/Prof. Julian Worrall, A/Prof Nigel Westbrook and Dr. Ehsan Sharifi. The PhD research project is funded by 'APA' (i.e. Australian Postgraduate Award).

Why am I being invited to participate? You are being invited to participate in this interview because you are an expert in contemporary development policy and practice inside historic urban areas, or you are knowledgeable in regards to the urban formation-functionality of the historical regions of Kashan, Yazd or Isfahan, the three case studies in this project.

What am I being invited to do? You are being invited to participate in a semi-structured interview where two open-ended questions are asked, mainly about your experiences regarding contemporary development processes, policy or building practices inside urban heritage areas. Such interviews aim to reveal participants' perceptions about the regeneration of unused structures, the influx of exogenous migrants and associated challenges in three Iranian heritage cities as mentioned earlier.

Follow up requirements: The shortlisted participants are informed two weeks before the interview, using phone calls or emails. Arrangements for post-interview communication-clarifications (if necessary) also will be made at the end of the anticipated meeting.

Use of digital recording (audio, video), photographs: Interviewer may ask participants if a voice recorder could be used during the interview. Video or pictures of the participants are not used in this research. If the interviewees do not agree on using a voice-recorder, the interview solely will be undertaken by writings.

Locations for semi-structured interviews: Other interviewees are including at least nine local builders- building investors or planners, and six representatives from government agencies. The interviewees' office or other semi-public areas (e.g. a meeting room in relevant organisations) could be the location where interviews may take place, based on the preferences of the participants and prior agreements.

How much time will my involvement in the project take? Approximately 60 minutes in maximum, and may require maximum two follow-ups (via email or phone calls) would be made, based on mutual agreements.

Are there any risks associated with participating in this project? As a result of this interview, there is no potential risk exposure to participants nor the interviewer. The shortlisted interviewees voluntarily agree to undertake an interview.

What are the potential benefits of the research project?

- Questionnaires and expected interviews may result in incorporating the lessons learnt (from the site visits, policymakers and local professionals) for revitalising vast areas of unexploited land in historical Iranian cities. The research highlights the scope for reintegrating 'liminal urban areas' into spatial and economic structures of traditional urban fabrics, as well as the surrounding contemporary urban spaces. This could demonstrate how regeneration methods based on liminality can be applied in practice. The research project may provide solutions for improving urban design and redevelopment processes inside historical Iranian cities
- There are no immediate or financial benefits to the participant, although he/she entirely voluntarily agrees to undertake an interview regarding his/her opinions about the revitalization of disused lands inside traditional urban areas, which may help this research project.

Can I withdraw from the project?

Your participation is entirely voluntary. You can withdraw your data from the study at any time only up until the submission of the thesis, and simply by advising the researcher via university Email: (hamed.tavakoli@adelaide.edu.au),

What will happen to my information?

- All names, contact numbers and personal details will be kept confidential and only could be accessed by authorised staff at the University of Adelaide. The data is preserved at least for five years, based on policies implemented by the University of Adelaide

- Apart from personal details, no part of information collected or used in this research would be confidential, and final results could be reported by the researcher, using publications, journal articles, PhD thesis and relevant presentations
- Interview data (apart from personal data) may be transcribed and post-coded. Your participation and information will be an essential part of the doctoral research project, which will be used strictly for academic purposes.
- Participants may choose to be identifiable in (above-mentioned) publications, however, in the case of interviews with representatives of government authorities (local council and ICHTO) only the name of organizations would be published
- Interview participants will receive a summary and interpretation of the interview before the results being included in the thesis or any publications. Collected data evidence and information might be used in future research projects and academic papers by scholars in the field
- Your information will only be used as described in this participant information sheet and it will only be disclosed according to the consent provided, except as required by law
- Who do I contact if I have questions about the project?

No	Name	Position	Contact Number	Email
1	A/Prof. Julian Worrall	Principal supervisor	Ph.: +61 8 8313 0683 Fax: +61 8 8313 4377	Julian.Worrall@adelaide.edu.au
2	Dr. Ehsan Sharifi	Co-supervisor	Ph.: +61 8 8313 5832 Fax: +61 8 8313 4377	ehsan.sharifi@adelaide.edu.au
3	A/Prof. Nigel Westbrook	External-supervisor	+61 8 6488 1082	Nigel.Westbrook@uwa.edu.au
4	Hamed Tavakoli	PhD Researcher	Ph: +61 8 8313 2986 Fax: +61 8 8313 4377	hamed.tavakoli@student.adelaide.edu.au

What if I have a complaint or any concerns? The study has been approved by the Human Research Ethics Committee at the University of Adelaide (approval number **H-2018-047**). This research project will be conducted according to the NHMRC National Statement on Ethical Conduct in Human Research (2007). If you have questions or problems associated with the practical aspects of your participation in the project or wish to raise a concern or complaint about the project, then you should consult the Principal Investigator. If you wish to speak with an independent person regarding concerns or a complaint, the University's policy on research involving human participants, or your rights as a participant, please contact the Human Research Ethics Committee's Secretariat on:

- Phone: +61 8 8313 6028
- Email: hrec@adelaide.edu.au
- Post: Level 4, Rundle Mall Plaza, 50 Rundle Mall, Adelaide SA 5000
- Any complaint or concern will be treated with confidence and fully investigated. You will be informed of the outcome.

If I want to participate, what do I do? You can express your interest in participating in this research project, and by contacting the student researcher via email; then interview questions will be sent to you. A couple of follow-ups might also be needed that will be arranged accordingly. The following forms: PARTICIPANT INFORMATION SHEET and CONSENT FORM would be filled by participants before an interview. You will be contacted by the researcher for booking an appointment, and at least two weeks before a possible interview session (if applicable).

Yours sincerely,

Dr. Julian Worrall
Dr. Ehsan Sharifi
Dr. Nigel Westbrook
Hamed Tavakoli

Principal supervisor
Co-supervisor
External-supervisor
PhD Researcher



E-6. Consent form

1. I have read the attached Information Sheet and agree to take part in the following research project:

Title:	Application of spatial Liminality in urban design, towards an approach for revitalising unexploited land areas in historical Iranian cities
Ethics Approval Number:	H-2018-047

2. I have had the project, so far as it affects me, and the potential risks and burdens fully explained to my satisfaction by the research worker. I have had the opportunity to ask any questions I may have about the project and my participation. My consent is given freely.
3. Although I understand the purpose of the research project, it has also been explained that my involvement may not be of any benefit to me.
4. I agree to participate in the activities outlined in the participant information sheet.
5. I understand that I can withdraw anytime up until submission of the survey/completion of the interview.
6. I have been informed that the information gained in the project may be published in a book/journal article/thesis/conference presentations/website/report etc.
7. I have been informed that in the published materials I will not be identified and my personal results will not be divulged.
8. My information will only be used for this research project, and it will only be disclosed according to the consent provided, except where disclosure is required by law.
9. I am aware that I should keep a copy of this Consent Form when completed, and the attached Information Sheet.

Participant to complete:

Name: _____ Signature: _____ Date: _____

_____ I have described the nature of the research

to _____

(print name of participant)

and in my opinion, she/he understood the explanation.

Signature: _____ Position: _____ Date: _____

Version 2018

Date: 22/01/2018

E-7. Interview questions**E-7-1. Pilot in-depth interviews with residents:**

Question1: How long are you living in historic areas and what are your current social-financial status?. Question2: Why did you move to historic areas and what are the most crucial problems in your areas?. Question 3: Are you interested to participate for revitalizing your areas, or do you leave historic urban areas? Please explain how and why.

E-7-2. Interview with policy makers and representative from the three government agencies

An invitation letter by the principal supervisor introduced the student researcher to government agencies for conducting interviews. Upon the formal correspondences, several representatives in three cities were contacted and interviewed:

Question 1: Do DABs become a serious problem in historic cities of Iran? Please explain if your answer is yes.

Question 2: Why and how are DABs forming inside historic cities of Iran?

Question 3: Regarding large areas of abandoned and dilapidated properties inside historic urban fabrics, which programs/ policies/design moves are directly addressing the underutilization of land inside historic cities? What are their cons and pros? Are they proved to be successful or not? How does your organization assess the historical ramifications of such programs and policies?

Question 4: How does you organization identify feasibility studies, and implement/audit the revitalization programs (e.g. for reutilizing DABs) in historic areas?

Question 5: Does your organization has any programs for reutilizing DABs in the future? How do such urban policy/design moves could attract or deter public or private building investments inside DABs?

Question 6: Do you have suggestions for revising current preventative policy-regulations?

E-7-3. Interviews with practitioners (architects, urban designers, urban planners, contractors and developers)

Question 1: Do DABs become a serious problem in historic cities of Iran? Please explain if your answer is yes.

Question 2: Why and how are DABs forming inside historic cities of Iran?

Question 3: Regarding large areas of abandoned and dilapidated historic urban fabrics, which programs and policies (by private of public institutions) are directly causing such massive deleterious phenomenon inside historic cities? For instance how does the lack of vehicular accessibility can play a role in the further dilapidation of historic areas?

Question 4: What are the best method of urban design/policy (e.g. simulative incentives) which can best attract sustainable building investments towards DABs and unexploited historic areas? What are the factors that can limit such building investments?

E-8. Field study adverse event and general risk assessment protocol (for the student researcher and participants)

Risk Categories (This would be defined after consulting with local heritage authorities before field studies)	Threat	Levels of Risk	Mitigation Measure	Risk after mitigation (Researcher)	Levels of Risk for Participants (Residents)
All areas: high risk and low risk	<u>Night time</u> criminal activities which occurring during antisocial hours	High	Field visits/questionnaires must be conducted during daylight, in a thoroughfare where the social surveillance exists	Low	Low
	<u>Daytime</u> felonies or illegal occupancies	Low to Medium	Neither enter nor trespass a dilapidated property. Must follow predefined thoroughfares.	Low	Low
	Personal safety concerns	Low to Medium	Appoint a contact person for checking in-out with him/her, on a daily basis. Fill out the form before and after each field visit (please see table 7)	Low	Low
High-risk areas	Personal safety concerns	Low to Medium	If necessary ask a local friend to accompany you/ carry a charged-working mobile phone	Low	Low
	Witnessing a criminal activity	Medium	Call 110 (police line) as soon as practicable, do not interact at any level. Carry a working mobile phone	Low	Low
General risk	Legal permissions	Low to Medium	Obtained and will be carried during all activities/	Low	Low
	Acts of God, e.g. an earthquake	Low	The University of Adelaide insurance will cover this travel to Iran	Low	Low

E-9. Door-to-Door data collection procedure

Procedure		Subsequent Activity
1	Find the property number on the map	Make sure the location correctly presented in the plan, if not provide hand corrections
2	Find the main entrance to the property	
3	Ring the doorbell or knock the door	
4	Occupants open the door and are interested in a quick questionnaire	Present participation information sheet, present the questionnaire and fill it out
5	Occupants open the door but are not interested in filling the questionnaire	Appreciating for time and finishing conversation
		Decide whether local or exogenous residents were occupied the property; write down the number as ' Possibly exogenous settlement ' or ' Possibly local settlement '
6	Nobody answers	Take down the property number, return in 2-3 days
7	No Answer for the second time	Take down the property number, return in different time 3-5 days later
8	No Answer for the third time	Write down the property as ' possibly abandoned '

E-10. Risk assessment and mitigation plan for the student researcher

General safety instructions
<ul style="list-style-type: none"> • No trespassing through dilapidated structures, only use thoroughfare for presenting the questionnaire door-to-door • Work during daytime to avoid potential threats during antisocial hours • Consult with local experts regarding levels of risk of illegal activities in different neighbourhoods before implementing field studies • Ask local friends, colleagues or local connections to accompany you in high-risk areas • Carry a working mobile phone and let friends know where you are • If a criminal activity may be observed, it will be reported by the phone line 110 to the local police emergency department. • The researcher must not interact with the criminal actors at any level.
Coming across illegal occupancies
<ul style="list-style-type: none"> • This research does not aim to find out legal or illegal occupants. Instead, a questionnaire is looking for local residents, for measuring levels of underutilization of land and types of residential adjacencies inside historic cities (Table 3). • It is probable that the researcher may witness the illegal occupancies. • The Illegal occupancy inside historic cities is known to Iranian urbanists since the 1970s, and in this case, poses no danger towards the researchers or participants. • Illegal occupancies would not be reported to police as a separate case, due to the fact that ‘Statistical Center of Iran’ publishes such reports annually, and it is available online to the public.
Coming across illegal activities
<p>To mitigate the risk of being exposed to illegal activities inside historic areas</p> <ul style="list-style-type: none"> • Seek advice from local heritage authorities/locals, and identify which neighbourhoods could have safety concerns • Ask local friends/connections in advance for accompanying you during site visits inside high- risk areas • Avoid suspicious encounters, and leave potential danger zones as soon as practicable • If criminal activities are observed, Inform police as soon as safe and practical: In Iran, illegal events must be reported to 110 (police line)

E-11. Risk assessment and mitigation plan for participants

Risks towards residents who may participate in a questionnaire
<ul style="list-style-type: none"> • The researcher does not intend to study legal/illegal occupation of the space; he is neither in the position nor interested to identify the state of legal or illegal occupancies, and therefore will not recognize, report or disclose illegal occupations. • Participating in this street questionnaire is a voluntary action, and may take less than five minutes. It would be implemented on an anonymous basis, so there is no potential risk towards participants • Participants would be interviewed base on a goodwill • All the participants remain anonymous at all times; no name would be asked unless participants are interested in receiving research updates (please see Appendix B-4)
<ul style="list-style-type: none"> • If criminal activity is observed, it will be reported by the phone line 110 (police emergency), and as soon as practicable. The researcher will not interact with the criminal actors at any level.

E-12. Contingency procedure regarding the withdrawal of participants in the research (addendum to participant information sheet)

Interviewees (academics, building experts and professionals, representatives of heritage authorities or government agencies)
<ul style="list-style-type: none"> • A nominated participant may decide to withdraw during/after an interview. Subsequently, the researcher will shortlist 30 potential participants, expecting to conduct at least 20 interviews. Successively, withdrawals will not hamper the overall research process. • In case of interviewing a representative from local government agencies, the head of organisation will nominate such potential interviewees and may replace them with other staff, if required.
Participants in the questionnaire
<ul style="list-style-type: none"> • Participating in a street questionnaire is a voluntary action, and may take less than five minutes from residents of preselected properties. It would be implemented on an anonymous basis, so there is no risk of the adverse event towards participants. • In this door-to-door questionnaire, not answering the door could be interpreted as meaningful data and could not be considered an adverse event (see Appendix B-9).

E-13. Daily worksheet and safety schedule (student researcher)

Date:		Neighborhood:	
		City/Province:	
The student researcher: Hamed Tavakoli;		The contact person's name:	
Mobile Phone: (+98) 9181614381		Mobile Phone: (+98) 918 8641189	
Signature:		Signature:	
Double-checking smartphones before starting a site visit			
<ul style="list-style-type: none"> • Check if the 'GPS tracker app' is working properly on the smartphones (for both the contact person/s and the research student). please see step-by-step safety procedures below • Is the student researcher's phone fully charged and in working condition? 			
Yes: Continue data collection		No: Fix it before starting field studies	
Details of the intended field studies		i.e. the specific neighbourhoods and building blocks which are supposed to be investigated/covered today	
Meeting point (for check-in)	Time	Address:	
Meeting point (for check out)	Time	Address:	
Step-by-step safety procedure for the student researcher			
<ul style="list-style-type: none"> • The researcher must comply with this form on a daily basis • The student researcher must appoint reliable person/s in advance (as named above), and for checking in-out with them before and after each shift of field study • In case of any changes regarding meeting time/place or other emergency matters the student researcher and appointed persons will inform each other, by using their smartphones • The student researcher's location would be monitored permanently, and by installing a 'Phone Tracker app' (e.g.mspy or Life360) in the contact persons' smartphone/s • Should the researcher not check in within 15-30 minutes from the agreed time; the nominated safety supervisor will contact the researcher on his mobile phone ASAP • If the student researcher does not return or call back within half an hour, the appointed person(s) have to track and find the exact location of the student researcher by 'GPS tracker' • In a case of emergency (e.g. a criminal activity), the nominated person will contact 110 (police line) and inform them regarding the location and safety concerns 			
Daily report: Today's filed visits covered properties in the historic city of..... Including building Block B-....., in .....neighbourhood.			

E-14. Recommendation letter and formal communications with government agencies



SCHOOL OF ARCHITECTURE AND
BUILT ENVIRONMENT

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CRICOS Provider Number 00123M

4 February 2017

To whom it may concern:

This letter confirms that the bearer, Hamed Tavakoli, is a doctoral candidate, under my supervision, in the field of Urban Design at the School of Architecture and Built Environment at the University of Adelaide in Australia. Mr Tavakoli's doctoral research project, entitled "Building in-between: Towards an Urban Design Approach for Revitalizing Transitional Urban Fabrics in Iran," aims to survey, gather information, and analyse urban areas surrounding historic cores in a number of Iranian cities, focusing particularly on districts designated as "heritage buffer zones". The research will explore various relevant dimensions of these districts, including spatial, material, socio-economic, and administrative-regulatory aspects that shape the formation and operation of these urban districts. The research objective is to determine the relationship between heritage protection provisions and the urban character and qualities observed in these buffer zones; and to develop approaches to address issues where this relationship has resulted in sub-optimal or negative outcomes.

To this end his data gathering may include, among others, the collection of historical measured surveys and urban planning maps; heritage assessment and impact reports; applicable planning regulations and case histories of specific challenges and determinations under this; land title and property taxation records; relevant official statistics; aerial photogrammetric maps and street-level photography; and material sourced from interviews with scholars and academics; local opinion leaders; city government officials, property and business owners; and urban inhabitants and visitors.

This research aims ultimately to contribute to improved understandings of contemporary Iranian urbanism; I would be grateful if you could provide him every assistance in his research inquiries. Should you have any concerns or queries, please don't hesitate to direct them to me at the address on this letterhead.

Yours sincerely

Dr Julian Worrall
Associate Professor, Architecture and Urban Design
M.Arch Program Director



ریاست جمهوری
سازمان میراث فرهنگی، صنایع دستی و گردشگری

باسمه تعالی

تاریخ: ۱۳۹۵/۱۱/۲۴

شماره: ۹۵۳۵۰۱/۸۲۸۶۲

پیوست: ندارد

سال " اقتصاد مقاومتی، اقدام و عمل "

جناب آقای محمود وفایی

مدیر کل محترم میراث فرهنگی، صنایع دستی و گردشگری استان کرمان

جناب آقای دکتر فریدون اله یاری

مدیر کل محترم میراث فرهنگی، صنایع دستی و گردشگری استان اصفهان

سرکار خانم دانش یزدی

مدیر کل محترم میراث فرهنگی، صنایع دستی و گردشگری استان یزد

با سلام و احترام

به پیوست نامه وارده به شماره ۹۵۱/۳۹۱۰۲ مورخ ۹۵/۱۱/۲۰ آقای حامد توکلی دانشجوی دوره دکتری از دانشگاه آدلاید استرالیا به همراه معرفی نامه دکتر جولیان ورال، دانشیار دانشکده معماری و طراحی از دانشگاه مورد اشاره مبنی بر جمع آوری نقشه های موجود در بافت های تاریخی و عکس برداری از شهرهای کرمان، کاشان، اصفهان و یزد ارسال می گردد. خواهشمند است با توجه به تأییدیه استعلام گرفته شده از اداره کل حراست سازمان و با رعایت قوانین و مقررات در خصوص همکاری علمی با دانشجویان و مراکز دانشگاهی دستور اقدام مقتضی صادر فرمایید.

غلامرضا صیفاقیان
مدیر کل دفتر حفظ و احیاء بناها، بافت ها
و محوطه های تاریخی

تهران: خیابان آزادی - تقاطع بزرگراه یادگار امام - سازمان میراث فرهنگی، صنایع دستی و گردشگری تلفن: ۶۱۰۶۳۰۰۰

مستودق پستی: ۷۱۹-۱۳۴۴۵۰ کد پستی: ۱۳۴۴۳۷۱۱۱۶۷ سایت: WWW.ichto.ir

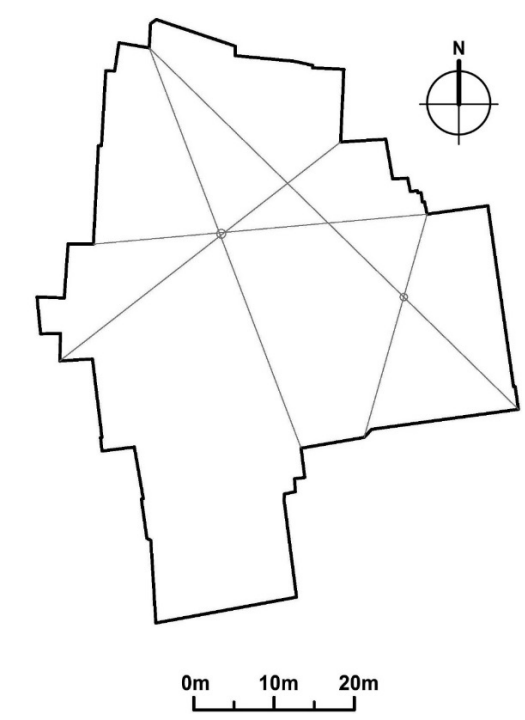
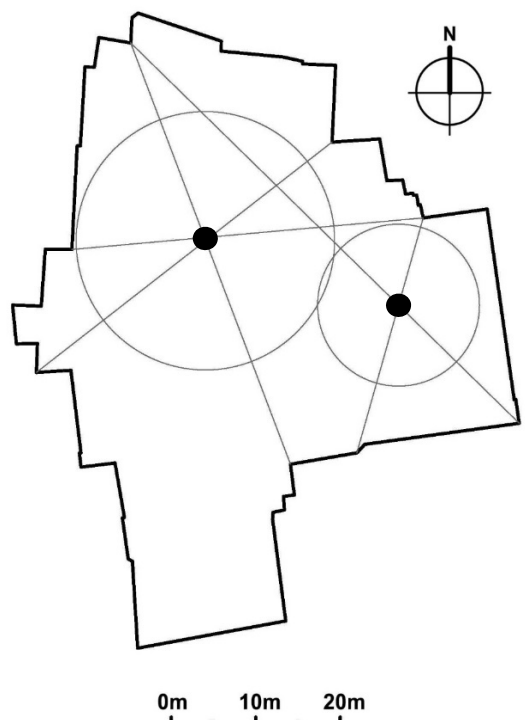
Appendix F: In-depth interview coding criteria

This appendix names interviewees whose ideas have quoted in this research in Chapter 8. The disclosure of names was decided based on consent forms endorsed by interviewees in Appendix E-6.

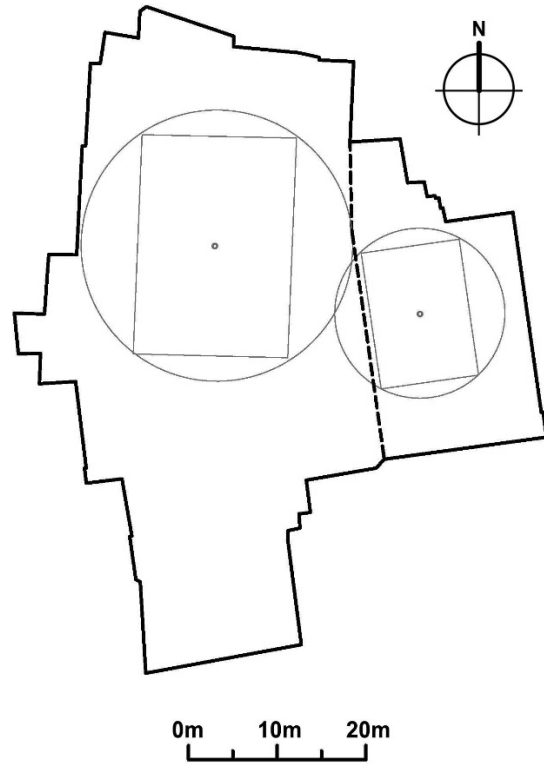
List of interviewees and their references		
Name of the interviewees and their relevant organizations	Organizational responsibility	Names as are referenced in Chapters 8 and 9
1. Mr. Ziarati (ICHHTO, Kashan)	Head of Preservation and Regeneration Department	Z-HPRD
2. Mrs. Bahra(ICHHTO , Yazd)	Urban Planner	B-UP
3.Mrs. Naderi(Yazd World Heritage Centre , ICHHTO , Yazd)	Head of Research Centre	N-HRC
4.Mr. Khajooei (ICHHTO , Isfahan)	Head of Preservation and Regeneration Department	KH-HPRD
5.Mr. Mousavi (ICHHTO , Isfahan)	Urban Planner	M-UP
6.Mr. Noori (Ministry for Roads and urban developments, Kashan)	Senior Staff	N-SS
7.Mr. Tajvidi (Ministry for Roads and urban developments, Kashan)	Head of Department	T-HD
8. Khosro-abadi (Ministry for Roads and urban developments, Yazd)	Senior Staff	KH-SS
9.Mr. Honardan (Ministry for Roads and urban developments, Isfahan)	Senior Staff	H-SS
10.Mr. Farehmand (The municipaplity, Yazd)	Deputy mayor	F-DM
11.Mr. Ghaderi, (The municipaplity, Kashan)	Head of urban design department	GH-HUDD
12.Mr. Houshmandian, (Development, renewal and improvement department, The municipality of Kashan)	Head of Development, Renewal and Improvement Department	H-HDRID
13.Mr. Shams (Development, renewal and improvement department, The municipality of Isfahan)	Senior Staff	S-SS
14.Mr. Helli (Kashan)	Traditional Architect and Developer, specialist on redeveloping DABs	H-TAD
15.Mr. Dastgah-saz (Yazd)	Developer specialist on redeveloping DABs in historic areas	D-GC
16.Mr. Hajinia, Isfahan Housing Development Corporation (Sherkate-i-toseh-i-mskan-i-Isfahan)	Engineer and developer	H-ED,
17.Mr. Hassanzadeh, Isfahan Housing Development Corporation (Sherkate-i-toseh-i-mskan-i-Isfahan)	Engineer and developer	H-ED
18.Prof. Behzadfar	Principal Urban Designer (theoretician in historic areas)	B-PUD
19.Prof. Memarian	Professor (theoretician) in Traditional Architecture	M-PTA

Appendix G: Methods of positioning courtyards in historic cities

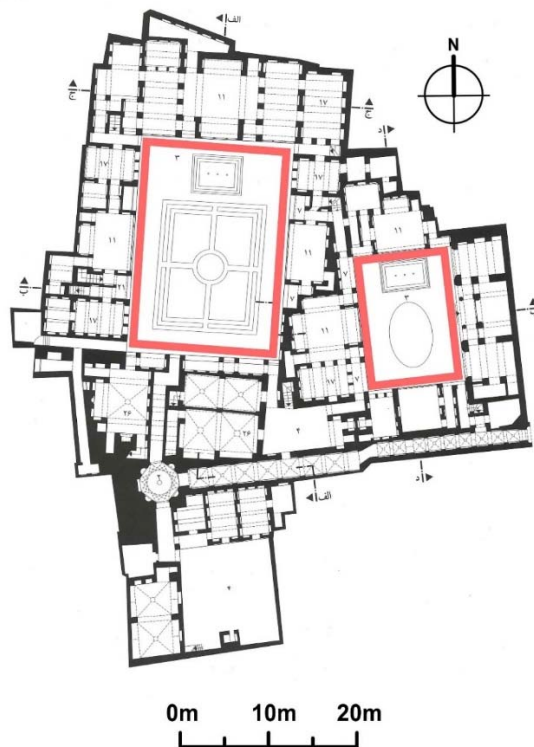
Appendix G-1: The geometrical language of courtyard structures in historical Iranian architecture

Design Phase	Spatial demonstration
<p>1. Locating the geometrical centre or centres of the land</p>	 <p>The diagram illustrates the first step of spatial demonstration. It shows an irregular, multi-sided land plot. Two diagonals are drawn across the plot, intersecting at a central point. Two other points are also marked, each being the intersection of two lines connecting opposite corners of the plot. A north arrow is located in the upper right corner, and a scale bar at the bottom indicates 0m, 10m, and 20m.</p>
<p>2. Drawing the base circles upon which the courtyard will be positioned</p>	 <p>The diagram illustrates the second step of spatial demonstration. It shows the same irregular land plot as in the first diagram. Two large circles are drawn, centered on the two points marked in the first diagram. The circles overlap each other and also overlap with the boundaries of the land plot. A north arrow is located in the upper right corner, and a scale bar at the bottom indicates 0m, 10m, and 20m.</p>

3. Positioning the courtyard regarding the preferred directions



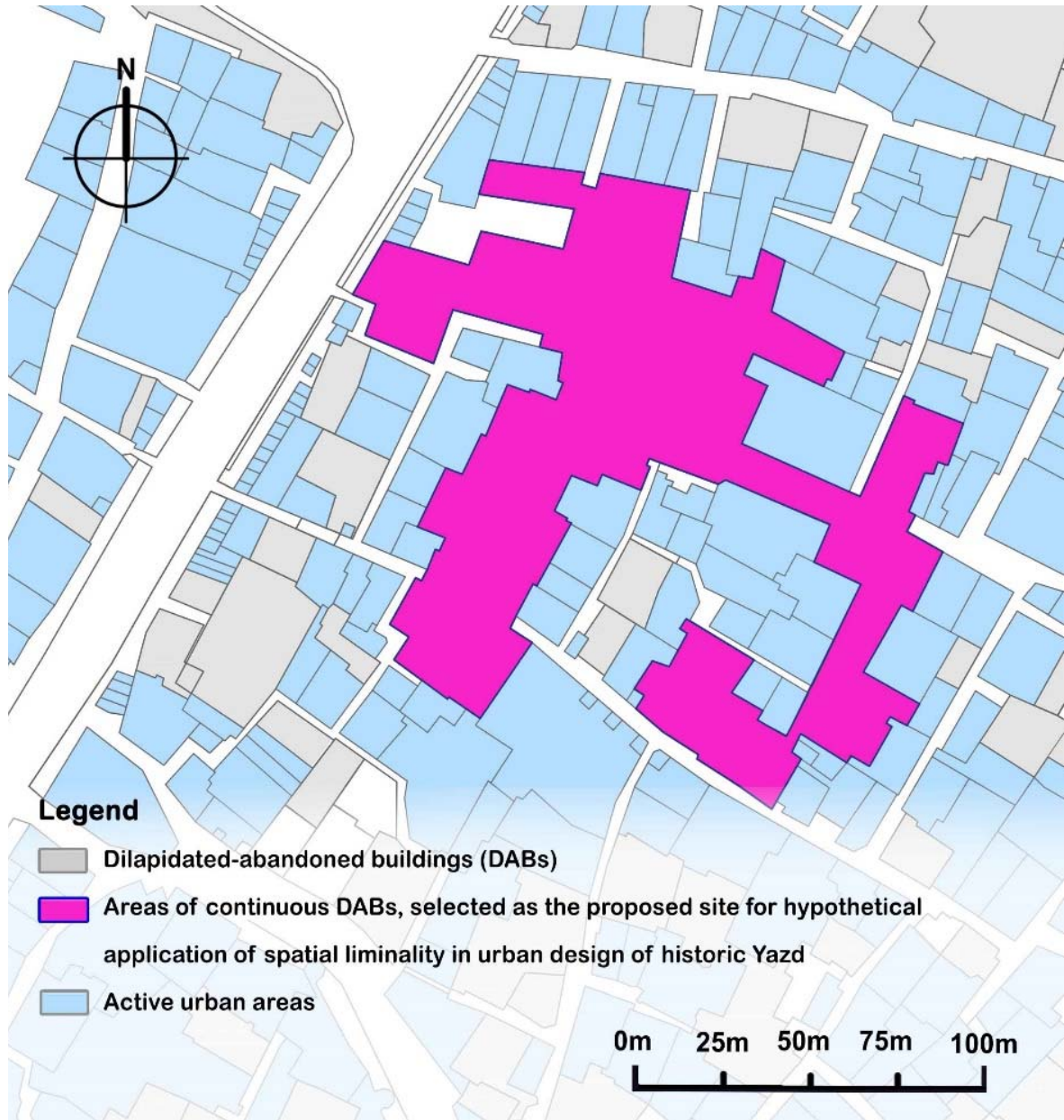
4. The final designed product



A case study in historic Isfahan by Mulavi (1991) is demonstrating the geometrical language of courtyard structures in traditional Iranian architecture (Khaghani, 2012, p. 171).

Appendix G-2: Methods for identifying a hypothetical continually-dilapidated site

The plan depicts a hypothetical cluster of interwoven DABs in historic Yazd that potentially could be used for implementing holistic masterplans. In this hypothetical case, areas of continuous DABs approximately reach up to 13074 m².



Appendix G-3: Methods for proposing building mass and in-between open spaces inside a hypothetical continually-dilapidated site

One possible way for proposing building mass and in-between spaces (courtyards) inside a hypothetical continually-dilapidated site, up-scaled based on Appendix G-1 and by the method as first discussed by Mulavi (1990).

