

**How Can the Global Food Security
Challenges be Addressed in a
Multilateral Trading System?**

By

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THESIS

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Abstract

Eradicating hunger and meeting food security expectations remain global goals. In the multilateral trading system (MTS) they can only be met through cooperation among countries in the form of international trade. Yet a number of trade-related incidents have eroded confidence in the capacity of the MTS to address food security issues.

The research question here is “How can global food security challenges be addressed in a MTS?” The main focus is on the role of the World Trade Organization (WTO), but the research also covers its interaction with other organisations and the context in which it operates, that is, the MTS.

The study covers four topics:

- What is food security?
- Does the WTO have a mandate and the capability to contribute to food security?
- What policy measures are used to address food security issues and are they effective?
- What significant changes in the context of the debate complicate or ease the quest for a consensus on how to respond to food security challenges?

The method used was to collect information on the views of delegates, researchers and officials, by an online survey and from interviews, and to analyse the data using different tools.

Views on “What is food security?” were grouped according to combinations of ‘orientations’ and ‘dimensions’. The former refers to a focus on people, trade or resources. The latter refers to availability, accessibility, stability and utilisation. Views on the nature of food security, while apparently showing a systematic variation by the frequency of responses, were not found to differ significantly in statistical terms over the development levels of the respondents’ countries. Lack of progress on food security issues in the WTO is therefore not caused primarily by a lack of a common understanding of the concept.

A majority view was that the WTO mandate on food security is limited, although the less developed economies supported the counterview. Respondents also confirmed that WTO rules are inadequate in addressing food security issues. Lack of policy space was an issue for the least-developed and developing countries; inadequacy in disciplining trade-distortive measures was also a concern for the developing, developed and research/official groups; and lack of transparency was especially undesirable for the developed and least-developed countries.

Import/export restrictions and subsidies (including domestic support) are widely used policy instruments for food security goals, despite their trade-distortive aspects. However, respondents had mixed views about the effectiveness of these policies, especially in the context of the inadequacy of rules to discipline them. The lack of case law through the dispute settlement system is compounding that issue.

The food crisis of 2006–2008 raised the profile of food security but other dynamics have made it difficult to reach a consensus for change. These include greater diversity in the interests of the developing group as a whole, the shift in the negotiating positions of emerging developing countries, and protectionist concerns related to the increase in green box spending.

For all these reasons – the uncertainty about the WTO’s mandate, the inadequacy of its rules and the diversity within the developing economy group – negotiations that are relevant to food security have been hindered and little progress has been made. The MTS could contribute to food security, but resolving these issues is the next step to doing so.

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. In addition, I certify that no part of this work will, in the future, be used in a submission in my name, for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint-award of this degree.

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I believe nothing just happens, but everything is planned for a purpose. Therefore, I hope this thesis will facilitate the noble cause in question to bring glory to the Lord almighty, whose hand I have experienced in every moment in this journey!

Dedication

to

my son Nikhil

Acronyms

ACP	African, Caribbean and Pacific
ACWL	Advisory Centre on WTO Law
AMS	Aggregate measurement of support
AoA	Agreement on Agriculture
APEC	Asia – Pacific Economic Cooperation
ASEAN	Association of South-East Asian Nations
BRICS	Brazil, Russia, India, China and South Africa
D	developed
DDA	Doha Development Agenda
DSB	Dispute Settlement Body
DSM	Dispute Settlement Mechanism
DSU	Dispute Settlement Understanding
Dv	developing
EC	European Commission
EU	European Union
EU CAP	EU Common Agricultural Policy
FAO	Food and Agriculture Organization
G-10	Group of 10
G-20	Group of 20
G-33	Group of 33
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariff and Trade
GDP	gross domestic product

GNI	gross national income
HD	high-income developed
HDV	high-income developing
ICTSD	International Centre for Trade and Sustainable Development
IMF	International Monetary Fund
ITO	International Trade Organization
LDCs	least-developed countries
LDV	lower middle-income developing
LIFDC	low-income food deficit country
MDGs	Millennium Development Goals
MFN	most-favoured-nation
MTS	Multilateral Trading System
NFE	net food exporters
NFG	net food group
NFI	net food importers
NFIDC	net food-importing developing country
OECD	Organization for Economic Cooperation & Development
PCA	Principal Component Analysis
PTA	preferential trade agreement
RAM	recently acceded member
RDev	Rest of the developing
RTA	regional trade agreement
SCM	subsidies and countervailing measures
SDGs	Sustainable Development Goals

SDT	special and differential treatment
SPS	sanitary and phytosanitary measures
SSM	special safeguard mechanism
TRIPS	Trade-Related Aspects of Intellectual Property Rights
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNIDO	United Nations Industrial Development Organization
UPDV	upper middle-income developing
US	United States
WHO	World Health Organization
WTO	World Trade Organization

Chapter 1 Introduction

1.1 Introduction

The notion of food security, the focus of this thesis, was first referred to at the United Nations World Food Conference in 1974 in Rome. The conference was organised to review the food crisis at the time and to agree on measures to ensure that “within a decade nobody would suffer from food insecurity”¹ (Simon 2012; Shaw 2007). Even though the issue was commonly acknowledged (internationally), the orientation was national. The importance of taking a global outlook was introduced at the World Food Summit in 1996 (Gentilini 2002; Simon 2012). However, these conversations had been preceded by a long history of discussion of food policy issues among multilateral institutions.

The collective drive to “eradicate hunger” was initiated in the post–World War 2 years under the leadership of President Franklin Roosevelt at the United Nations Conference on Food and Agriculture in Hot Springs, Virginia, USA in May/June 1943 (Simon 2012; Shaw 2007). This initiative spearheaded the establishment of the Food and Agriculture Organization (FAO) under the purview of the UN in 1945, signed by 42 nations in Quebec, Canada (Phillips 1981). As stated in the first session of the FAO Conference held from 16 October to 1 November 1945 (FAO 1945), the main purposes are:

... to promote the common welfare by furthering separate and collective action on their part for the purposes of raising levels of nutrition and standards of living of the peoples under their respective jurisdictions, securing improvements in the efficiency of the production and distribution of all food and agricultural products, bettering the condition of

¹ This objective is in line with the keynote address made by Mr Henry Kissinger, US Secretary of State, the leader of US delegation to the World Food Conference 1974 held 5–16 November.

... all government should accept the removal of the scourge of hunger and malnutrition, which at present afflicts many millions of human beings, as the objective of the international community as a whole, and should accept the goal that within a decade no child will go to bed hungry, that no family will fear for its next day’s bread, and that no human being’s future and capacities will be stunted by malnutrition. (Shaw 2007, p. 131)

rural populations, and thus contributing toward an expanding world economy and ensuring humanity's freedom from hunger²". (FAO 1945)

The UN, as well as the FAO, has recognised the importance of agricultural trade, and a historical relationship exists among these organisations and the institutions of the world trading system. Agricultural trade was a major part in the Havana Charter negotiations, which led to the establishment of the International Trade Organization (ITO) in 1947. A legal framework was also drafted for the post-war intergovernmental commodity agreements (ICAs). The ICAs were established to reduce price fluctuations and to balance supply and demand of staple food and non-food commodities (Gilbert 1987; Margulis 2017; Raffaelli 1995). Initially, they were a part of the ITO (Josling, Tangermann & Warley 1996). In 1948, after the failure of the ITO, the General Agreement on Tariffs and Trade (GATT) was created and continued until the World Trade Organization (WTO) was established in 1994. It is understood that "the US had not seen the need to shifting agriculture trade issues onto the UN, rather regarded the work of GATT negotiations and FAO as complementary" (Margulis 2017).

In its 18th conference in 1975, the FAO reaffirmed the need to foster collaboration and economic relations with other international organisations, such as GATT (FAO 1975). The interest shown by the FAO on GATT negotiations during its eight trade negotiation rounds is captured in its conference reports. The importance of the GATT for widening market access and reducing non-tariff measures, and the slow progress in areas that are important for the developing countries are registered concerns at these meetings (FAO 1977 & 1979).

More specific relationships are observed between the FAO and the WTO in 1994. The WTO has recognised FAO participation at the meetings of the Agriculture Committee and other relevant committees as an observer (WTO n.d-a)³. Further, there is a collaboration between the WTO and the joint FAO/WHO Codex Alimentarius, the WTO having identified the latter as

² In 1965 the phrase "ensuring humanity's freedom from hunger" was added to the FAO Constitution (Phillips 1981, p.9).

³ FAO participation in WTO Committees: General Council, Trade Policy Review Body, Council for Goods, Council for Trade-related Aspects of Intellectual Property Rights, Committee on Subsidies and Countervailing Measures, Committee on Agriculture, Committee on Agriculture – Special Sessions, Committee on Sanitary and Phytosanitary Measures, Committee on Regional Trade Agreements, Committee on Trade and Development, Committee on Trade and Environment, Committee on Market Access, Committee on Technical Barriers to Trade, and Working Group on Trade, Debt and Finance (WTO n.d- a).

the relevant standard setting body in the Sanitary and Phytosanitary (SPS) Agreement of the WTO (Codex Alimentarius 2016 & WTO n.d-b).

Similar to the FAO Constitution, the Marrakesh Agreement Establishing the WTO in 1994 stated the importance of effective cooperation with other international organisations that have related responsibilities (WTO 1994). Hence, in addition to being a part of the High Level Task Force on Global Food Security Crisis in April 2008, the WTO Secretariat is involved in other initiatives on food security spearheaded by the UN (WTO n.d-c). In recent years the work on eradicating hunger has been heightened in a more organised and a collaborative manner with a partnership of different stakeholders. The importance and concern placed by the international community on addressing the needs of the billion people in this planet who are affected by hunger is reflected in the first goal “eradicate extreme poverty and hunger” of the Millennium Development Goals (MDGs)⁴ (United Nations n.d-a) and the first and second of the Sustainable Development Goals (SDGs)⁵ (United Nations n.d-b). The WTO is part of the dialogue in achieving SDGs, as both WTO and the UN identify that trade can play a central role in post-2015 international work on development. Programs conducted by the WTO, such as Aid for Trade (WTO n.d -d) and Enhanced Integrated Framework (Enhanced Integrated Framework n.d), which focus on addressing supply- and trade-related infrastructure obstacles to reducing trade costs. These programs, which have a direct impact on elevating trade in poor countries and reducing poverty and hunger, contribute towards achieving the SDGs (OECD & WTO 2015; Basnett & Bhattacharya 2015). In addition, involvement in global value chains (WTO n.d-e), the recent abolishment of export subsidies⁶ (WTO n.d-f & WTO 2015-a), and the enforcement of the Trade Facilitation Agreement⁷ (WTO n.d-g) are more areas that will contribute to inclusive and sustainable development outcomes.

⁴ MDGs- In September 2000 in New York, during the special session of the UN Assembly the United Nations Millennium Summit approved 8 Millennium Development Goals. The target was to reduce its first goal eradicating extreme poverty and hunger by half during 1995-2015.

⁵ SDGs – In September 2015, at the Sustainable Development Summit part of the UN Assembly, the members adopted a set of goal to end poverty, protect the planet and ensure prosperity for all as part of the Sustainable Development Goals with a target to be achieved in 15 years.

⁶ A Ministerial Decision was taken at the tenth WTO Ministerial Conference held in Nairobi in 2015, to abolish export subsidies. WT/MIN(15)/45 WT/L/980 21 December 2015.

⁷ Trade Facilitation Agreement came into force on the 22 February 2017

In spite of their long-running relationship and similar objectives, differences are also observed between the FAO and the WTO in dealing with food security issues. As is widely understood, the FAO is the relevant organisation for addressing food security issues and, among other objectives, the importance of enhancing and managing production to feed the populations is a priority for the FAO. However, the domestic policies on production should conform with the WTO rules. Compared to the FAO, the WTO has a role in disciplining members over trade-distortive policies. Referring to its dispute settlement system, one of the WTO delegates who participated in this research asked:

...[W]ho would ensure that countries actually are not undermining others' food security in pursuing their own food security and legitimate concerns and policy orientations? FAO doesn't do that because it's not an organisation that has the rules with teeth. Who else, but the WTO with a perfect body?

Does the WTO role end there? Trade is connected to all four dimensions of the 1996 FAO definition of food security. Based on this definition, four dimensions, namely, availability, accessibility, utilisation and stability are identified as aspects to be fulfilled simultaneously in order to achieve food security (FAO 2008 -a). These dimensions reflect the role and importance of trade in achieving food security. For example, availability of food is achieved through trade without restrictions. Accessibility which is equally important, relies on countries and persons having purchasing power (Sen 1981-a)⁸.

Trade acts as a catalyst in promoting production, creating income, ensuring the free flow of goods at a reasonable price and stabilising markets to uplift the economic and social standards of the people. According to one of the developing country WTO delegates who participated in this research, "All economic development is for livelihood and food security. It is a part of every economic activity, from the perspective of keeping market well-functioning for food security and removing distortions".

Similar to the FAO objective of raising the standard of living, the WTO recognises its responsibility to enhance the economic development to alleviate the standard of living of its members, especially the developing and least developed countries (LDCs), as stated in its objectives (WTO 1994). According to some WTO delegates who participated in this research, these are the categories most affected by poverty and hunger and they represent two-thirds of

⁸ Amartya Sen described the importance, when the food is already available, of the accessibility of food, or the ability to purchase it.

the WTO membership. The WTO recognised the vulnerability of the net food-importing developing countries (NFIDCs) under its Ministerial Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on LDCs and NFIDCs (WTO n.d-h). However, the food crisis experienced in 2008 was an eye-opener, leading to new thinking about other areas relating to food security and the WTO's relevance and capacity in addressing these issues.

The relationship between trade and food security was evident during the 2007/2008 food price hike. An additional 75 million people fell below the hunger threshold according to the FAO reports in 2008 (FAO 2008-b & Gurria 2009). There were even consequences for political instability in some countries. Commodity prices that had been declining since 1994 spiked during 2007/2008 (Elliott 2015). Policy measures such as export restrictions, import restrictions and price controls were put in place to mitigate the situation, according to the 2008 FAO survey (Sharma 2011), and instead had escalated it. Analysis conducted by Martin and Anderson explained that insulated policies contributed towards the surge in staple food prices for rice and wheat by 45% and 30% respectively during 2006–2008 (Martin & Anderson 2011). For example, India's decision to ban non-Basmati rice exports in August 2007 fuelled a string of restrictions and bans by other exporters, such as Thailand and Vietnam, followed by the panicked reaction of the Philippines, a major importer of rice. The rice price, which was less than US \$250 per metric ton before the ban, exceeded US \$1000 per metric ton in May 2008. A similar effect was noted with wheat during this period. The wheat price, which was around US \$200 per metric ton in January 2007, escalated to US \$500 per metric ton in May 2008, an impact of the restrictions imposed by the Ukraine, India, Argentina, Russia, Kazakhstan and others (Dawe & Slayton 2010; Sharma 2011).

Since 2008, there have been more food security-related debates in the WTO, with various proposals being submitted.⁹ (WTO 2014-a) The special safeguard mechanism (SSM) proposal discussed in the Doha Development Agenda (DDA) and the most recently discussed proposal on public stockholding for food security purposes are related to food security (Margulis 2017). The expectations of the WTO have been high. For example, a developing country delegate participating in this research stated that:

⁹ The public stockholding proposal submitted in 2013 are G-33 proposals for Bali - JOB/AG/22 – 13 November 2012 & JOB/AG/25 – 3 October 2013

I think that, especially in the WTO, food security is a humanitarian issue that everybody's supposed to understand. And those developed countries instead of refusing the proposal should help those country who need to apply those programs and seek a balance on that.

However, the response has not been significant, specifically with the public stockholding proposal expecting a permanent solution at the end of this year. In an interim measure, the countries already conducting such programs are protected from being challenged through the WTO dispute settlement mechanism as agreed at the 10th WTO Ministerial Meeting in Bali.¹⁰ These programs are deployed by developing countries to purchase and stockpile food for distribution among needy people (WTO n.d -c). Governments with highly populated countries have resort to these programs to address hunger and malnutrition and generate a livelihood for the farmers. However, researchers (Elliott 2015) and the respondents interviewed for this thesis have expressed concerns that the inherent weaknesses in rules in addressing these domestic support policies permit manipulation of these programs, resulting in trade-distortive actions that can impact the food security of other members (WTO 2015 -a).

Reporting on the latest state of the Geneva negotiations, Kanth (2017) stated that in spite of the efforts of the WTO Director General to find a permanent solution for the G-33 proposal on public stockholding, the G-33 members have a tremendous task in reaching a credible and legally sound solution on public stockholding for all developing countries that can be accepted by other members of the WTO at the 11th WTO Ministerial Meeting scheduled to be held in Buenos Aires by end of this year. At the meeting conveyed by the WTO Director General on 17 March 2017, the Chair of the G-33, Indonesia, voiced the inadequacy of the current rules and the provisions in the AoA on public stockholding in allowing policy space to implement food security programs to fight hunger and rural poverty in developing countries and address the needs of the low-income, resource-poor farmers. On the other hand, diverse concerns were expressed by developed countries (e.g. Canada, the EU, USA, Norway, Japan) and developing members (e.g. Pakistan Thailand, and Paraguay). Kanth (2017) reports that the developed countries view the G-33 proposal as a request for unrestricted policy space for the developing countries. However, the underlying common concern is of any possible trade distortions that could generate from a permanent solution which enable market-price support programs to be

¹⁰ 9th WTO Ministerial meeting held in Bali, Indonesia. – Ministerial Decision - WT/MIN (13)/38 WT/L/913 of 11th December 2013.

included in the “Green box” (known as the least trade-distortive support). Therefore, the main challenge is for the WTO Director General to convince the main opponents – Brazil, the United States, Canada, the European Union, Paraguay, Pakistan, Thailand, and Australia, among others. According to Kanth (2017), they have “repeatedly ... stonewalled attempts to engage in a serious conversation based on the G33 proposal on grounds that it would undermine the AoA agreement”.

1.2 Objective and research focus

Uncertainties remain as to what extent these issues can be addressed in a trade organisation (WTO n.d-i). The public stockholding proposal for food security, for instance, has been lingering since 2013¹¹, with members trying to explore the meaning and relevance of the food security concept in the WTO context. As there had not been any disputes directly relating to food security and the concept was identified only once in the preamble to the Agreement of Agriculture (AoA) as a non-trade concern.

The WTO is the body that regulates agricultural trade in a multilateral system. Should it and can it address the food security concerns of the consumers, farmers, importers and exporters of its membership? The aim of this thesis is to address this gap in understanding and exploring how the multilateral trading system (MTS) could contribute to reaching the goal of global food security. The main research question of this thesis is therefore: “How can the global food security challenges be addressed in a MTS?”

Firstly, this research aims to identify what is food security in the context of the WTO. Views were obtained in a survey and in interviews from the WTO agriculture delegates, researchers and officials. Having identified the nature of food security issues, attention turns in this thesis to the WTO. The structure of the WTO plays a vital role, as it sets the parameters for negotiations. Therefore, the clarity of its mandate and adequacy of its rules to address food security issues is the second essential area for research. In particular, the ability to discipline contentious policies such as import and export restrictions and subsidies that have an impact on food security remains a question. The third element of the research is the response to question of the how the MTS can address food security challenges. The response is complicated by the

¹¹ These clarifications had been sought since 2013 when this research began and it is still an unresolved issue.

dynamics that can act as an impetus or an impediment in achieving organisational goals within the evolving economic and geopolitical landscape. Some suggestions are discussed.

The data for this thesis are the views of respondents, who include delegates, researchers and officials. Among them, the main focus is on the views of delegates, complemented by those of researchers and officials as a source of third-party perspective. These views were ascertained from both an anonymous survey (50 respondents) and interviews (63 respondents¹²)¹³. The survey was initiated before the interviews and was used to draft the interview questions. Each chapter is centred on one or more survey and interview questions. Depending on the objective and the availability of data, a different methodology was used to identify meaningful outcomes. The methodology included frequency percentages, hypothesis testing, standard error bars and factor analysis, as explained in each chapter.

1.3 Chapter plan

There are nine interrelated chapters in this thesis. The chapter structure is illustrated in the chapter map in Figure 1.1. The focuses of chapters 2–9 are explained briefly.

Chapter 2 reviews relevant literature on the concept of food security within the ambit of the MTS. Particular reference is made to trade-related food security issues and the inadequacy of the WTO rules in addressing these issues.

Chapter 3, or the data chapter, initiates the discussion by presenting an overall view of the issues to be studied. It contains the analysis of 50 anonymous online survey responses from a combination of 28 delegates and 22 researchers and officials. It covers 30 questions under six sections: (1) food security–related challenges, (2) role of the MTS of the WTO in addressing food security challenges, (3) views on food security and trade restrictions, (4) food security and WTO negotiations, (5) food security and political dimensions and (6) food security and future prospects.

¹² The names or the countries or the participants were not disclosed to comply with the University Ethics statement.

¹³ Number of respondents can change (by 1) depending on their participation and response to a particular question.

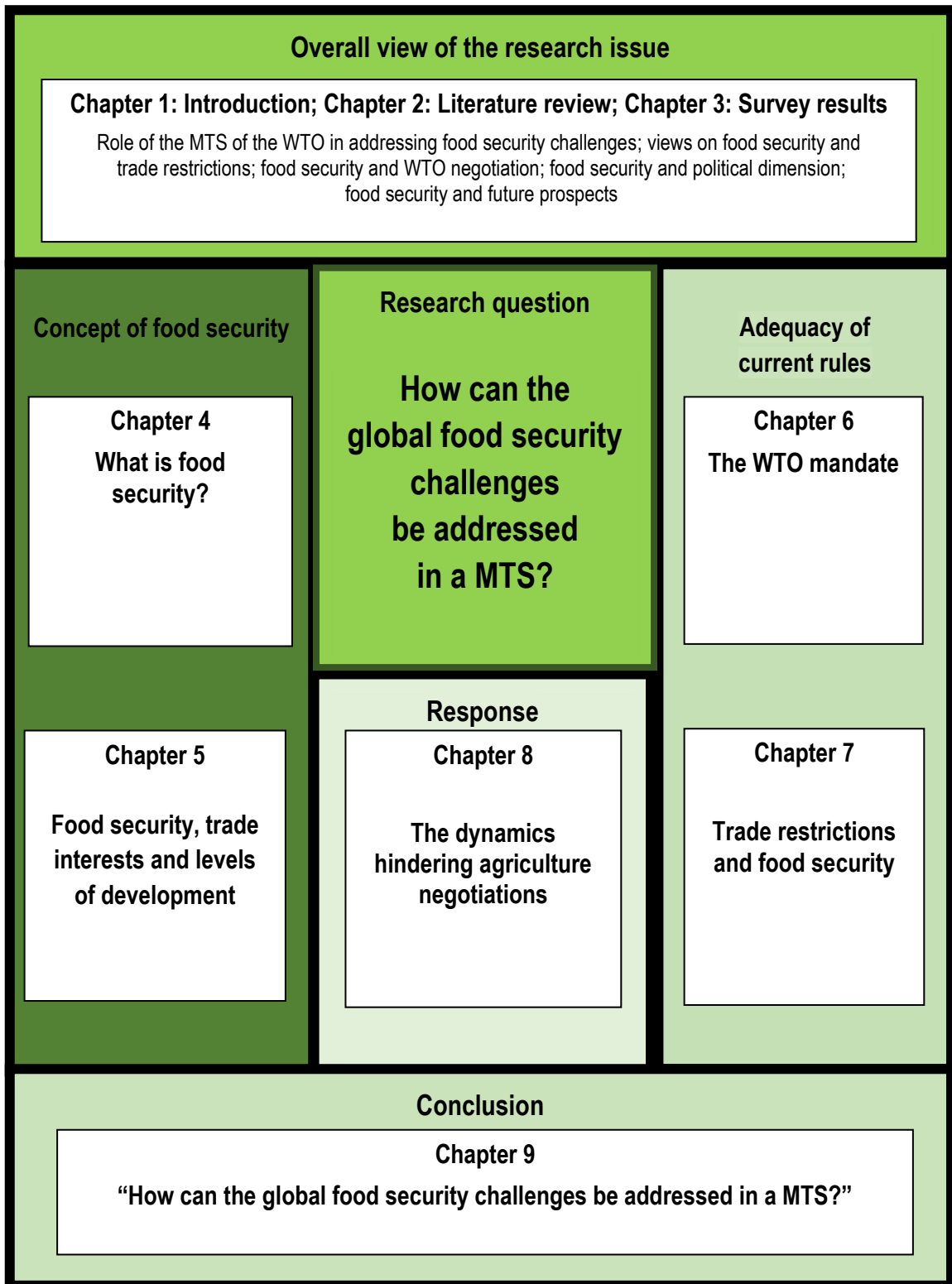


Figure 1.1: Chapter map

Chapter 4 focuses on the multidimensional concept of food security from the point of view of the WTO members. Two related areas are discussed. “What is food security?” and “What are the reasons for diverse views of food security?” Responses to the first question, “What is food

security?” are analysed under three orientations: people, trade and resources with particular reference to four dimensions: availability, accessibility, utilisation and stability.

Chapter 5 continues the discussion begun in Chapter 4, with further analysis of the following three key issues:

1. People orientation and development levels: Is there any relationship between people orientation and development levels, and the four dimensions of food security within the people orientation and development levels of countries?
2. Importance of trade: Is the trade aspect of food security more important for developing country members than for others?
3. Impact on negotiations: What impacts do the diverse interests of countries and negotiating groups have on food security–related trade negotiations?

Chapter 6 questions the relevance of the WTO by elevating the discussion to the next level. Broadly, it questions the mandate of the WTO to address food security issues and the adequacy of current WTO rules to address the trade-related food security challenges of its membership.

Chapter 7 inquires into the effectiveness and disciplining of trade policies and measures used by some WTO member countries as tools to address food security challenges. Further, the effectiveness of the dispute settlement system is assessed.

Chapter 8 concentrates on a range of dynamics and their impact on trade negotiations. In addition to the WTO rules, dynamics are considered to be important in arriving at a consensus, as the WTO operates in an evolving environment within and beyond its direct negotiating scope.

Chapter 9, the conclusion, enfolds the salient points of each chapter and discusses “How can the global food security challenges be addressed in a MTS?”

Chapter 2 Literature Review

2.1 Introduction

Trade and food security are closely interconnected (Matthew 2014 in Magrini, Montalbano, Nenci & Salvatici 2014). Smith provides a conceptual framework to discuss the impact of international trade on food availability, accessibility and stability (Smith 1998 in Diaz-Bonila et.al 2003; Magrini et.al 2014). The various channels to food security are through trade itself – the contribution of trade to growth and to government revenue. Matthew (2014) adds to this list the point that a more open and predictable trading system would be more responsive to sudden shocks. Although agriculture accounts for three per cent of the GDP and six per cent of the global trade, throughout the WTO history spanning from GATT, the Uruguay Round, Doha and now post-DDA agriculture negotiations have been very contentious and tense (Anderson 2010; Margulis 2017; Gonzalez 2002).

This chapter examines the literature on the connections between trade and food security, focusing on the following areas: the negotiations related to agriculture before and during Uruguay Round, to explain the emergence of the AoA; the food security coverage in the AoA; the different views on food security and the changes that have taken place after Uruguay Round; the debate about the association of trade policy measures with food security, adequacy of rules and effectiveness of the dispute settlement system in disciplining these measures.

2.2 Food security negotiations before and during the Uruguay Round

In the 1940s, agriculture continued to be a significant economic sector and source of employment, production and foreign exchange for both developed and developing countries (Margulis 2017). The GATT (1947) provided a basic framework of rules to regulate international trade between the contracting parties, with commitments for further tariff reduction, focusing on trade liberalisation (the WTO and GATT). However, in the 1950s, the US initiated a GATT waiver to exempt agriculture, supported by the then emerging European Community (EC), which was intending to provide domestic support for agriculture through the Common Agriculture Policy (CAP) (Bown 2009). The exemption of the agriculture sector from GATT continued. In the 1960s, when GATT banned export subsidies, the agriculture sector was exempted and in 1966 when Switzerland joined the GATT, its agriculture sector was also exempted (Tyres 1993). In view of the waivers, Bown (2009) predicted that:

This lack of discipline concerning trade in agricultural products would ultimately result in a complicated web of domestic policies throughout the sector excesses in import

restrictions as well as substantial domestic support (subsidies) programs, which can have the effect of choking off imports and making suppliers artificially competitive in third country (export) markets (p. 14).

As indicated by Bown prior to the Uruguay Round, there was a clear difference between the undisciplined agriculture policies of the developing and developed countries. Some developed industrial economies promoted agriculture production by utilising subsidies, tariffs, quotas and other non-tariff barriers. These policies supported farmers at the expense of the urban consumers. In contrast, developing countries had supported the urban consumers at the expense of the farmers. The policy was to tax farmers to maintain affordable prices for the urban consumers and to develop the industrial sector. Unlike the developed economies, these countries lacked the financial capacity to subsidise the farmers and had given less prominence to agriculture, which, compared to their industrial sector, was known as the “backward sector”. (Gonzalez 2002). These different orientations were reflected in the subsequent rounds of negotiations.

As discussed by Hoekman & Kostecki (2009), prior to the Uruguay Round, agriculture negotiations had not been strong and discussions favoured US positions. Even during the Kennedy and Tokyo Rounds in 1960–1970, agriculture negotiations had made little progress owing to different approaches between the USA and EU and their unwillingness to reform the domestic market. The EU favoured a system to facilitate CAP,¹⁴ whereas the US, supported by Australia, New Zealand and Canada, had insisted on trade liberalisation (Hoekman & Kostecki 2009). During the Uruguay Round negotiations the USA, EU, Japan and Canada, known as the Quad, dominated the negotiations (Drahos 2003). Among the different interested parties, the Cairns Group, a coalition of developing and developed agriculture-exporting countries with the objective of promoting trade liberalisation, challenged the protectionist measures of the US and EU (Tyres 1993). Eventually, bridging the gap between different parties became difficult because of the fundamental differences and negotiating strategies (Hoekman & Kostecki 2009).

According to Margulis (2017), “subsidy wars” – structural adjustment programs to overcome the debt crisis and changes in policies and orientations of various countries – influenced the trade negotiations in the Uruguay Round (1986–1994). During this period, the EU a net food

¹⁴ However, the CAP, introduced in 1962, has reformed since the 1980s to reduce the subsidies.

importer (NFI) that transformed to a net food exporter (NFE) as a result of the subsidies provided under CAP), together with the US, accounted for 40% of international trade in food. Between the US and the EU, constant attempts were made to expand their respective shares in the world agriculture market. As a result of the subsidy wars in the 1980s and early 1990s, the US and EC disposed of surplus production with the result that food prices in the world market declined. According to Anderson (2010), in 1986 when the Uruguay Round was launched, the subsidy war had pushed the prices to record levels since 1930.

The cheap products from the dumping of agriculture surplus adversely affected exporting developing countries. The cheap products in the domestic markets reduced farmers' income and motivation to invest in the agriculture sector. Moreover, the cheap food in the international market discouraged staple food production of the developing countries and led to greater reliance on the international markets. On top of this, developing countries that were relying on the international markets were hit by the third-world debt crisis in the 1980s. These countries adopted reforms or structural adjustment programs to obtain loans from the International Monetary Fund (IMF). Currency devaluation, cutting government expenditure, privatisation and reducing tariff and non-tariff barriers were among many recommended programs that opened the developing country markets. These changes resulted in less government support for production and investment and reduced food subsidies for urban consumers (Gonzalez 2002).

These circumstances drove some major players to consider trade liberalisation, causing division between GATT contracting parties. A proposal was put forward by US in 1988 calling for the "elimination of all market access barriers and subsidies" (Margulis 2017, p. 43) defining a five-year phase-out period for subsidies, converting non-tariff barriers into tariffs and reducing domestic support. The Cairns Group¹⁵ vigorously extended their full support to trade liberalisation proposals until the end of the Uruguay Round negotiations. (Margulis 2017, Gonzalez 2002). However, the EU, still supporting the CAP, had difficulty in accepting the proposal. Furthermore, the GATT contracting parties were divided on trade liberalisation. Net food-exporting states, who were not vulnerable as NFIs as they produced food surpluses, supported trade liberalisation proposals. On the other hand, NFIs, vulnerable to price volatility,

¹⁵ The 14 founding Cairns Group members were Argentina, Australia, Brazil, Canada, Chile, Columbia, Fiji, Hungary, Indonesia, Malaysia, the Philippines, New Zealand, Thailand, and Uruguay. The group is named after the Australian city where they first met in August 1986.

had their own reservations and concerns. Among the NFIs, Japan and South Korea, both supporting domestic production policies, raised these concerns, while another coalition known as the Net Food Group (NFG), led by Egypt, demanded elimination of developed country protectionist measures on behalf of NFI developing country concerns. These developing countries sought policy space by means of special and differential treatment (SDT). As explained by Margulis (2014), this is a key divide that occurs even in current negotiations between the agro-powers. However, the majority, consisting of small developing countries, were almost ignored in the negotiations. (Hoekman & Kostecki 2009; Matsushita, Schoenbaum & Mavroid 2006; Gonzalez 2002).

A further round of pressures emerged when subsidies were becoming a burden for both the EU and the US (Margulis (2014) and Clapp (2006)). “The Blair House accord”, known for the bilateral agreement between the EU and the USA, enabled finalisation of the AoA (Clapp 2006). The result was the completion of the Uruguay Round and an AoA in the WTO. Anderson (2000) described it in this way: “A major achievement of the Uruguay Round was to begin to bring more rules-based GATT discipline to agricultural trade and trade related policies” (p.475).

Gonzalez (2002) considered:

The WTO Agreement on Agriculture is significant because it represents the first time since the creation of GATT in 1947 that agricultural commodities have been subjected to the multilateral trading rules. (p. 440)

2.3 Food security coverage in the AoA

Food security was a contentious issue throughout the history of GATT from 1947, and reference to it had remained an integral part of the agriculture negotiations (Margulis 2017). Food shortages were experienced in 1940 during the Havana Charter negotiations and in 1970 during the GATT period. Moreover, even before launching the Uruguay Round, GATT contracting parties had discussed food security in relation to quantitative restrictions and as a basis for SDT. Even though food security was not explicitly mentioned, the GATT Ministers agreed to include addressing “possible negative effects” of the reform programs on net food-importing (NFI) countries in the Uruguay Round agenda at the Montreal Meeting held in 1988 (Magulis 2017).

According to Margulis, Japan was the first to propose food security as a “non-trade concern” to emphasise the need for NFIs to maintain a minimal level of domestic production to absorb

any market swings. This suggestion was later supported by Switzerland, and Norway. The meaning of the concept is debatable: The term ‘non-trade concerns’ covers a range of commercial and non-commercial interest of the WTO members (Smith 2000; Margulis 2017). Smith (2000) and Margulis (2017) explained that non-trade concerns cover food security, rural livelihood and environmental stewardship, with flexibilities to liberalise agriculture trade, including lesser commitments to NFIs.

The AoA refers to food security in its preamble as a non-trade concern and in Article 20(c) of the AoA, members agreed to continue policy reforms on non-trade concerns. Another outcome was Article 16 of the AoA, “Decision on measures concerning the possible negative effects of the reform programme on least developed and net food-importing countries”, which is considered a compromise between the US, EC and net importers group (NGI). This achievement was in response to the demands made by NGI, led by Egypt. Having experienced high commodity prices during 1987–1989, this group flagged their concerns on possible negative effect for NFIs that could result from similar price volatilities in the world market, especially after the proposed trade liberalisation. To cover the budgetary challenges faced by these importers, they demanded financial compensation from the developed countries. This decision further covers food aid, technical assistance and finance for the developing countries (Knudsen, 1990 in Margulis 2017).

Even though there is reference to food security in the AoA, there are diverse views in the literature on how it should be treated, and if it should be addressed at the WTO or at a domestic or state level. Examples are the following:

WTO is about trade liberalization whereas responsibility for combating poverty must remain in the domain of sovereign national governments. (Haberli 2013, p.79)

In the multilateral world . . . , food security is considered as a state affair. . . . (Stevens, Greenhill, Kennan & Devereux 2000, p. v)

Anderson (2000) and Margulis (2017) refuted these views:

Despite their ‘non-trade’ adjective, these concerns need to be dealt within the WTO because they certainly can affect trade. (Anderson 2000 p.491)

Today food security is deeply integrated into the rules of the trade regime, making the WTO an important yet largely unacknowledged institution in global food security governance. (Margulis 2017 p.25)

2.4 Changes after the AoA

The percentage food production that has been traded internationally increased from 15% in the mid-1980s to 23% by 2009 (Clap, 2015), despite the agriculture share of the merchandise trade stagnating at around 7% throughout the past 20 years, the latter because of the decline (50% of the merchandise trade in the 1990s) and stagnation of the GDP share of agriculture at 3% and the increase in agriculture protectionism (Anderson 2017; OECD & FAO 2007). Greater reliance on imports has been observed among the 66 countries that are unable to be self-sufficient owing to natural resource endowment and among African countries experiencing a decline in domestic production and change in diet (Clap 2015). From the export side, the value increased from USD 1 trillion in 1985 to USD 6.1 trillion in 2004 (OECD-FAO 2007). Even though trade liberalisation has enabled greater participation, there are only a few constant key exporters of staple foods. The growing reliance on the few is considered a risk, as the global markets can be effected by natural or economic disturbances experienced by these countries (Anderson 2017; Clap 2015; OECD/FAO 2007; Schmidhuber 2010).

Food consumption had expanded among the developing countries following strong global economic growth in 2000–2007 (Demeke, Pangrazio & Maetz, 2009; Harbeli 2013). Similarly, food demand is anticipated to grow, with the world population expected to reach 9.15 billion in 2050, the growth mainly taking place in developing countries. This requires a 70% increase in total food production, with the demand for cereals expected to increase by another 50%. Another prediction is that by 2050, 70% will live in urban areas and rural dwelling will decline (Schmidhuber 2010).

The decline in food prices ended after 25 years with the food crisis of 2006–2008 (Demeke, Pangrazio & Maetz, 2009; Harbeli 2013). It is projected that real food prices will be slightly higher in 2030 than in 2007, but less than during the food crisis period.

It is also anticipated that developing economies, particularly those emerging in Asia, will hold a larger share of the global economy in 2030, which is tipped to rise specifically in Asia. It is also predicted that China will be the world's number one producer of both primary and manufacturing products. Its agriculture share is expected to rise from 15% to 18%, and Asia will double its import share of agriculture products (OECD/FAO 2016 in Anderson 2017).

From the negotiations context, Diaz-Bonilla and colleagues (2000, referred to in Karapinar 2010) have pointed to the need for:

... more sophisticated categories than the existing categories of developing countries, least-developed countries (LDCs) and net food-importing developing (NFIDCs) to better capture the relationship between international trade and food security. (p. 13)

These events points towards the future food security debate. Reliance on agriculture imports to feed growing populations, especially in Asia and developing countries, encourages production and international trade. However, if the production is dominated by a few exporters there will be concerns that the food security of vulnerable countries will again be affected.

2.5 Trade liberalisation debate

Trade liberalisation versus self-sufficiency is a continuing debate that is an element of the food security agenda. One set of WTO members is supporting food self-sufficiency and another is advocating freer trade in food as the most effective strategy to achieve food security (Margulis 2017).

It is argued that trade liberalisation achieves food security by increasing food availability, providing greater price stability for poor people and adding to accessibility for both producers and consumers. It allows countries and producers to generate higher income by penetrating new markets and maximising production efficiencies, with a trickledown effect on other non-agriculture sectors and the economy as a whole (Quaker UN Office 2015; Harbeli 2013). Supporters of this view argue that both low food prices due to subsidies in some economies and higher prices for producers due to protection in other economies discourage developing countries from investing in the agriculture sector (Karapinar 2010). Others do not support this view and argue that lowering border protection and agriculture support would hurt developing country consumers through food shortages and price volatility (Karapinar 2010).

Developing countries continue to place high importance on long-run food self-sufficiency policies (Anderson 2017). After the 2006–2008 food crisis, policies tended to move from a self-reliance to a self-sufficiency focus. Countries such as China, Indonesia, Malaysia, Philippines, and Senegal have bolstered their level of food sufficiency as a response to high food prices. The food crisis led to a resurgence of domestic production in Latin American and Caribbean countries that have been relying on food imports (Demeke, Pangrazio & Maetz 2009; Clap 2015)

Acquiring foreign land to produce food for domestic consumption, widely known as “land grabbing”, is another practice with self-sufficiency motives implemented by countries such as China, Japan, Kuwait, Saudi Arabia and South Korea or other cash-rich nations, which is yet

to be seriously explored under the scope of the WTO rules (Demeke, Pangrazio & Maetz 2009; Harbeli 2013). However, according to Anderson (2017), self-sufficiency it is not a viable policy for highly populated countries.

Next to be reviewed are some of the policy measures addressed in the thesis, such as quantitative restrictions, export subsidies and domestic support, which are widely known as protectionist and contentious but used by members to address food security needs.

2.6 Quantitative restrictions

Quantitative restrictions are import and export restrictions. Import restrictions are disciplined by Article XI of GATT, whereas export restrictions are disciplined by both Article XI of GATT and Article 12 of AoA.

Article XI:1 of GATT on elimination of quantitative restrictions states:

No prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas, import or export licences or other measures, shall be instituted or maintained by any contracting party on the importation of any product of the territory of any other contracting party or on the exportation or sale for export of any product destined for the territory of any other contracting party (WTO n.d-j).

However, paragraph 2 (Article XI:2 of GATT) provides exceptions. Exemption on export restrictions also applies to food security–related situations stipulated in Article XI:2(a), for preventing or relieving a critical shortage of food and other products. Exemptions on import restrictions are listed in Article XI:2(c), permitting restrictions on domestic production or marketing of like or substitute products, removing temporary surpluses of like or substitute products and complementing the reduction of animal production (Gonzalez 2002).

As recorded, Article XI:2(a) on export restrictions on food has not been tested, but in the WTO dispute settlement panel reports on China, “Measures related to the exportation of various raw materials” (WTO 2011, panel report: WT/DS394/R, WT/DS395/R, WT/DS398/R dated 5 July 2011), terms such as “critical shortages” and “temporarily” in paragraphs 7.257, 7.258, 7.305 and 7.346 were interpreted in relation to other products (WTO n.d-j).

Compared to export restrictions, import restrictions are invoked and clarified for different purposes in many panels. The “Turkey – restrictions on imports of textile and clothing products panel report” described “quantitative” as:

The prohibition on the use of quantitative restrictions forms one of the cornerstones of the GATT system. A basic principle of the GATT system is that tariffs are the preferred and acceptable form of protection ... The prohibition against quantitative restrictions is a reflection that tariffs are GATT's border protection "of choice". Quantitative restrictions impose absolute limits on imports, while tariffs do not. In contrast to MFN tariffs which permit the most efficient competitor to supply imports, quantitative restrictions usually have a trade distorting effect, their allocation can be problematic and their administration may not be transparent. (WTO 1999, panel report: WT/DS34/R, 31 May 1999, para 9.63)

Anania (2013) explained that, the import restrictions are in place as they were better disciplined in the Uruguay Round by reverting to tariffs and binding , whereas provisions on export restrictions were not . However, Martin and Anderson (2011) stated that high-income countries had bound these restrictions at levels with plenty of “wriggle room” or “water” where they could raise the applied rates when needed.

Export restrictions, also known as the “beggar-thy-neighbour policy”, used widely during the 2007–2010 food crisis, continued to be a prominent trade policy instrument with a long history (Sharma 2011). Mitra and Josling (2009) defined export restrictions as: “Agricultural export restrictions constitute defensive measures implemented by economies to protect consumers or producers” (p. 3).

The most well-known reasons for using the GATT exemption “for preventing or relieving a critical shortage of food” to insulate domestic markets are exogenous shocks such as droughts, climatic conditions and natural calamities. The weaker dollar, high oil prices and speculation that price would further increase are other triggers (Slayton 2009). Timmer and Dawe (2010) identified as reasons for the 2007 food crisis the domestic policies of China and India to reduce rice stocks in late 1990 through early 2000 and the demand for biofuel (corn for ethanol production). Interestingly, Slayton (2009) described the 2007 rice crisis as more a man-made than a natural catastrophe.

There are different tools for restricting exports. Export taxes (specific / ad valorem, variable & differential), minimum export price, quotas, government to government (G2G) sales, export bans and restrictions are covered within the scope of Article XI of GATT on “prohibition and restrictions” (Sharma 2011). The FAO survey of 105 countries observing the reaction during 2007 to 2011 found that countries had resorted to 528 policy measures. Thirty-one per cent of the countries had used one or more combinations of export-restrictive tools, which were used mostly by Asia and Africa. Export bans were noted as being more popular among the LDCs

and smaller exporters during the 2007–2010 period. Of the many restrictive options, countries' selection of tools depends on the different country situation, based on the type of product and time.

The exporters' objectives of imposing export restrictions can be seen from different perspectives, mainly from a political, economic and social point of view to ensure domestic supply, reduce price volatility, secure fiscal revenue and protect the domestic processing industry (Anania 2013).

When export restrictions are imposed to protect domestic consumers from food shortages, importers attempt to collect supplies to stabilise their own domestic markets and the instant reaction is spiralling prices (Timmer & Dawe 2010). However, this situation escalates if other exporters follow suit with more export restrictions as the preferred reaction to price spike threats (Sharma 2011). For example, in 2007, Vietnam, anticipating a shortage due to unfavourable weather conditions in Red River Delta, restricted rice exports. This was followed by India's rice export restriction, owing to election motives and poor domestic food policies, and the situation was exacerbated by the panic reaction from the Philippines. India and Vietnam are the second and the third rice exporters in the world. These two countries accounted for 34% of exports in 2007 and that had an impact on the world market prices, even for the poor rice consumers in Africa and Latin America (Slayton 2009). It is understood that during the 6 month period (October 2007 to April 2008), world market rice price for Thai100%B had increased from US\$335 per ton to over US\$1000 per ton, reaching the highest level ever recorded (Dawe & Slayton 2010). A similar situation was recorded for wheat¹⁶ in 2007 with an estimated 20% increase in price and also with corn and soya bean¹⁷ prices (*Economist*, 27 March 2008 in Mitra & Josling 2009; Mitra & Josling 2009; United Nations 2011). Further, these price spikes had affected the price of other commodities¹⁸ (World Bank 2010). Martin and Anderson (2011) found that in 2006–2008, 45% and 30% of the increase in world rice and wheat prices respectively were due to these insulating policies and countries' reactions.

¹⁶ Fifteen countries, including Russia, Kazakhstan, Pakistan and Bolivia, had stopped exporting wheat in order to ensure adequate domestic supplies.

¹⁷ Argentina and Kazakhstan had banned soybean and sunflower seed exports.

¹⁸ In the affected African region, the domestic prices for cassava in Congo, sorghum in Nigeria, maize in Burkina Faso had increased to 60%, 50% and 35% respectively during 2008–2009 (World Bank, 2010, February).

The political, social and economic impacts of export restrictions are interrelated. The economic impact affects parties differently. It reduces world food supply, but within countries domestic supply increases, prices decrease (more for products with inelastic demand), revenues increase and consumer gains result. However, producers lose and would experience some efficiency losses. The impact differs according to the size of a country relative to the world market, demand and supply for the product, volume traded and so on. Restrictions by small and large exporters have a different impact on the world market. Small exporters' restrictions are seen as limited to the country concerned, without having much impact on the world market prices. The restrictions of large exporters have a direct impact on reduction in world supply and increase in commodity prices. As a result, consumer welfare declines. Producers and other exporters benefit from the high prices in the short run. According to Mitra and Josling (2009), because these are distortive measures, the decline in consumer welfare will always be higher than the increase in producers' welfare. However, they describe net welfare change in the long run as less than in the short run but still negative, because the price levels will not reach the pre-restriction low level even though producers increase the long-run supply in response to high prices (Anania 2013, Mitra & Josling 2009; Sharma 2011).

Mostly affected by export restrictions are the less developed and NFI countries with large populations also receiving a low income and living in urban areas (Gilbert & Morgan 2010; Headey 2013; Ivanic & Martin 2008; Rutten et al. 2013; Verpoorten *et al.* 2013 in Anania 2013; High Level Panel of Experts [HLPE] on Food Security and Nutrition 2011). According to the HLPE report, these countries are now more connected to international prices than in 1970, and rely significantly on imports for food supply. Therefore, price volatility on food security has an impact on household purchasing power (Anania 2013): "By impacting household incomes and purchasing power they can transform vulnerable people into poor and hungry people" (HLPE 2011, p. 19)

Poor households receiving the same level of income had spent around 50–80% and even 100% of their income on staple foods during the food crisis. With the increase, in prices they had neglected nutrition and cut down on health and educational expenses (United Nations 2011). The FAO estimated that the number of chronically hungry people in 2007 increased by 75 million because of high food prices experienced during the food crisis (FAO 2008c). That crisis led not only to hunger, but also to social and political crises, with riots and protests in Africa, Asia, the Middle East and Latin America and the Caribbean (World Bank 2013), and in Senegal (Demeke, Pangrazio & Maetz, 2009).

Anania (2013) further explained that restricting exports reduces importers' confidence in international markets and drives a country towards self-sufficiency policies. Slayton (2009) discussed this phenomenon, describing how Indian and Vietnamese exporters had lost the market share to Pakistan and other exporters. An example is the Philippines; President Arroyo's announcement of the government's commitment to reach self-sufficiency in rice production by 2010 had led to losses from panic responses (later this goal was shifted to 2013).

It is possible to mitigate the effect by subsidising imports, but that is not a viable option for countries that lack fiscal resources (Anania 2013). Diaz-Bonilla, Thomas, Robinson (2003) have argued that industrial countries have resources and legal provisions to subsidise, but in contrast, many developing countries lack the needed resources, even though they have the legal flexibilities.

2.7 Export subsidies and domestic support

Article 1(e) of the AoA defines export subsidies as "... subsidies contingent upon export performance, including the export subsidies listed in detail in Article 9 of [the] Agreement ..."

Diaz-Bonilla and Hepburn (2016) observed that:

Export subsidies tend to be the result of the accumulation of domestic stocks by the exporting country under public buying schemes with the goal to support prices for domestic producers. Then, disposing of those excess stocks on world markets is a way to reduce the cost to domestic taxpayers of these policies. (p. 5).

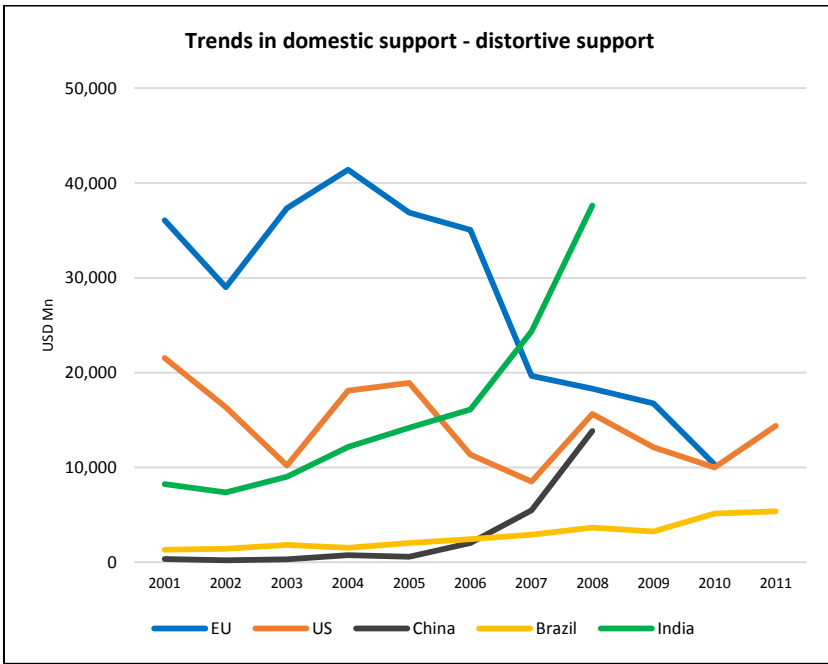
Export subsidies increase the price of food for domestic consumers: those in OECD countries are estimated to pay one-third more for their food because of agriculture policies (Anderson 2000). Simultaneously, they reduce prices in the international market, transferring the benefit to the importing countries and its consumers. However, these subsidies also displace other producers and exporters (Diaz-Bonilla & Hepburn 2016). Furthermore, export subsidies are generally provided only when the commodity prices are low; they become least helpful to the poor and vulnerable countries when the prices are high. Therefore, researchers have argued that export subsidies undermine food security when commodity prices are high (Laborde & Diaz-Bonilla 2015).

Domestic support, in the AoA, is grouped into three boxes depending on the level of trade-distortive effect. The amber box contains all production- and trade-distortive support measures, the blue box is for direct payments made to farmers under production-limiting programs, and the green box is known as support with "no or minimal trade distortive" effect (Banga 2014;

WTO n.d-k). Green box subsidies are unconstrained. Amber box measures are subject to limits and reduction commitments, especially for the 28 WTO members that had significant amounts of subsidies prior to the AoA. However, a “de minimis” minimal support is allowed for other members (five per cent of agricultural production for developed countries, ten per cent for developing countries). Blue box payments are based on the yield or acreage, with a limit of 85% of base-level production). Green box subsidies are not coupled with any such limitations (WTO n.d-l). Furthermore, these boxes contain very specific programs.

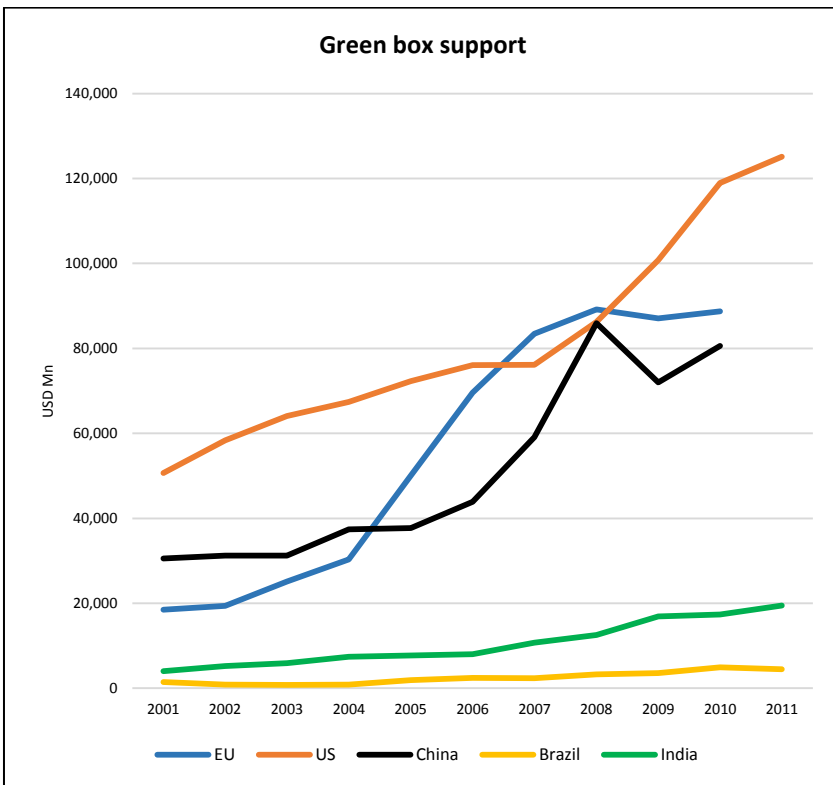
There are, however, major concerns¹⁹ that green box support will be misused to displace exporters, domestic importers and similar trade-distortive effects as export subsidies. Banga (2014) revealed a drastic reduction in amber and blue box domestic measures in the US, EU and Japan. The reduction in use of amber and blue boxes is associated with a rise in spending on green box subsidies, which is argued to be “box shifting” in these countries. Further, there are concerns that emerging countries are also increasingly utilising green box support. Figures 2.1 and 2.2 capture the trend in domestic support and green box support extended by the EU, USA, China, India and Brazil from 2001 to 2011. India and China show rising expenditure on distortive measures. But green box spending in the US, the EU and China has risen rapidly, and China’s spending on green box measures is over five times that spent on distortive measures. The US accounts for the bulk of green box spending.

¹⁹ The dispute US-Upland Cotton (WT/DS267) is an example where the difference between green and amber box support was not proved clearly and it was revealed that green box programs can be contested (Hoekman and Kostecki 2009).



Source: data based on WTO notifications and Cairns Group communication RD/AG/29

Figure 2.1: Domestic support: spending on distortive measures (in US\$ m)



Source: data based on WTO notifications and Cairns Group communication RD/AG/29

Figure 2.2: Green box support (in US\$ m)

Green box subsidies cover a range of 13 government service programs²⁰. China concentrates more on general services, with specific attention to infrastructure services, extension services, public stockholding and direct payments (on relief from natural disaster and environment programs); the USA concentrates on domestic food aid (food stamps program for the poor), and the EU focuses on decoupled income support. India spends more on public stockholding (12 bn) and direct payments on relief from natural calamities (3.9 bn). Brazil spends on domestic food aid, extension and advisory services and infrastructural services. (WTO n.d-m notifications; Hepburn & Bellmann 2014; Gopinath 2008; International Centre for Trade and Sustainable Development [ICTSD] 2009). African countries spend very little on agriculture subsidies compared to other developing countries (ICTSD 2009).

Considering the green box share of the total value of production (VOP) among the countries over the same period, the EU has a recorded increase from 8% to 20% and the USA from 29% to 36%. The other three developing country (China, India and Brazil) shares have a relatively flat trend (Cairns Group communication based on the WTO notifications²¹, WTO n.d-n). Further analysis of Banga (2014) reveals that green box subsidies have increased agricultural production by around 51% in the USA and 60% in the EU. If the USA and EU had cut the green box subsidies by 40% and 50% respectively, the import volumes of agricultural products would rise substantially in the EU by 35% and in the USA by 67%, with an increase of 17% in export revenue of the developing countries. If the subsidies were capped at the 2001 level, developing country export income would increase by 55%. According to Banga, developing countries, LDCs and NFIDC farmers would gain from such capping.

In summary, export subsidies and support, including the shift to green box spending, can affect food security. These measures, as well as quantitative restrictions, are regarded as distortionary

²⁰ These are: general services, public stockholding for food security purposes, domestic food aid, direct payments to producers, decouple income support, income insurance and income safety net programs conducted by the government, payment made for relief from natural disaster, structural adjustment assistance provided through producer retirement programs, structural adjustment assistance provided through resource retirement programs, structural adjustment assistance provided through investment aids, payment under environmental program, and payments under regional assistance program (Agreement on Agriculture Annex 2 [WTO n.d.-p])

²¹ Cairns Group Communication–RD/AG/29/Rev.1 of 28 May 2014 – domestic support calculated based on WTO members transparency toolkit and DS: 1 notifications.

and therefore their use may be subject to WTO rules. The adequacy of rules and debates over various policy measures is reviewed in the next sections.

2.8 Review on the adequacy of rules and policy measures

In relation to export restrictions, many researchers have identified the AoA as “not effective”, “under regulated”, having “regulatory deficiency” or a weak area largely ignored by the Uruguay Round until it was exposed during the severe food price spike in 2007/2008 (Martin & Anderson 2011; Anania 2013; Konandreas 2011; Sharma 2011; Mitra & Josling 2009). The rules are inadequate because the terms and the circumstances in which they can be used are not properly defined, notification and consultation requirements are not enforced, and imbalances between regulating import and export restrictions prevail. As a result, the undisciplined policy space is too great. Sharma (2011) highlighted the need to clarify terms such as “foodstuff”, “temporary”, “critical shortages” and “prevention and relieving of shortages”, and also the need to improve notification and consultancy provisions and stricter disciplining on export restrictions.

The disciplining of subsidies has been a difficult task throughout the negotiations. Export subsidies for industrial products were prohibited under GATT, but agriculture subsidies remained to be partially disciplined in the Uruguay Round (Diaz-Bonilla & Hepburn 2016; Laborde & Diaz-Bonilla 2015). Under the AoA, all prevailing export subsidies were scheduled and bound with reduction commitments; none of the new export subsidy schemes were permitted and such programs are considered illegal subsidies (Hoekman and Kostecki 2009). Members can use export subsidies only for four situations stipulated in Article 9 of the AoA. These include export subsidies subject to product-specified reduction commitments, which can be used by 25 WTO members (one of which is the EU) and accounts for 428 individual commitment on 23 product categories (WTO n.d-o).

Elimination of export subsidies had always been a part of the agriculture negotiations in pursuant to the mandate set out in Article 20 of the AoA. Following the attempts in Doha (WT/MIN(01)/DEC/1, 20 November 2001), Hong Kong (“Doha Work Programme”, WT/MIN(05)/DEC, December 22, 2005) and Bali (WT/MIN(13)/40 WT/L/915, 11 December 2013), and finally in Nairobi (WT/MIN(05)/45 –WT/L/980, 19 December 2015), these were eliminated immediately for the developed countries. However, there are some exemptions in the text and in footnotes 3, 4 and 5. Therefore, it is argued that the Nairobi decision lacks

precision compared to the Rev 4 modalities and does not eliminate subsidies immediately (Diaz-Bonilla & Hepburn 2016; Laborde & Diaz-Bonilla 2015).

Rules still allow trade-distortive and least or no trade-distortive domestic support. There are 28 members able to use trade-distortive amber box support, subject to reduction commitments known as total aggregate measurement of support (AMS). The reduction period differs between the developed (20% over six years) and developing members (13% over ten years). The members with no scheduled commitments can maintain a de minimis level under product-specific and non-product-specific categories. The product-specific threshold should not exceed 5% of the total VOP of that agriculture product, and the non-product-specific category has a ceiling of 5% for the developed and 10% for developing countries (WTO n.d-k).

The rules for the green box are given in Annex 2 of the AoA (Domestic support: The basis for exemption from the reduction commitments) (WTO n.d-p). The fundamental requirement is that this support should "... have no, or at most minimal, trade distortive effects or effects on the production". These should "... be provided through a publicly-funded government programs (including government revenue foregone) not involving transfer from consumers..." and should "... not have the effect of providing price support to the producers ..." (WTO n.d-p). With the reduction commitments, developed countries are using more of the green box support discussed in the previous sections. This is a growing concern among the members, as it amounts to limitless spending.

The DSS can be used by WTO members to test trade-distortive actions of a trading partner. However, researchers have also identified constraints in using the dispute settlement system (DSS).

2.9 Dispute settlement system

The WTO dispute settlement mechanism (DSM), which is known as the most important international tribunal, is built on the dispute settlement that prevailed over 40 years under GATT 1947 regime. The dispute settlement was created to preserve and safeguard the rights and the obligations of the members in facilitating effective functioning of the WTO (Matsushita, Schoenbaum & Mavroidis 2006).

The DSM was strengthened in the Uruguay Round to be more appealing for the smaller members. (Schott & Buurman 1994; Croome 1999 in Hoekman & Kostecki 2009). Further, the Seattle ministerial decision in 1999 to establish the Advisory Centre on WTO Law was to level the playing field by assisting developing countries to use the dispute system. Despite these efforts, there has been very low usage of the DSM by the LDCs. On the other hand, increased usage is reported among the high- and middle-income developing countries, mostly on anti-dumping litigations interestingly, between the developing countries. It is noted that more contentious disputes on subsidies and countervailing measures between OECD members reveal lack of clarity and differences in their domestic regulations (Hoekman & Kostecki 2009).

Resource constraints of the developing and least-developed countries are seen as an obstacle to use of the dispute settlement. On average, a case is estimated to cost around US \$500,000 or more and takes two to three years to resolve. If the dispute is with the main trading partner and the countries have less diversified export markets there will be difficulties in finding alternative markets. Furthermore, with the increasing complexity and coverage of the WTO, its agreements add up to over 25,000 pages of documentation and case laws, adding to another existing 25,000 pages of case law, with the result that legal expertise and capacity is needed in dealing with disputes. Dealing with very complex technical or scientific cases such as the EC-Biotech dispute adds further to the cost and constraints (Hoekman & Kostecki 2009).

It is understood that some governments will not opt to take a case to the WTO, for reasons beyond resource constraints, associated with political, diplomatic and international relations. Member governments fear “stimulating counterclaims (the ‘glasshouse’ syndrome)” (Hoekman & Kostecki 2009) and as a consequence, face retaliation in other areas such as security or cooperation, or when there are other more prominent issues to settle with the country in question, or when the expected payoff is not significant. Therefore, Hoekman and Kostecki (2009) explained this situation as a power based system of relation undermining the rules-based system.

Irrespective of the reason for not prosecuting, the DSS has rarely been invoked for export restrictions and domestic support disputes, apart from the DS267: US – Subsidies on Upland Cotton (WTO 2014-b)²² and more recently the DS511: China are two cases on domestic

²² DS267: US-Subsidies on Upland Cotton, complainant Brazil, respondent – USA, DSB agreed to established a panel on 18 March 2003 and the disputes was settled on 16 October 2014.

support (WTO 2017-a)²³. This is significant; the dearth of cases limits the opportunities to bring in further clarity to the rules.

Some researchers have suggested a “fast track” DSM for smaller disputes, as there are no rapid resolutions in the DSS. Among other views are the mode of retaliation and non-conformity. Since retaliation creates more trade barriers, renegotiation of concessions is suggested as compensation for the affected party. Furthermore, trade or monetary compensations are proposed when the party is nonconforming with the ruling or recommendations. Third-party participation is argued to be a factor in a less effective and prolonged dispute settlement procedure. Among the weaknesses in the system is room for free riders, with the expectation that other countries will litigate and enforce decisions. Other ideas are complying merely to make a notification, or losing opportunities to strengthen the system when uncertainty of the outcome induces parties to reach a settlement (Hoekman & Kostecki 2009).

Finally, the research question of this thesis, “How can the global food security challenges be addressed in a multilateral trading system?” is based on the literature review documented in this chapter. The understanding of food security negotiations before and during the Uruguay Round, which also captures political sensitivities of the GATT contracting parties, lays the framework to explore food security issues in this thesis. More specifically, a critical assessment of high food prices experienced in 2006-2008, fuelled by quantitative restrictions and their implications for importing countries, the debate between trade liberalization and self-sufficiency to mitigate future food shortages, and diverse views on export subsidies and domestic support are identified as contentious challenges addressed within the scope of the thesis. The adequacy of rules in the MTS with particular reference to the Agreement on Agriculture in disciplining trade distortive measures and strengthening a fair and transparent trading regime within the WTO is questioned, with a view to understand the effectiveness of the MTS in addressing food security issues.

²³ DS511: China domestic support for agricultural producers, complainant USA, respondent China, DSB agreed to establish a panel and it was composed on 24 June 2017.

Chapter 3 Survey results

3.1 Introduction

This chapter is based on the anonymous online survey conducted from 11 August 2014 to 30 April 2015. This survey was designed to facilitate one-on-one interviews held mostly in November 2014 in Geneva to gain insight into the question: How can the global food security challenges be addressed in an MTS?

In line with the objective of this research, views were sought from the WTO agriculture delegates, researchers and officials who are working on food security issues. Because they play different roles in the negotiation process, their views were considered separately in two different groups: those of the delegates who represent their country's position in negotiations; and those of the researchers and officials who follow or observe negotiations and feed insight into the process.

This chapter provides an outline of the sampling and survey methods. Because the survey provided an overview of many food security-related issues, key points are presented at the end of each section. Further reference is made to the survey results in later chapters.

3.2 Sample

A multistage sampling method was used to select the sample. First, stratified sampling techniques were used to select an active sample²⁴ of delegates representing the total WTO membership population of 160²⁵, which is broadly differentiated based on the three development levels: developed, developing and least-developed countries. The second consideration was delegates representing different negotiation groups in each stratum (i.e. developed, developing and least-developed) and relevant agriculture negotiating groups

²⁴ Among the 160 membership, EU countries are counted individually despite being collectively represented by the EU Mission in Geneva. It is also noteworthy that not all WTO members have missions in Geneva. Members with fewer resources are represented either by their mission in Brussels at important sessions or through initiatives such as the Organization of Eastern Caribbean States (OECs) or the Pacific Islands Forum. Moreover, even if their mission is based in Geneva, not all members are active in agriculture negotiations. Therefore, although the population sample was 160, the realistic and active population sample was less than 160. When selecting an active sample of delegates, all these factors were taken into consideration.

²⁵ Although at 29.07.2016 there are 164 members, when selecting the sample in May–June 2014, the membership was 160.

(e.g. Cairns Group, G-10, G-20, G-33, African, Caribbean and Pacific countries (ACP), African Group). The final selection was made using judgemental and convenience sampling methods to select researchers and officials who were involved, responsible or currently following the issues of interest to this research.

Invitations to participate in this voluntary survey were sent to 80 delegates, researchers and officials. Participation was also a recommended prerequisite for the interview. Fifty respondents participated in this anonymous online survey. They comprised 28 delegates (from eight developed, 18 developing and two least-developed countries) and 22 researchers/officials (14 researchers and 8 officials). As instructed, most of the questions were attempted and some respondents included additional comments. Remarkably, most of them also shared their contact details for any further correspondence.

The information disclosed in the demographic section of the survey was used to understand their backgrounds, level of competence, involvement and influence in negotiations, and reasons for diverse opinions.

The survey has some limitations. Firstly, 50 responses were achieved out of the 80 initial contacts, which were followed up with emails and telephone calls. The online survey was open for eight months. The decision was made to close the survey and proceed with analysis after 50 responses had been obtained, owing to the low response during the last few months²⁶, mainly due to the voluntary nature of the survey and the fact that the delegates were busy after a stalemate²⁷. It is understood that if the number of responses had been increased by another 20–25, it would have been possible to arrive at more robust conclusions. However, the online survey was a preliminary study to understand the significant issues to be concentrated in the interview questionnaire and become the focus of the thesis chapters. Therefore, the outcome of 50 responses fulfilled the initial need²⁸.

²⁶ Many respondents had already participated by early December 2014.

²⁷ A stalemate in 2014 was caused by the India and USA deadlock in negotiations on the Trade Facilitation Agreement.

²⁸ The survey feedback (received before the interviews were conducted) facilitated in drafting, modifying and selecting the interview questions.

As shown in Figure 3.1, 80% (40 respondents) of the sample had more than five years of experience working with multilateral trade issues. Of those, 39% of delegates and 68% of researchers/officials had more than 10 years of experience.

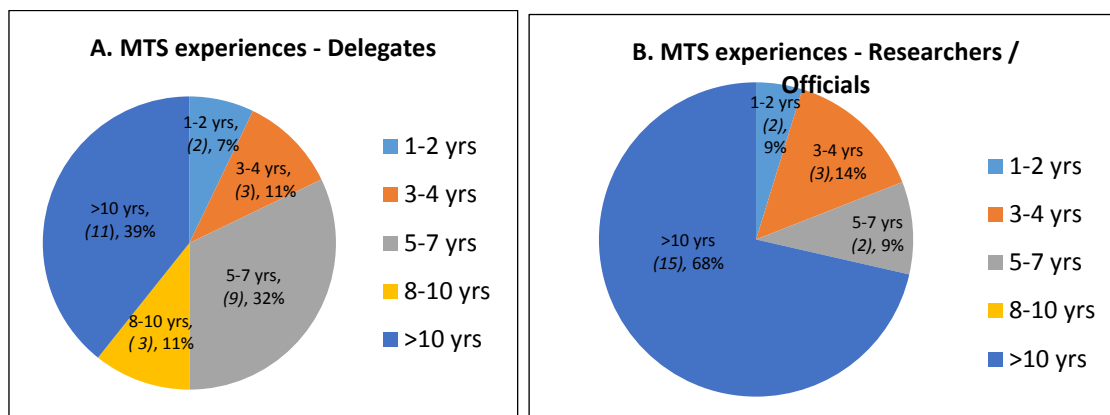


Figure 3.1: MTS experience of (A) delegates and (B) researchers/officials

All but one of the 28 delegate respondents had indicated which country they represented. Of the 27 delegates, 67% were from developing nations, 26% from a developed nation and another 7% were from an LDC (Figure 3.2). Furthermore, as depicted in Figure 3.3 the 27 delegates were well represented in agriculture negotiating groups at the WTO (WTO, 2017-b). Of those 27, 12 were from the Cairns Group (with 19 members), 11 were from the G-33 (47 members), four were from the OECD (35 members), 13 were from the G-20 (23 members), five were from the ACP Group (62 members), three were from the African Group (43 members), three were from G-10 (9 members) and seven were from NFIDCs (31 developing countries plus 36 least-developed member countries)²⁹.

²⁹ The latest WTO List of NFIDCs – G/AG/5/Rev.10 of 23 March 2012.

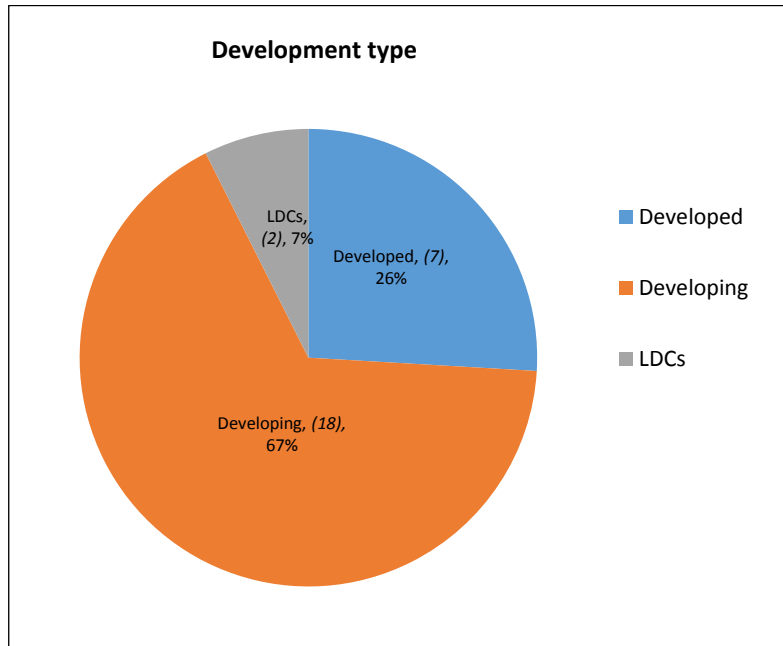


Figure 3.2: Country representation³⁰

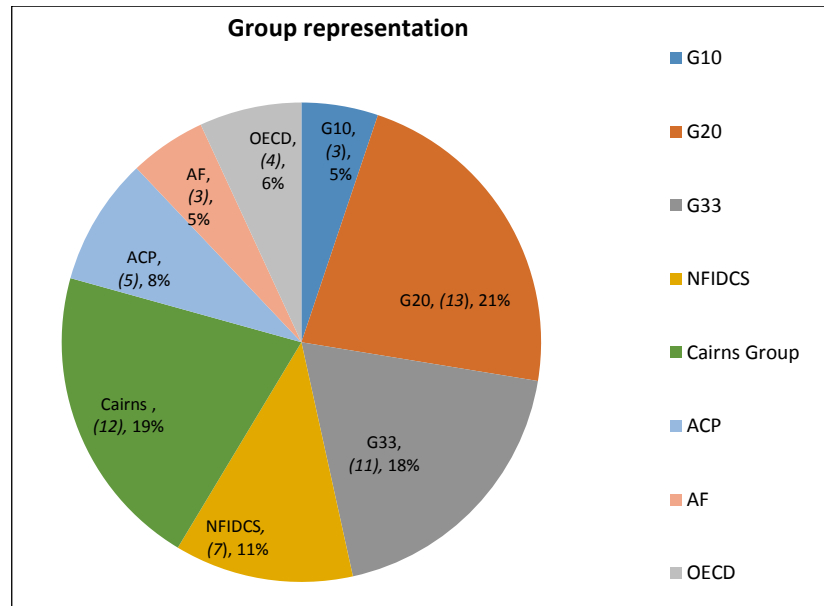


Figure 3.3: Negotiating group representation³¹

³⁰ Although 28 delegates participated in the online survey, only 27 had indicated their country development level.

³¹ Countries have membership in more than one negotiation group, therefore group participation overlaps.

3.3 Survey design

The main objective of the survey was to gain a better understanding of the concept and issues of food security in order to frame the interview questions so as to bring more insights to the research through well-framed interview questions.

Moreover, as depicted in Figure 3.4, survey questions categorised under the six sections are fitted into the four main areas (see Chapter 1) researched under the main research question: How can the global food security challenges be addressed in a MTS? Further, views of the respondents ascertained under these six sections are broadly discussed in the Literature Review. The outcome of the survey results is used in the subsequent chapters as a basis for argumentation and elaboration of the questions.

The survey, including the questionnaire, was developed by the researcher from its foundation stage. The online survey comprised 30 questions under six broad sections. In addition, there were sections for other comments and to disclose the respondents' demographic data.

Although the questions and the structure of the questionnaire were the same, because different demographic information was sought from the two groups, two different links were established using the Adobe online survey facility, one for delegates and one for researchers/officials. These links were emailed to the selected sample. The projected completion time was 15–20 minutes. Copies of the questionnaires are attached in Appendix B-1.1 and B-1.2.

Under the following six sections inquiring into different aspects of food security, respondents were asked to express their views via 5-point Likert scales, rankings and a bipolar scale.

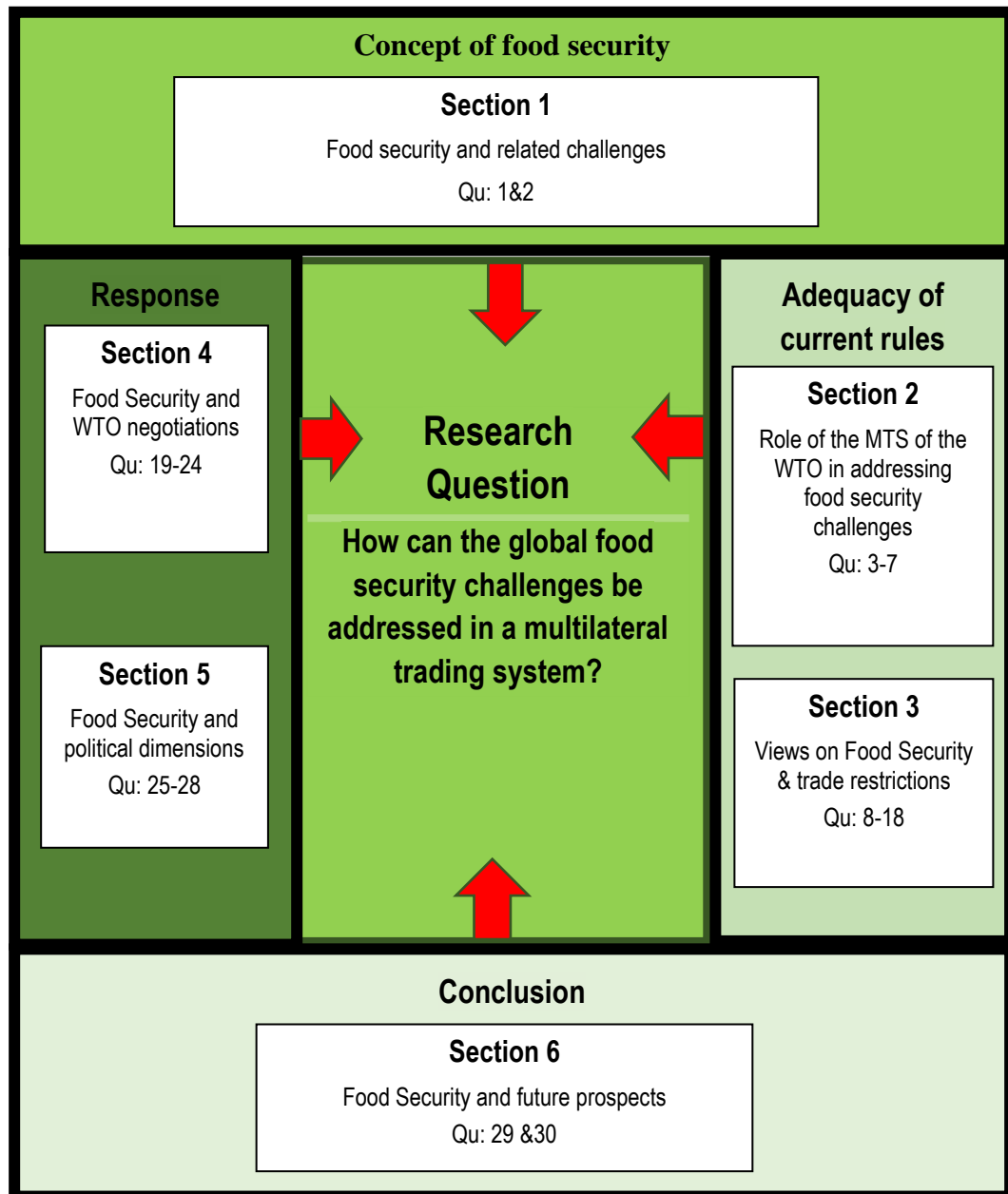


Figure 3.4: Research setting

Four types of scales were designed and used to measure broadly the level of agreement with the statements given. One of the scales evaluated the extent of agreement from “not at all” to “a greater extent”, without an anchor for neutral viewpoints. The other 5-point scales, for testing effectiveness, agreement and satisfaction, contained two extreme sides (positive and negative) and a neutral or undecided point at the middle. There is a possibility that respondents who were not confident with that particular scenario in the statement, or those who preferred to reserve their comments, opted for the neutral or undecided viewpoint.

Views on “food security and related challenges” are captured in questions 1 and 2. Both being ranking questions, respondents were requested to select five elements/challenges they consider

important among the given set, and then rank them in diminishing order. Space was provided for “if any other answers” that respondents deemed important but were not listed.

Views on the role of the WTO’s MTS in addressing food security challenges are captured in Questions 3–7. A Likert scale ranging from “not at all” to “a greater extent” in agreement with given statements was used to assess the respondents’ views on the role and effectiveness of the MTS, and extent of satisfaction with the role played by the WTO in addressing food security challenges.

Views on food security and trade restrictions are found in the responses to Questions 8–18. A Likert scale ranging from “not at all” to “a greater extent” was used for Questions 8 and 9 to test the level of sufficiency of the two Articles – Article XI of GATT and Article 12 of AoA – that regulate quantitative restrictions. Questions 10 and 11 were designed to examine the impact and effectiveness of quantitative trade restrictions using a Likert scale that allowed respondents to select the level of agreement that ranged from “strongly disagree” to “strongly agree”.

Questions 12 and 13 measured the level of effectiveness of quantitative restrictions in ensuring domestic food security needs in the short and long term, with the use of a Likert scale ranging from “very ineffective” to “very effective”.

In Questions 14–18, respondents’ level of agreement on opinions in connection to the impact of export subsidies on food security, its utilisation and the need for domestic measures, was assessed using a Likert scale ranging from “not at all” to “a greater extent”.

Views on food security and WTO negotiations are reported in response to Questions 19–24. In Question 19, respondents were asked to select the five most important factors/reasons for not reaching a consensus at the WTO on agricultural issues, then rank them in the diminishing order. Space was provided to elaborate “any other important factors” that were not listed.

Questions 20 and 21 examined respondents’ level of agreement on two statements, one on trade policies of developed countries and the other on proposals for food security that were still pending, using a Likert scale ranging from “strongly disagree” to “strongly agree”. The views on the Bali Ministerial outcome and the post-Bali negotiations were tested using a Likert scale that ranged from “very unsatisfactory” to “very satisfied” in Questions 22–24.

Views on food security and political dimensions are found in Questions 25–28. For Questions 25–27, a Likert scale ranging from “strongly disagree” to “strongly agree” was used to rate

statements on political aspects in food security issues. A bipolar scale was used to test respondents' views on the best trade policy for a country in Question 28.

The final section (Questions 29–30) relates to future prospects. With a view to addressing these issues, respondents' level of agreement on cooperation among the organisations dealing with food security and the scope of free trade agreements was rated using a Likert scale ranging from “not at all” to “a greater extent”.

3.4 Analysis and findings

The results are presented in graphs, along with an analysis elaborating the group views of delegates and researchers/officials, followed by their individual reactions towards the questions or statements. Moreover, when deemed necessary, the responses of the delegates are further analysed by, for example, their development levels or negotiation groups, to provide a better understanding of the context and issue.

The method of analysis is described below.

3.4.1 Analysis

Ranking questions (1, 2 and 19) were analysed for an overall view and in consideration of the first three most important rankings. Uniformity in analysis was maintained among these questions for accuracy and ease of comparison.

First, the overall scores were ascertained by adding the feedback received for each element/challenge/factor (reason), disregarding the rankings. Then the percentage of the total response received by the two main groups was calculated for each element/challenge/factor (reason).³² Thereafter, for further comparison purposes, the percentage of the respective total responses for each element/challenge/factor (reason) was calculated for each individual group³³. The responses of all 28 delegates were considered in calculating the overall view.

Next, the first three most important rankings for each question were considered. The percentage of the total responses received separately from the two main groups for each rank (1st rank, 2nd

³² Two main groups – delegates and researchers/officials.

³³ Individual group means developed, developing, LDC, researchers/officials separately.

rank, 3rd rank for delegates and researchers/officials separately) is calculated for each element/challenge/factor (reason) in each rank.

The percentage of total responses received for each rank is calculated for each individual group by each rank. Of these, the high-scored elements/challenges/factors (reasons) were identified and compared with each other (first rank, second rank, third rank for LDCs, developing and developed, etc.).

Of the 28 delegates, one delegate had not indicated the development category of the country represented. Therefore, the three most important rankings were analysed excluding unclassified responses.

Similarly, for delegates and researchers/officials, their response on each point on the Likert scale (“very ineffective”, “somewhat ineffective”, “undecided”, etc.) was added to obtain the respective group percentage. Thereafter, based on the individual response received, percentages were calculated for individual groups for each point on the scale.

The response of the delegate who had not revealed the development category of the country represented was considered only for calculating the overall view.

The relevant calculations for each question and the response rates to each question are attached in Appendix C.

3.4.2 Findings

This section reports the key findings for each section of the survey. The questions are discussed by section:

1. Food security–related challenges
2. Role of the MTS of the WTO in addressing food security challenges
3. Views on Food security and trade restrictions
4. Food security and WTO negotiations
5. Food security and political dimensions
6. Food security and future prospects.

3.4.2.1 The concept of food security

The first section refers to the nature of food security.

Question 1: In your view what are the most important elements related to food security?

Respondents were instructed to select the five elements they consider most important out of the given nine, and then rank them in descending order.

As grouped in Table 3.1, the nine statements were designed in line with the four dimensions of food security (i.e. availability, accessibility, utilisation, and stability) reflected in the definition provided by the World Food Summit plan of action (FAO 1996):

Food security, at the individual, household, national, regional and global levels ... exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (FAO 1996, p. 1).

A few related, additional concepts were also tested.

Table 3.1: Categorisation of elements

Availability	Accessibility	Utilisation	Stability	Other concepts
1.5 Availability of sufficient staple foods at all times without any shortages	1.3 Consumers having economic resources to buy staple food 1.7 Availability of staple foods at a price that the poor can afford 1.8 Predictable prices in the international market with minimum price fluctuations	1.2 People having nutritious food to meet their dietary needs	1.6 Consistent supply of food through domestic production or imports at all times without any shortages	1.1 Fundamental right of the people & a precondition for right to food 1.4 A balance among production, supply and demand for food 1.9 Consumers having a choice of their preferred food 1.10 Any other

Overall views of delegates and researchers/officials

(Appendix C: Tables C-2, C-3, C-8, C-17, C-18 & C-22 provides numbers and percentages for rankings of delegates and researchers/officials.)

When comparing the overall scores given by the delegates (see Figure 3.5A), irrespective of rankings, the three highest rated elements were the availability of staple food without any

shortages (1.5; 15% of total responses), the consistent supply of food (1.6; 14%) and staple food at an affordable price (1.7; 13%).

It is evident that the delegates were more focused on the availability aspect of food, followed by stable supply, and access to economic resources. These three elements were strongly favoured by least-developed (60%), followed by developing (42%) and developed (34%) country representatives. (See Appendix C: Table C-4 for delegates' percentages.) When considering the individual groups' reactions, the developing countries attached high importance to the availability of staple foods without any shortages (1.5; 16% of total responses), and food security as a fundamental right of the people and a precondition for the right to food (1.1; 16%) over other elements. Their second choice was consistent supply of food (1.6; 13%). However, a different perception is seen among the developed countries' responses. As a group, developed countries placed high emphasis on the nutritional aspect of food (1.2; 17%), predictable prices (1.8; 17%) and consumer's purchasing power (1.3; 14%). The reactions of LDCs were equally distributed with a score of 20%, over availability (1.5), stability (1.6), affordable prices (1.7) and the right to food notion (1.1).

Clearly, the views of researchers and officials (see Figure 3.5B) are more diverse than those of the delegates. As a group, they attached more importance to nutrition (1.2; 16% of total responses), then availability of staple food at an affordable price for the poor (1.7; 15%), followed by access to economic resources (1.3; 14%), and availability of staple food without any shortages (1.5; 14%).

The researchers' views upheld their group view more strongly. They attach a higher value to nutritional aspect of food than the other groups. Eighteen per cent affirmed the importance of the nutrition in food (1.2), along with 15% preferring staple food at an affordable price (1.7), followed by 15% pointing to availability of staple food without any shortages (1.5) and 14% access to economic resources (1.3). However, as a group, officials gave a much higher rating to another aspect, balance between production, supply and demand (1.4; 18%). Their next choices follow the group's preferences. Of those four elements, availability of staple food at an affordable price (1.7; 15%) and consumers having economic resources (1.3; 15%) are rated equally ahead of the other two, nutrition (1.2) and availability of sufficient staple foods at any time without shortage (1.5), each rating 13%.

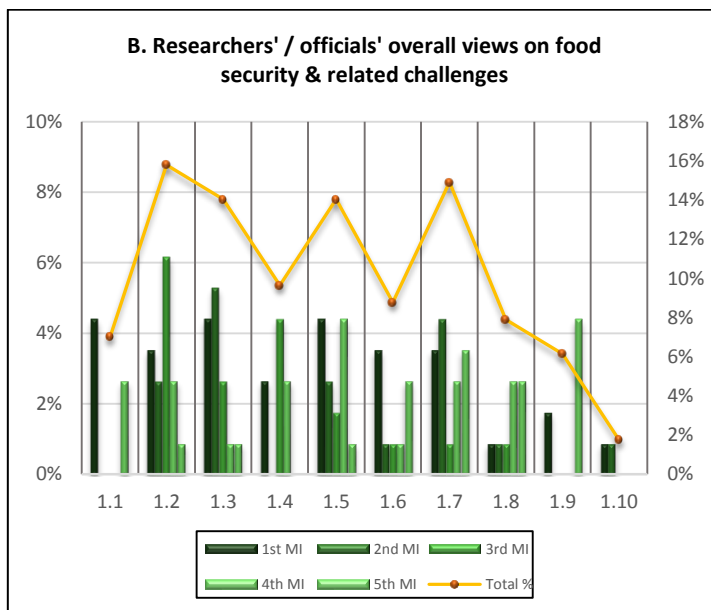
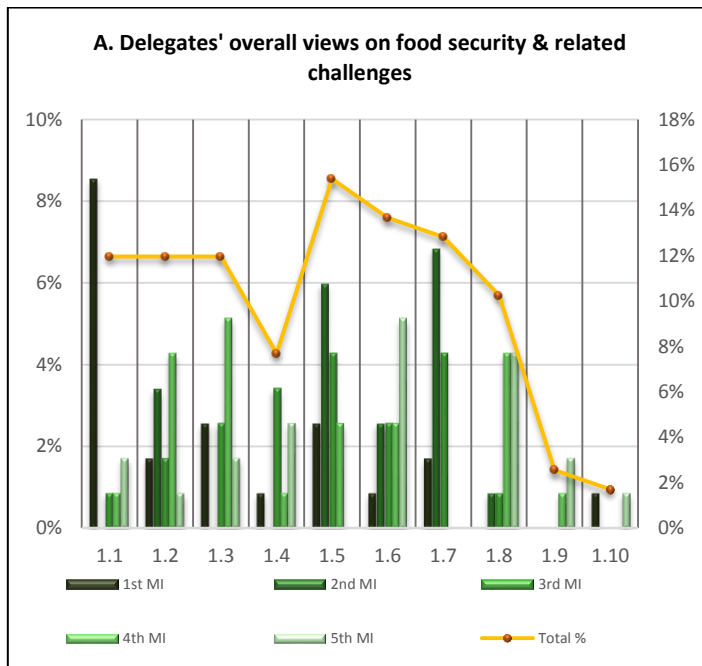


Figure 3.5: (A) Delegates' and (B) researchers'/officials' overall views on food security and related challenges

The three most important rankings of delegates and researchers/officials

(Appendix C: Tables C-11, C-13, C-14, C-15, C-25, C-27 & C-28 provides percentages for rankings of delegates and researchers/officials.)

The first three rankings of the elements were further analysed as a percentage of each rank and thereafter as a percentage of individual group. The results for delegates are depicted in Figure 3.6 and Figure 3.7.

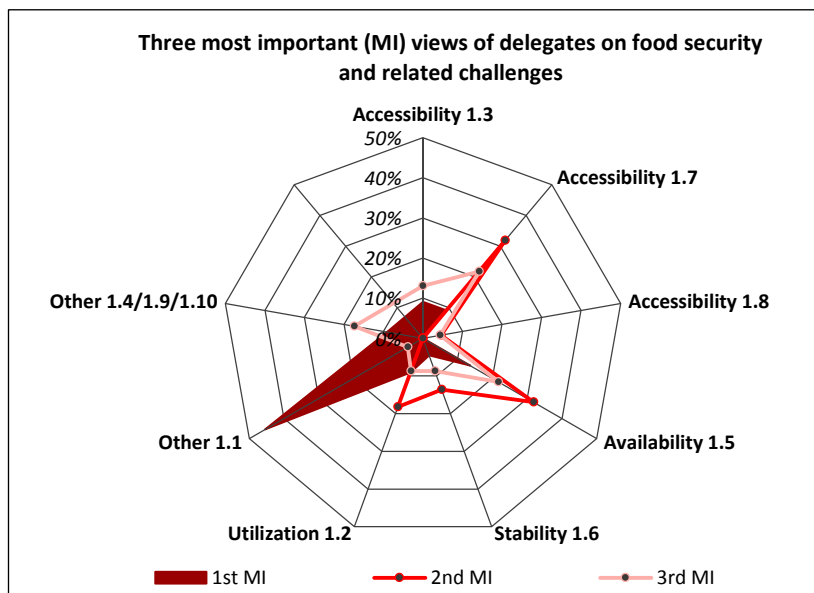


Figure 3.6: The three most important views of the delegates on food security and related challenges

Of the given elements, delegates rated the fundamental right of the people and a precondition for the right to food (1.1; 46% of responses) as the first highest preference, alongside the availability of staple foods at a price that the poor can afford (1.7; 32% & 22%) and the availability of staple foods without any shortages (1.5; 32% & 22%) as their second and third highest scores (Most Important Rankings).

The delegates of developing and least-developed countries identified very clearly and strongly with the notion of the fundamental right of the people and a precondition for right to food (1.1) as the most important element of food security. The second and third preferred conditions, namely, food security through the availability of staple foods at a price that the poor can afford (1.7) and the availability of staple foods without any shortages (1.5) were shared by all three levels of development categories.

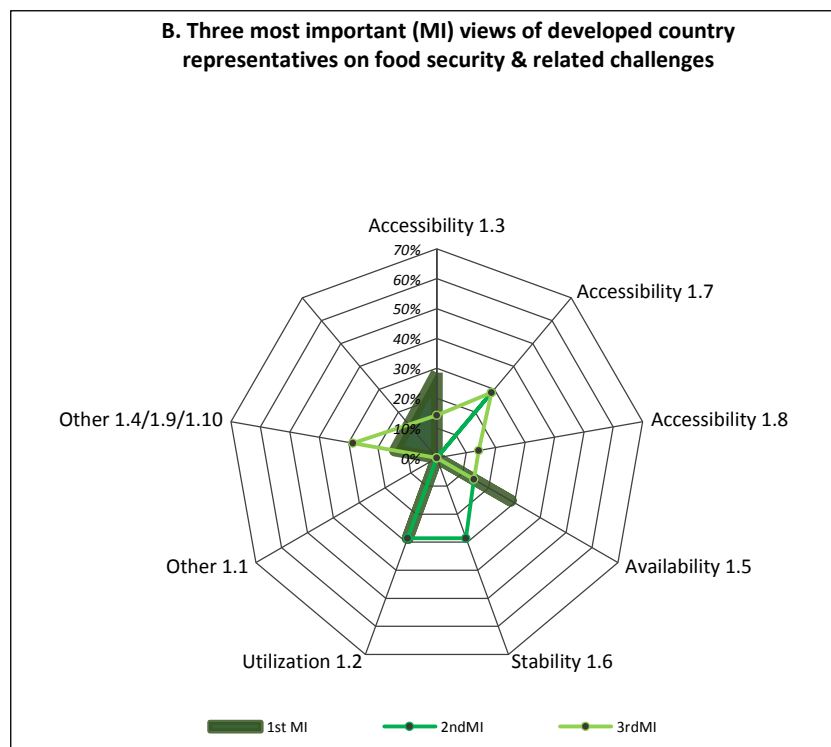
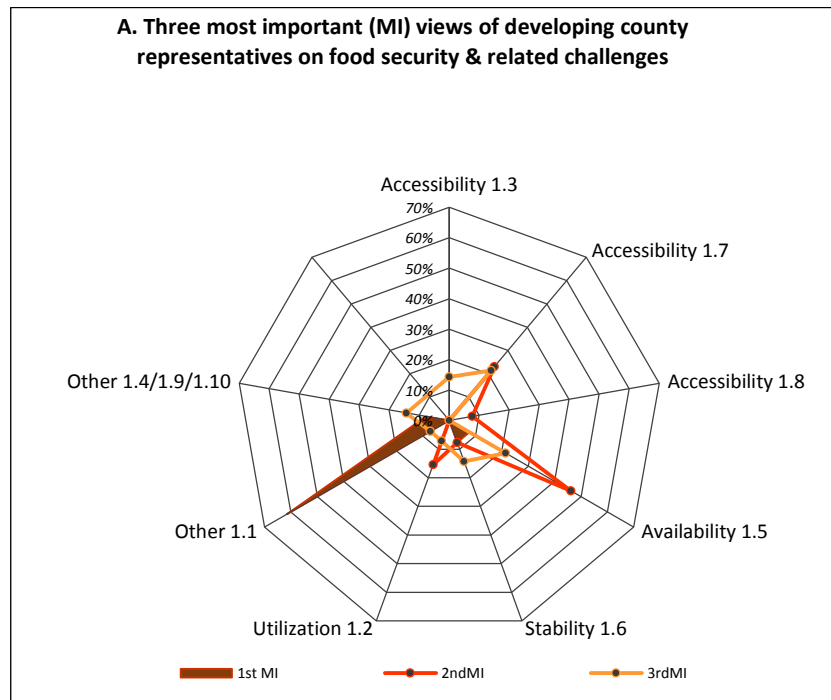


Figure 3.7: The three most important views of (A) developing and (B) developed country representatives on food security and related challenges

When considering the individual rankings (Figure 3.7), 62% of **developing** country representatives (Figure 3.7A) acknowledged the fundamental right of the people and a precondition for the right to food (1.1) as their first preferred rank. The availability of staple

foods without any shortages (1.5; 46%) attracted the highest second-ranking score. The third most important elements were the availability of staple foods at a price that the poor can afford (1.7; 21%) and the availability of staple foods even during shortages (1.5; 21%), were rated equally. The **developed** countries' (Figure 3.7B) first preferred rank comprised three elements and each attracted 29% response: consumers having economic resources (1.3), the availability of staple food without any shortages (1.5) and nutrition component in the food (1.2). Ranking second were the availability of staple foods at a price that the poor can afford (1.7), the consistent supply of food (1.6) and the nutrition component of the food (1.2). The availability of staple foods at a price that the poor can afford (1.7) and a balance among production, supply and demand for food (1.4) attracted their third most important ranking. **Least developed** countries, too, recognised the fundamental right of the people and a precondition for the right to food (1.1) as their first rank, followed by the availability of staple foods at a price that the poor can afford (1.7) as the second rank, and the availability of staple food without any shortages (1.5) and the nutritional component of food (1.2) as their preferred third ranking (See Appendix C: Table C-15).

Notably, the developed country responses failed to recognise food security as a fundamental right of the people and a precondition for the right to food (1.1) as an important element within their first four ranks.

On the other hand, as illustrated in Figure 3.8, the preferences of researchers/officials were distributed among fewer views. Consumers having economic resources (1.3), the availability of staple foods without any shortages (1.5) and the fundamental right of the people and a precondition for the right to food (1.1) each scored 15% as the most important elements in the first rank³⁴. Predominately, researchers rather than officials supported these views. Rated highest in second rank were consumers having economic resources (1.3; 30%) and the availability of staple foods at a price that the poor can afford (1.7; 25%). Both these elements were strongly supported by the officials. Supported mainly by researchers in the third most important ranking was the nutritional component of food (1.2; 35%).

³⁴ As depicted in the Figure 3.8, the category "other", which comprise three elements, scored 17%. Only single elements with high values are considered significant. Therefore, "other" is not considered.

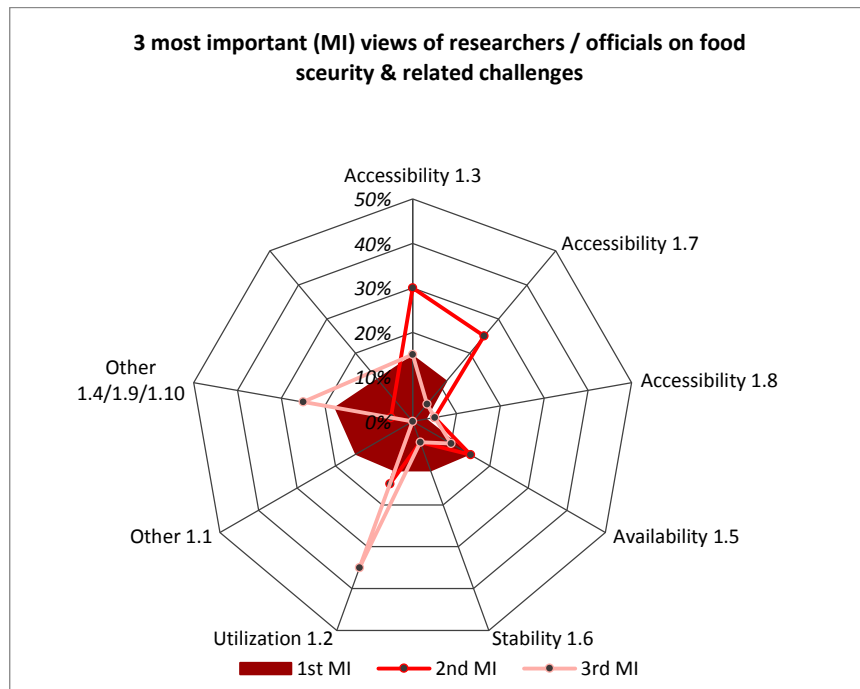


Figure 3.8: The three most important views of the researchers/officials on food security and related challenges

When considering the individual rankings (Figure 3.9), researchers’ choices (A) differ from those of officials (B). **Researchers’** first most important element related to food security was consumers having economic resources (1.3; 19% of researchers)³⁵. This was followed by consumers having economic resources (1.3; 25%) and the nutritional component of food (1.2; 25%). Repeatedly, the researchers demonstrated their strong view on the nutritional component of food (1.2) by allocating 50% of their preference in the third rank.

Officials identified the consistent supply of food (1.6; 38% of officials) as the most important element in the first rank. Equal highest scores in second rank were consumers having economic resources (1.3; 38%) and the availability of staple foods at a price that the poor can afford (1.7; 38%). Officials assigned 50% of their scores to a balance between production, supply and demand for food (1.4) as the most important element in the third rank.

³⁵ Depicted in the chart, the category “other”, comprising three elements, scored 19%. Only single elements with high values are considered significant. Therefore, “other” value is not considered.

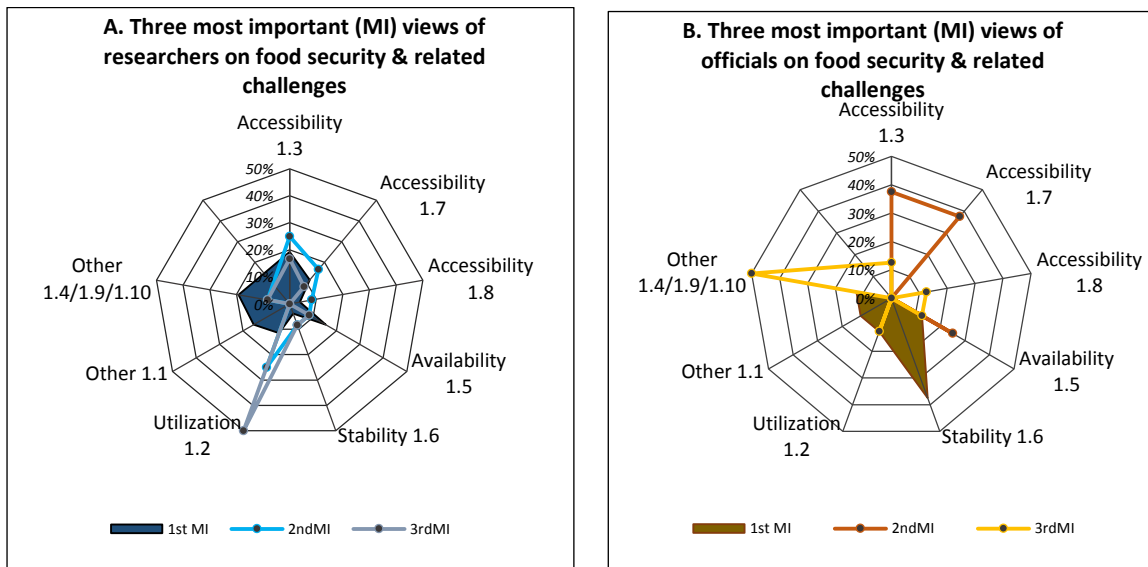


Figure 3.9: The three most Important views of (A) researchers and (B) officials on food security and related challenges

Key points: Questions 1

The responses to Question 1 show diverse views on food security. Predominately, developing and least-developed countries view food security as a basic right linked to political dimensions. Developing and least-developed countries favour availability, stability and accessibility elements, whereas developed countries are more concerned about availability, accessibility (prices and consumer purchasing power) and nutrition. Researchers consider the nutrition component of food to be the most important, whereas officials are more concerned about market factors, availability and affordability.

Question 2: In your view, what are the most significant challenges to food security?

In view of the diverse and numerous issues that challenge food security, respondents were asked to select five challenges that they consider most important out of the given 11 (see Table 3.2), and then rank them in descending order.

Table 3.2: Significant challenges to food security

	Challenges
2.1	High/ volatile staple food prices
2.2	Unavailability/shortage of food due to trade restrictions
2.3	Food shortages due to unexpected natural disasters
2.4	Inefficiencies in the distribution system
2.5	Low demand due to lack of purchasing power
2.6	Too much dependence on imported food stocks
2.7	More production of feed stocks (bio fuel crops) at the expense of food stocks
2.8	Low supply due to low investment/ low productivity & lack of research
2.9	Not consuming nutritious food due to poverty or ignorance
2.10	Balancing demands of farmers and consumers
2.11	Food wastages in the production and consumption cycle
2.12	Any other

Overall views of delegates and researchers/officials

(Appendix C: Tables C-30, C-31, C-35, C-44, C-45 & C-48 provides numbers and percentages for rankings of delegates and researchers/officials.)

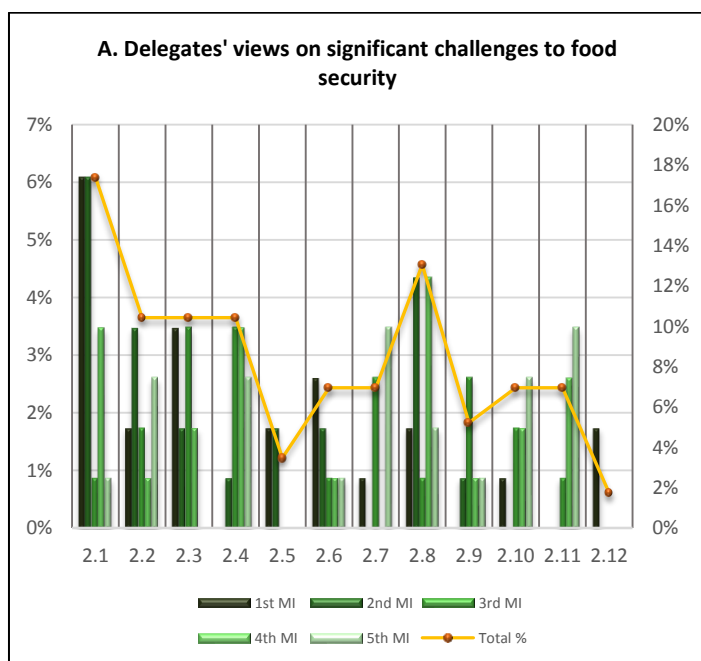
When comparing the overall scores but disregarding the rankings, delegates identified as the two top-scored challenges high/volatile staple food prices (2.1; 17%) and low supply due to low investments/low productivity and lack of research (2.8; 13%). The next highest scored issues with 10% each were unavailability/shortage of food due to trade (import/export) restrictions (2.2), food shortages due to natural disasters (2.3), and inefficiencies in the distribution system (2.4). (See Figure 3.10A.)

Although high/volatile staple food prices (2.1) was a concern for all three categories, developing (19%) and least-developed country representatives (22%) supported this strongly with their highest individual scores. The second challenge for the developing countries was low supply due to low investments / low productivity and lack of research (2.8; 13%). Delegates from LDCs considered inefficiencies in the distribution system (2.4; 22%) to be the second key challenge. Unavailability/shortage of food due to trade (import/export) restrictions (2.2; 17%) was the highest concern for the developed countries, followed by high/volatile

staple food prices (2.1; 14%), inefficiencies in the distribution system (2.4; 14%) and low investments/low productivity and lack of research (2.8; 14) with equal response rates. (See Appendix C: Table C-35 for percentages.)

Interestingly, preferences on overall challenges of the researchers/officials and delegates complement each other, although the strength of the support varies. Researchers/officials, composing 14% of the total sample, were of the view that a high/volatile staple food price (2.1) is the main challenge. This is followed by another 12% recognising the unavailability/shortage of food due to trade (import/export) restrictions (2.2) and inefficiencies in the distribution system (2.4) as the second line of challenges. Another 10% were of the opinion that food shortages due to unexpected natural disasters (2.3) and low supply due to low investments/ low productivity and lack of research (2.8) are the third level of challenges. (See Figure 3.10B.)

In considering individual ratings of the two groups, unavailability/shortage of food due to trade (import/ export) restrictions (2.2) were supported mostly by the researchers (15%) while high/volatile staple food price (2.1) and inefficiencies in the distribution system (2.4) were upheld by the officials, each with a 15% rate. Further, 13% of researchers rated high/ volatile staple food prices (2.1) as the second main challenge. In addition, with a 12% rating each, non-consumption of nutrition food (2.9) and wastage of food (2.11) were identified by researchers and officials respectively as their third highest scored challenges. (See Appendix C: Table C-48.)



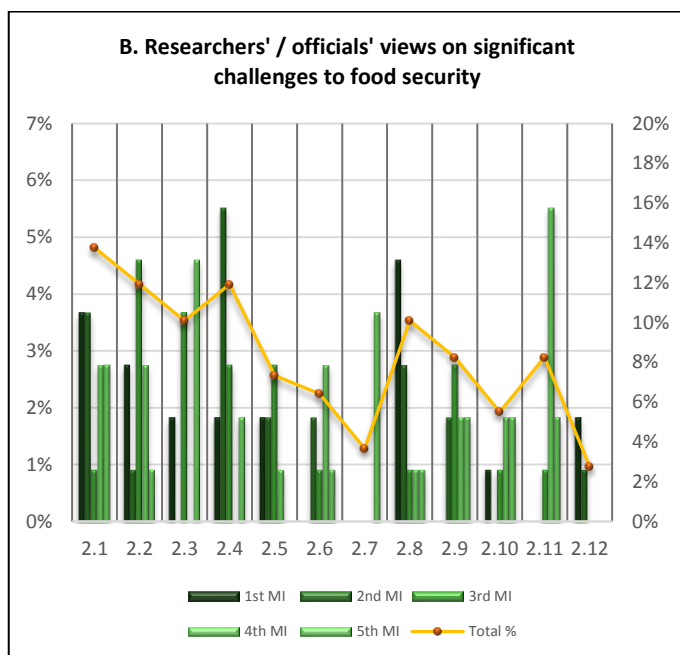


Figure 3.10: (A) Delegates' and (B) researchers'/officials' views on significant challenges to food security

The three most important rankings of delegates and researchers/officials

(Appendix C: Tables C-37, C-38, C-40, C-41, C-42, C-50, C-51, C-53 & C-54 provides numbers and percentages for rankings of delegates and researchers/officials.)

The first three rankings of the challenges were further analysed as a percentage of each rank (see Figure 3.11) and thereafter as a percentage of individual groups (see Figure 3.12). The majority of the delegates ranked high/volatile staple food prices (2.1) as the most common response for their first as well as the second most important challenge, attaching a 30% response rate to each. Inefficiencies in the distribution system (2.4) ranked third, with a rating of 19%.

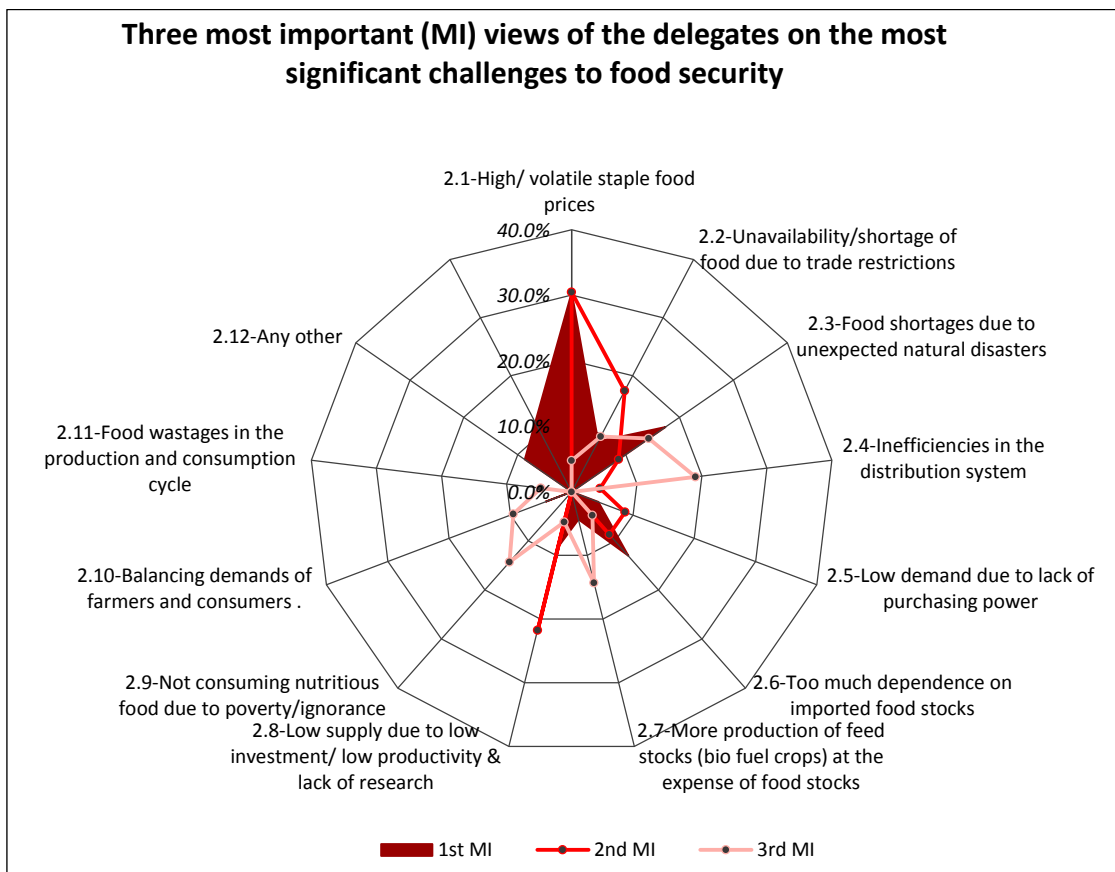


Figure 3.11: The three most important views of the delegates on the most significant challenges to food security

As illustrated in Figure 3.12, of the delegates, 43% of developing country representatives considered high/volatile staple food prices (2.1) to be the main challenge, with unavailability/shortage of food due to trade (import/export) restrictions (2.2; 29%) the second challenge. Both production of feed stocks at the expense of the food stocks (2.7; 23%) and not consuming nutritious food due to poverty or ignorance (2.9) were considered the third most important challenges, with an equal response rate. Least-developed country representatives, too, were of the view that high/volatile staple food prices (2.1) and food shortages due to unexpected natural disasters (2.3) are the most important challenges, followed by over-dependence on imported food stocks (2.6) and inefficiencies in the distribution systems (2.4) (See Appendix C: Table C-42). Representatives from developed countries agreed that unavailability/shortages of food due to trade (import/export) restrictions (2.2; 29%) was their most important challenge, followed by high/volatile staple food prices (2.1; 57%) as their second most important challenge, and food shortages due to unexpected natural disasters (2.3; 29%) and inefficiencies in the distribution system (2.4; 29%) as the third most important

challenge, with an equal response rate³⁶. Clearly, across all three development levels, high/volatile staple food prices is the major concern, followed by unavailability/shortages of food due to trade (import/export) restrictions, unexpected natural disasters and inefficiencies in the distribution system.

³⁶ As depicted in Figure 3.12B, the category “other” which comprise various different elements has scored 29%. Only single elements with high values are considered significant. Therefore, “other” is not considered.

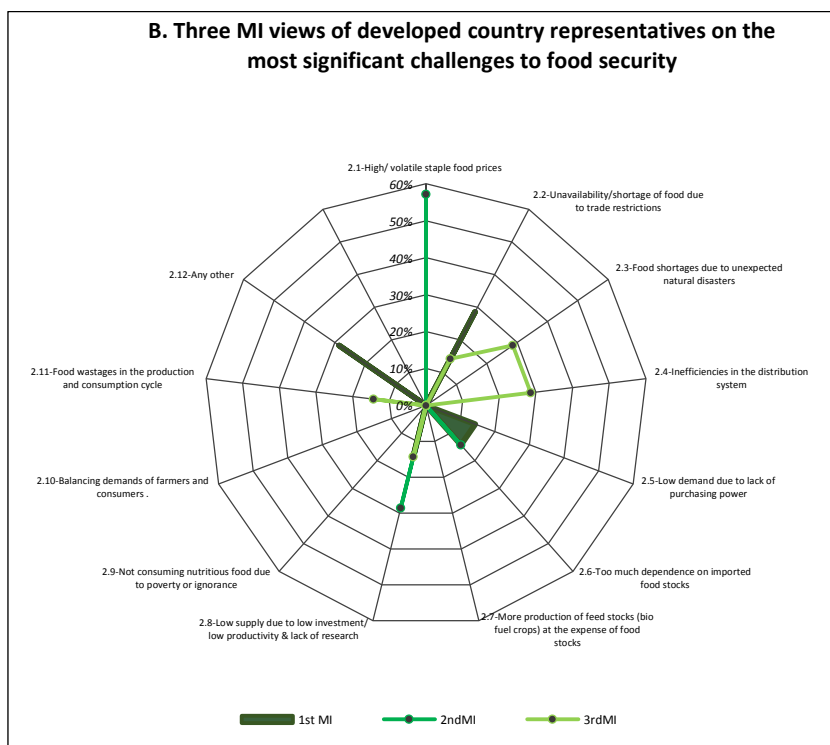
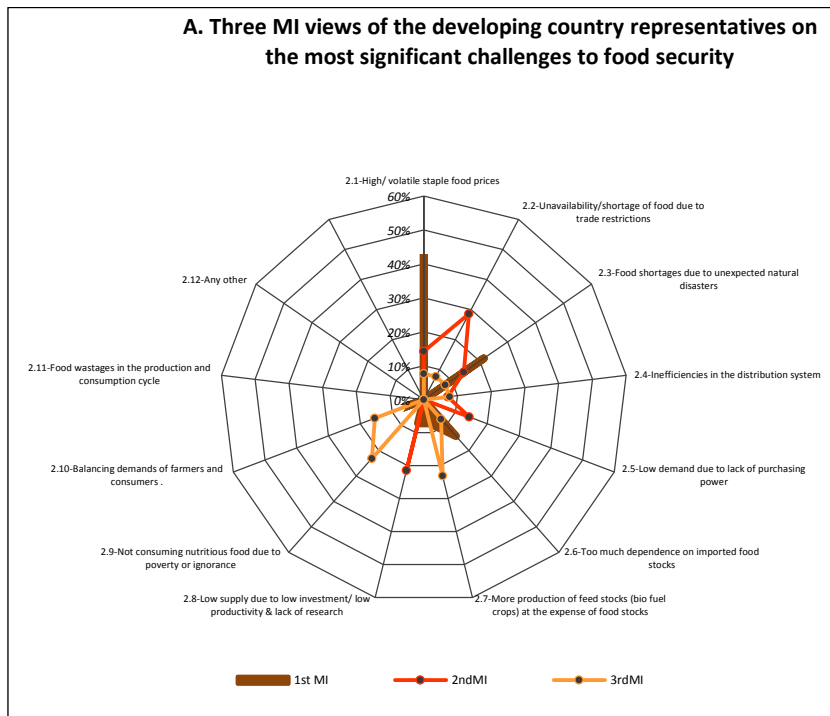


Figure 3.12: The three most important views of (A) developing and (B) developed country representatives on the most significant challenges to food security

While agreeing with the major challenges highlighted by the delegates, researchers/officials as a group pointed to constraints tied up with the low supply of food in developing and least-developed countries. As depicted in Figure 3.13, the consolidated view of 24% of researchers/officials was that low supply due to low investment / low productivity and lack of research (2.8) is the main challenge, in the first most important rank. Inefficiencies in the distribution system (2.4; 29% of responses) was the second highest challenge, and unavailability/shortage of food due to trade (import/export) restrictions (2.2; 22%) was the third. As a group, they did not prioritise the impact of high/volatile staple food prices (2.1), but it was the second highest challenge in the first and second most important rankings, with a rate of 19% each.

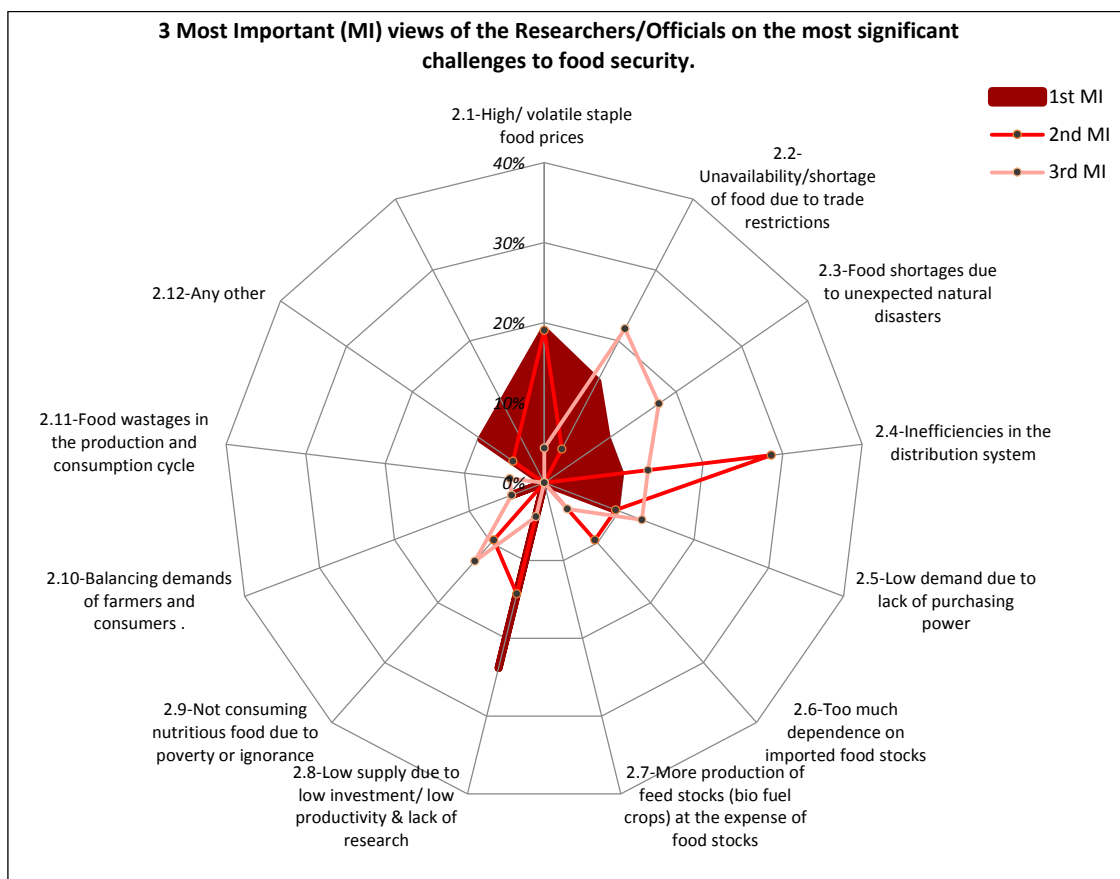


Figure 3.13: The three most important views of researchers/officials on the most significant challenges to food security

When closely examining the views of the two groups as illustrated in Figure 3.14, researchers (Fig. 3.14A) demonstrated a wide spread of challenges as their main challenge. Among them, unavailability/shortage of food due to trade (import/export) restrictions (2.2; 15%), food shortages due to unexpected natural disasters (2.3; 15%), inefficiencies in the distribution system (2.4; 15%) and low demand due to lack of purchasing power (2.5; 15%) ranked as the main challenge, with an equal response rate³⁷. The second most important challenge for researchers was high/volatile staple food prices (2.1; 31% of responses). This was followed by unavailability/shortage of food due to trade (import/export) restrictions (2.2; 33%) as their third-ranked choice. The officials' ratings (Figure 3.14B) differed from the researchers'. Officials rated their main challenges as high/volatile staple food prices (2.1; 38%) and low supply due to low investments/low productivity and lack of research (2.8; 38%). Inefficiencies

³⁷ Depicted in the chart the category "other" which comprise various different elements has scored 15%. Only single elements with high values are considered significant. Therefore, "other" is not considered.

in the distribution systems (2.4; 50%) were largely agreed to be the second most important challenge, and low demand due to lack of purchasing power (2.5; 25%) the third highest challenge.

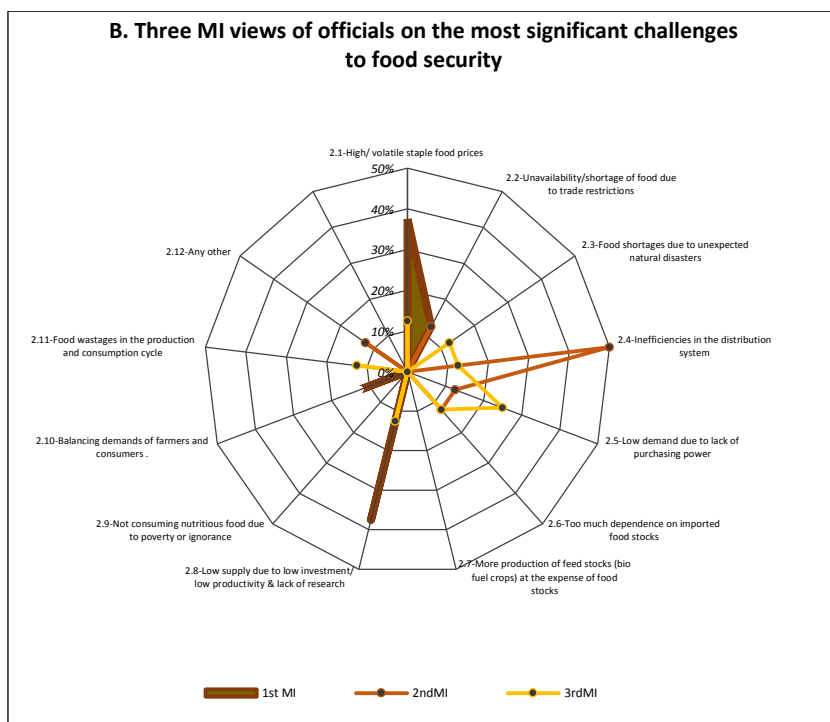
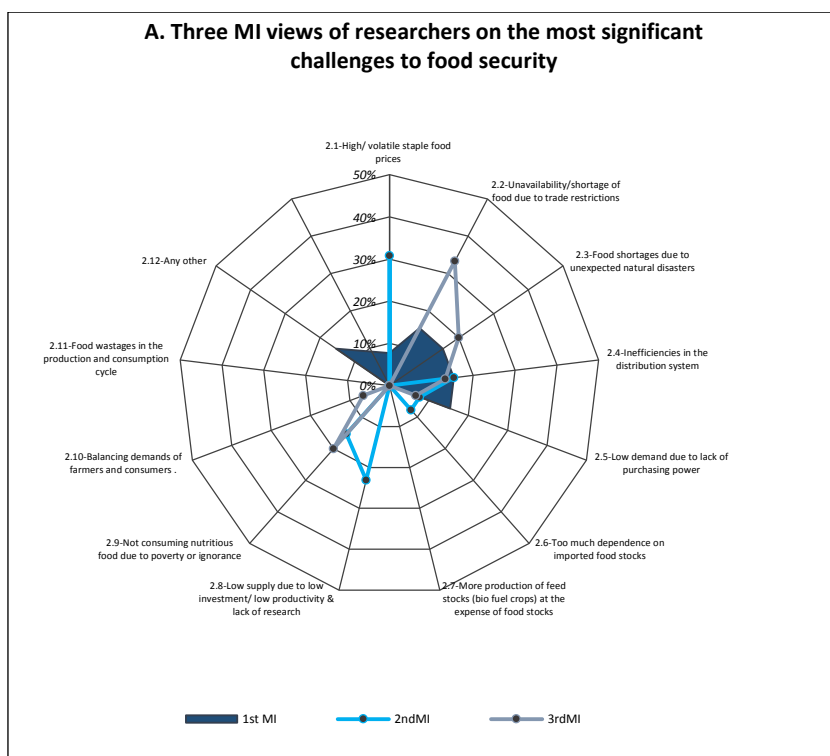


Figure 3.14: The three most important views of (A) researchers and (B) officials on the most significant challenges to food security

Key points: Questions 2

Among the diverse views of different groupings, it is evident that high/volatile prices of the staple food is a significant challenge for food security. Also deemed important were food shortages resulting from natural disasters and trade restriction, inefficiencies in distribution systems and low supply due to low investment / low productivity and lack of research. Other issues identified were low purchasing power and low nutrition content of food, high dependence on imports, and biofuel.

Highly volatile staple food prices (2.1) and low purchasing power (2.5) are clearly connected with food accessibility issues, one of the four dimensions of food security. Food shortages, inefficiency in the distribution system, low supply and high dependence on imports are related to availability and stability issues. Not consuming nutritious food is a matter to be discussed under the economic accessibility and utilisation dimensions.

Some challenges could be addressed effectively through national policies; for example, inefficiencies in the distribution system, low investments in agricultural sector, trade policies related to trade restrictions, high dependence on imports, creating awareness about food nutrition. High prices, low supply, low income, climate change and food shortages in the world market, too, have a multilateral component; organisations such as the WTO, World Health Organization (WHO) and UN organisations such as FAO, UNCTAD, United Nations Environment Programme (UNEP), *United Nations Industrial Development Organization* (UNIDO) and donor organisations could provide much-sought benefits to the countries through collaboration and coherence.

3.4.2.2 Role of the MTS of the WTO in addressing food security challenges

The next section of the survey deals with “adequacy of current rules” in an attempt to evaluate the role of the MTS and the WTO and how effective they are in addressing food security issues. Further, it enquires into the necessity of trade liberalisation in fulfilling food security challenges. Figure 3.15 captures responses of (A) the delegates and (B) the researchers/officials for survey Questions 3–7. (See Appendix C: Tables C-81 & C-82).

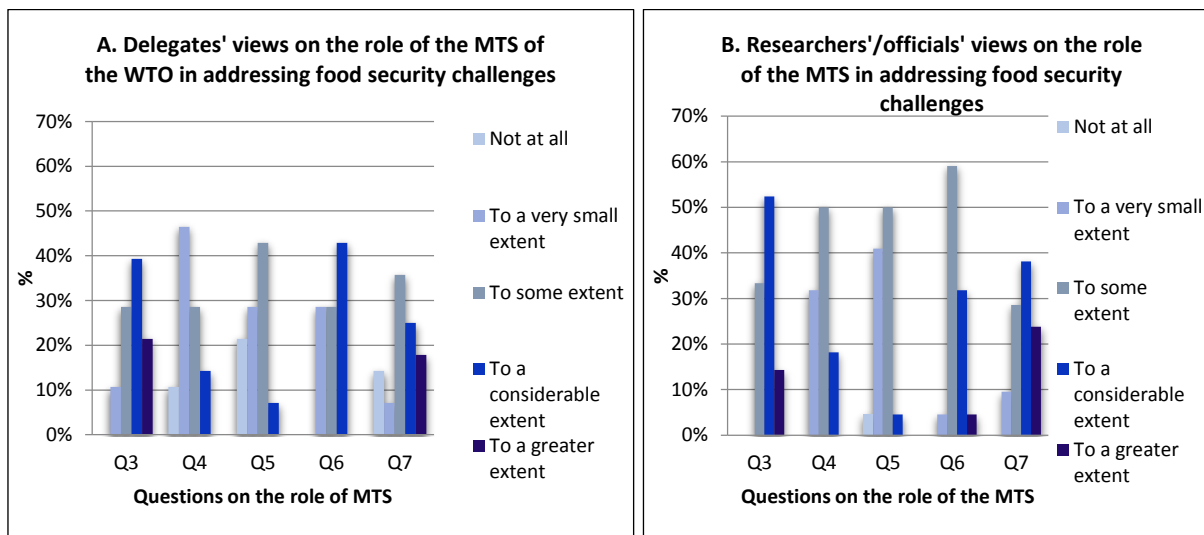


Figure 3.15: (A) Delegates' and (B) researchers'/officials' views on the role of the MTS of the WTO in addressing food security challenges

Qu 3: In your view does the MTS have a significant role to play in addressing global food security challenges?

Both groups agreed that the MTS has a role to play in addressing global food security challenges. When calculated as a percentage of their respective responses, developed countries (72%), LDCs (100%), researchers (69%) and officials (63%) held a stronger view than developing country respondents (50%) that the role is considerable or greater. Although the level of agreement differs, none of the groups rejected the role.

Qu 4: In your view how effective has the MTS been in addressing global food security challenges?

None considered that the MTS has effectively addressed global food security challenges “to a greater extent”. Eleven per cent of the delegates representing developing countries considered it to be “not at all” effective. The majority of the researchers/officials (82%) and delegates (74%), both developed (71%) and developing (78%), considered the effectiveness to be “very small” or only “to some extent”. Among the delegates, when compared to 6% of developing country representatives, 29% of developed country respondents strongly confirmed its role to be “to a considerable extent”.

A majority of the researchers (64%) considered the MTS to have some effectiveness, but 50% of officials rated this effectiveness very small.

Qu 5: Are you satisfied with the role played by the WTO in addressing these challenges?

Clearly indicating dissatisfaction, neither group seemed fully satisfied with the role played by the WTO in addressing food security challenges. Of the respondents, the developing country delegates and the researchers expressed their dissatisfaction most strongly.

Qu 6: To what extent do you think WTO members can find solutions for global food security challenges within the WTO system?

Both the delegates' and researchers'/officials' responses confirm their reliance on the MTS in finding solutions for global food security challenges within the WTO system. Forty-four per cent of delegates believed the WTO is the place to find solutions "to a considerable extent". Among them, developed countries (71%) seemed to be more optimistic about this potential. On the other hand, 59% of researchers/officials considered it could be useful only "to some extent". Between them, researchers were more positive than the officials. None of the respondents' groups denied the role of the WTO in finding solutions.

Qu 7: Is trade liberalisation a necessary mechanism to address food security challenges?

Many respondents recognised the role of trade liberalisation in addressing food security challenges. However, there is a clear divide between the views of the two groups on the extent of liberalisation. Researchers/officials are seen as more inclined to this concept than the delegates.

Developing country views are spread. Twenty-two per cent considered trade liberalisation to be not at all necessary, whereas 28% considered it necessary "to a considerable extent" and 17% "to a greater extent". A majority of the developed countries (57%) supported liberalisation to some extent, but others favoured further trade liberalisation. Responses from LDCs varied between "some" and "to a considerable extent". Researchers (46%) tended to view this mechanism to be necessary "to a considerable extent", but officials (50%) that it is necessary "to some extent".

Key points: Questions 3–5

On the whole, the sample confirmed that the MTS has a role to play in addressing food security challenges, although the majority held the view that its present role is not very effective and ideally its effectiveness could be improved to a considerable or greater level. In particular, irrespective of the development level of the country representatives, across the board they were

not satisfied with the role currently played by the WTO in addressing food security challenges. Interestingly, despite their scepticism, some respondents still looked to the MTS in finding solutions for global food security challenges within the WTO system. Nevertheless, respondents clearly believed in the MTS and seem to rely on the WTO system for solutions.

3.4.2.3 Views on food security and trade restrictions

Still focusing on the “adequacy of current rules”, the survey now seeks more precise views from the respondents on the adequacy of the provisions, effectiveness, impact and implementation of import and export restrictions covered under GATT, Article XI and Article 12 of the AoA, and export subsidies and domestic support covered in the AoA and ministerial declarations. Figures 3.16–3.19 capture the responses of the delegates and researchers/officials for survey Questions 8–18.

The views of delegates and researchers/officials on the sufficiency of GATT, Article XI and AoA, Article 12 of are discussed under Questions 8 and 9, with the respective responses depicted in Figure 3.16. (See Appendix C: Tables C-83 & C-84).

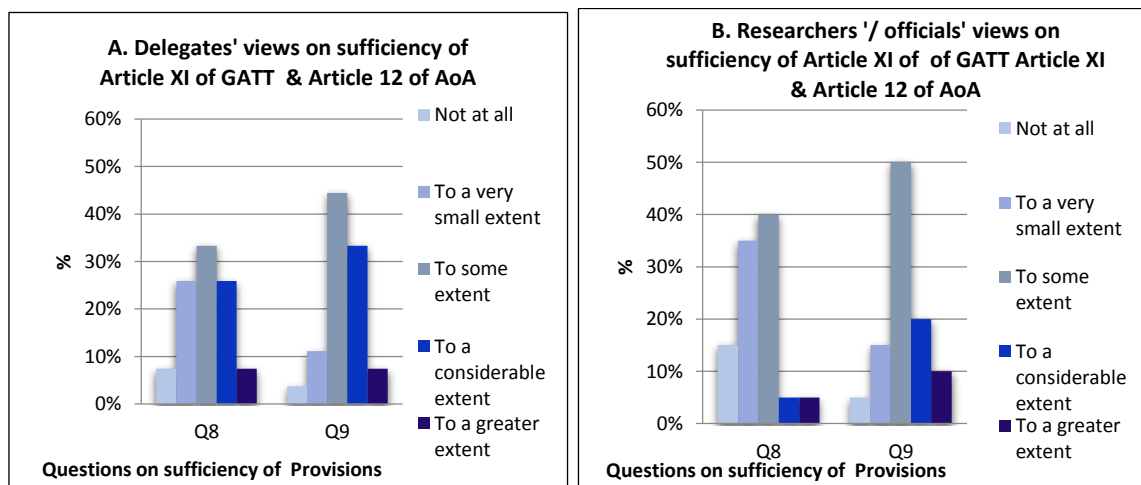


Figure 3.16: (A) Delegates' and (B) researchers'/officials' views on the sufficiency of Article XI of GATT and Article 12 of AoA

Qu 8: Are Article XI of GATT and Article 12 of the Agriculture Agreement sufficient to regulate export restrictions?

As depicted in Figure 3.16, 34% delegates and 40% researchers/officials considered that Article XI of GATT and Article 12 of AoA is sufficient to regulate export restrictions “to some extent” only. The other 66% of delegates’ responses are seen to be distributed symmetrically

at both ends. Clearly, delegates' responses are mixed. The majority of developing (78% including "to some extent") and least-developed (100%) countries supported the view that it is sufficient, whereas the majority view of the developed countries (66% excluding "to some extent") points towards insufficiency of the regulations. Similarly, more officials (62%) indicated their dissatisfaction with these provisions than researchers (42%).

Qu 9: Is Article XI of GATT sufficient to regulate import restrictions?

The majority of the sample (85% of delegates and 80% of researchers/officials) stated that the present regulations around import restrictions are sufficient at least "to some extent" and the overall response weights towards its adequacy.

The views of delegates and researchers/officials on export and import restrictions are discussed under Questions 10 and 11, with their respective responses presented in Figure 3.17. (See Appendix C: Tables C-85 & C-86).

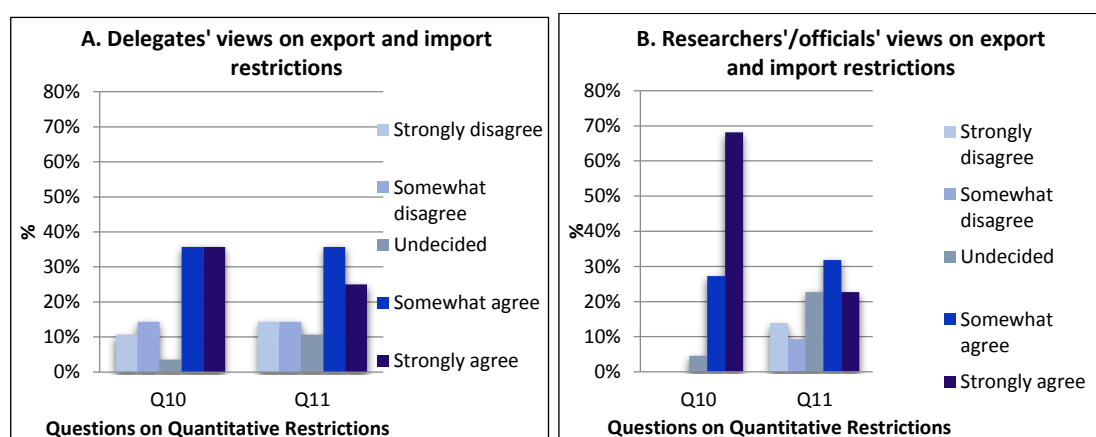


Figure 3.17: Delegates' and researchers'/officials' views on export and import restrictions

Qu 10: Export and import restrictions are trade-distorting measures

As can be seen in Figure 3.17, the majority view on export and import restrictions is that they are trade-distortive. Among the delegates, 71% agree with this statement. Their agreement level is equally divided between somewhat (36%) and strongly (35%) agree. Developed and least-developed countries also clearly agree that export and import restrictions are trade-distortive. Although 38% of developing country respondents somewhat agree with the statement, a similar proportion disagrees with the common view. Remarkably, 68% of the

researchers/officials group strongly agreed with this view, with 71% of the researchers and 62% of the officials individually supporting it.

Qu 11: Export and import restrictions can be considered as trade policies that a country could implement to ensure the food security needs of domestic consumers

A majority of over 50% of respondents from both groups agreed that export and import restrictions could be considered as trade policies that countries could implement to ensure food security needs of domestic consumers. Distinctively, developing (66%) and least-developed countries (100%) agreed with this view. However, the reaction among respondents from developed countries was mixed, with equal proportion (29%) of responses as somewhat agree, strongly disagree and undecided with the statement.

The majority of researchers agreed (somewhat: 36%; strongly: 29%), whereas officials' opinions were mixed, concentrated more in the middle. Among the officials, the somewhat agree, somewhat disagree and undecided answers attracted responses in equal proportions (25%). (See Appendix C: Tables C-85 & C-86).

Key points: Questions 8–11

Although the common view was that import and export restrictions are trade-distortive, the respondents were more content with import restriction regulations than with export restriction provisions. It also seems that developing countries had diverse views.

More than half of respondents viewed export and import restrictions as a trade policy tool to ensure food security needs of domestic consumers. Although import and export restrictions were regarded as trade-distortive measures, some respondents considered them essential trade policy tools.

Views on the effectiveness of import and export restrictions are discussed under Questions 12 and 13. The responses depicted in Figure 3.18. (See Appendix C: Tables C-87 & C-88).

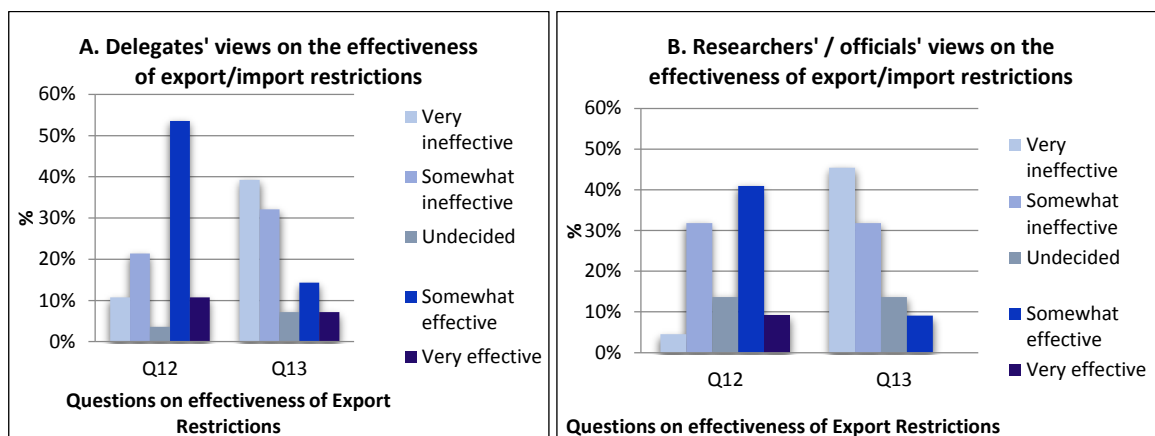


Figure 3.18: (A) Delegates' and (B) researchers'/officials' views on the effectiveness of export restrictions

Qu 12: In your view how effective are import and export restrictions in ensuring food security needs of the domestic consumers in the short term?

Across the sample, 64% of delegates and 49% of researchers/officials were of the view that import and export restrictions are at least somewhat effective in ensuring the food security needs of the domestic consumers in the short term. Within the 64% of delegates holding this view, it is supported mainly by developing (72%) and least-developed countries (100%). However, 57% of the developed countries answering this question expressed a contrary view, with 14% considering the restrictions to be very ineffective and another 43% considering them somewhat ineffective.

Among the researchers/officials group, 50% of both the researchers and officials and the group as a whole supported the view that it is very or somewhat effective.

It is noteworthy that there were researchers (14%), officials (13%), and delegates of developed countries (14%) especially who selected “undecided” as their choice.

Qu 13: In your view how effective are import and export restrictions in ensuring food security needs of the domestic consumers in the long term?

Figure 3.18 illustrates very clearly that, across the sample, over 70% of delegates (72%) and researchers/officials (77%) indicated that import and export restrictions are an ineffective tool when addressing the needs of domestic consumers in the long term.

Although all (100%) respondents from developed countries strongly claimed that import and export restrictions were ineffective, along with 66% of respondents from developing countries,

another 28% of respondents from developing and 50% from least-developed countries considered these policies to be effective.

From the researchers/officials group, individually 43% of researchers and 50% of officials were of the view that these restrictions are very ineffective. Although 77% as a group as well as individually considered them to be very and somewhat ineffective, 9% considered them to be a somewhat effective policy.

However, 14% of researchers/officials and 7% of the delegates groups (mainly made up of 6% from developing and 50% from least-developed countries) indicated that they were undecided.

Key points: Questions 12–13

In spite of their trade-distortive elements and long-term inefficiencies, import and export restrictions were viewed as measures that could be effective in the short term when addressing the food security challenges of domestic consumers. This view is confirmed mainly by developing and least-developed country representatives.

Views on subsidies were the next topic. They are discussed here under each related question, with respective responses illustrated in Figure 3.19. (See Appendix C: Tables C-89 & C-90).

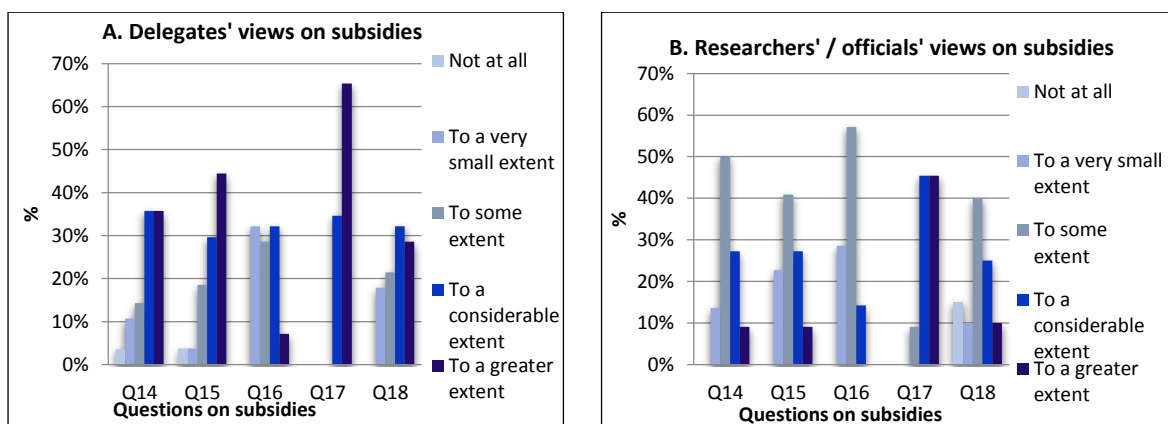


Figure 3.19: (A) Delegates' and (B) researchers'/officials' views on subsidies

Qu 14: To what extent do developed country export subsidies have an impact on the food security of developing and LDC countries which are importing food stuffs?

The overall results depict that both groups (developing and least-developed countries) commonly accept that developed country export subsidies have an impact on the food security of the food-importing developing countries. Over 80% of developing countries viewed that the impact is either considerable (33%) or to a greater extent (56%). With a 100% response rate,

LDCs also agreed that developed country export subsidies impact on the food security of developing and least-developed countries to a considerable extent. In contrast, most of the developed countries considered the impact to be very small (43%) or not at all (14%).

Half of the researchers and officials believed the impact is to some extent (50%). Between them, the researchers agreed more strongly that there is an effect. Among this group, none have indicated it to have no impact.

Qu 15: To what extent do developed country export subsidies have an impact on the food security of developing and LDC countries which are exporting food stuffs?

On the whole, over 70% of delegates considered that developed country subsidies affect the food exports of developing and least-developed countries to a considerable (30%) or to a greater (43%) extent. This view was supported mostly by developing (70%) and least-developed countries (100%). Developed countries expressed mixed views, with 43% believing there is a considerable impact.

On the other hand, most of the researchers/officials agreed that there is some impact but fewer responses were at the extremes. The researchers clearly indicated that there is an impact. The majority of the officials also agreed that developed country export subsidies have some (38%) or considerable (38%) impact on exporting countries.

Qu 16: In your view to what extent are the developing countries and LDCs making use of “Green box” measures?

As depicted in Figure 3.19A and Appendix C-89, overall, the delegates expressed mixed views on this question, with 45% of representatives from developing and 50% from least-developed countries supporting the view that the use of green box measures by developing and least-developed countries is very small. Twenty-nine per cent of delegates (also supported by 29% of developed and 33% of developing country representatives individually (see Appendix C-89)) perceived that it is used to some extent. However, a majority of developed countries were of the view that green box measures are implemented by the developing countries to a considerable extent (57%) or to a greater extent (14%).

Researchers/officials seems to be of the view that developing and least-developed countries are making use of green box measures. Sixty-five per cent of the researchers and 43% of the officials considered that they are used to some extent. Among them, another 43% of officials were more of the view that utilisation is at a very small level.

None of the groups denied the usage.

Qu 17: In your view to what extent are the developed countries making use of “Green box” measures?

Distinctively, across the sample, there was agreement that developed countries are using the green box measures to a considerable or greater extent. This view is also shared by the developed (100%), developing (100%) and least-developed countries (100%).

Except for 14% of researchers who considered that developed countries use the box to some extent, the remainder of the researchers and officials considered the usage to be considerable or to a greater extent.

Qu 18: Do you consider non–trade distortive subsidies as a necessary food security measure for resource poor farmers?

Both groups displayed mixed views on this statement. As illustrated in Figure 3.19, the majority of the delegates considered these non–trade distortive subsidies to be a necessary tool for resource-poor farmers. The developing countries (45%) in particular seemed to require it to a greater extent. Those who considered the non–trade distortive subsidies to be necessary to a considerable level were representatives from 100% of least-developed and 43% of developed countries.

Among the researchers/officials group, officials, more than the researchers, perceived the extent of support to be considerable (43%) or some (43%). Interestingly, among the researchers 23% indicated that the support is not at all necessary for resource-poor farmers.

Key points: Questions 14–18

Across the board, both groups were agreed that developed country export subsidies have an impact on the food security of the food-importing as well as food-exporting developing countries.

From the developing countries, 70% of respondents considered the subsidies of developed countries would impact to a greater extent on the food security of developing and least-developed countries that export food stuffs. The use of green box subsidies, also known as non–trade distortive measures, was confirmed by the sample. Across the sample there was agreement that developed country usage is high. However, the response level differed among the developing countries, possibly because of their differing capacity levels. Over 75% of the

sample (representing some, considerable and to a greater extent) also believed that non–trade distortive subsidies are a necessary food security measure for resource-poor farmers.

3.4.2.4 Food security and WTO negotiations

The next section deals with findings on respondents’ views on food security and WTO negotiations. It focuses specifically on the negotiation elements, with a stocktaking of the situation in order to direct future paths. Here are discussed: reasons that obstruct reaching a fruitful consensus, views on the Bali negotiations, understanding different trade policies, and relevance of previous proposals that were submitted but had not been agreed upon.

Qu 19: In your view what are the factors that have led to the inability of WTO members to arrive at a consensus on agriculture issues?

This question, which was designed to help understand reasons for not reaching a consensus, allowed respondents to select five reasons and rank them in their order of diminishing importance.

Table 3.3: Reasons for not arriving at a consensus on agriculture issues

Qu	Reasons
19.1	Unprecedented global events that have affected economic stability of countries
19.2	Trade policies of major trading partners
19.3	Bargaining power of lobbyists
19.4	Weak bargaining power of developing countries
19.5	Changes in the dynamics now and when AoA was signed in 1994
19.6	Use of more protectionist measures to safeguard the interests of farmers
19.7	Effectiveness of bilateral agreements
19.8	Powerfulness of emerging markets
19.9	Lack of trust, transparency and inclusiveness in negotiations
19.10	Low interest in the MTS after the long haul of DDA
19.11	“Development issues” being at the centre of Doha Round and hindering the progress
19.12	Single undertaking commitment
19.13	Reluctance to revisit the texts (Rev 4)
19.14	Any other

Overall views of delegates and researchers/officials

(Appendix C: Tables C-56, C-57, C-61, C-70, C-71 & C-74 provides numbers and percentages for rankings of delegates and researchers/officials.)

According to delegates, the overall top-scored reasons for not arriving at a consensus on agriculture were: trade policies of major trading partners (19.2; 16% of the responses), changes in the dynamics between now and when AoA was signed in 1994 (19.5; 13%), powerfulness of the emerging markets (19.8; 10%), lack of trust, transparency and inclusiveness in negotiations (19.9; 10%), and low interest in the MTS after the long haul of DDA (19.10; 10%). (See Figure 3.20B).

Among these factors, it is very clear that changes in the dynamics (19.5) were a common concern, identified by all three levels of development categories. In addition, trade policies of major trading partners (19.2; 11%), powerfulness of the emerging markets (19.8; 11%), DDA standstill (19.10; 11%) and single undertaking commitment (19.12; 11%) were concerns for the developed country representatives. For developing country representatives, trade policies of major trading partners (19.2; 18%), changes in the dynamics (19.5; 12%) and lack of trust, transparency and inclusiveness in negotiations (19.9; 12%) were deemed to be significant reasons. Representatives from least-developed countries were of the view that changes in dynamics (19.5; 20%), the use of protectionist measures to safeguard farmers' interests (19.6; 20%) and the powerfulness of the emerging markets (19.8; 20%) are creating stumble blocks.

Similarities are clearly seen between the views of delegates and the views of the researchers/officials. For the researchers/officials, the five top-scored reasons for not arriving at a consensus were changes in the dynamics (19.5; 15% of responses), trade policies of the major trading partners (19.2; 14%), lack of trust, transparency and inclusiveness in negotiations (19.9; 9%), weak bargaining power of the developing countries (19.4; 8%) and low interest in the MTS after the long haul of the DDA (19.10; 8%) (see Figure 3.20B). Changes in the dynamics (19.5; 13% of researchers and 18% of officials) and trade policies of the major trading partners (19.2; 14% of researchers and 13% of officials) were supported by both researchers and officials individually. In addition, lack of trust, transparency and inclusiveness in negotiations (19.9) and low interest in the MTS after the long haul of DDA (19.10) were the next most highly scored concerns among the researchers, with a response rate of 10% each. Apart from the two common reasons, 11% of officials also attributed the powerfulness of the emerging markets (19.8) as a reason for the deadlock.

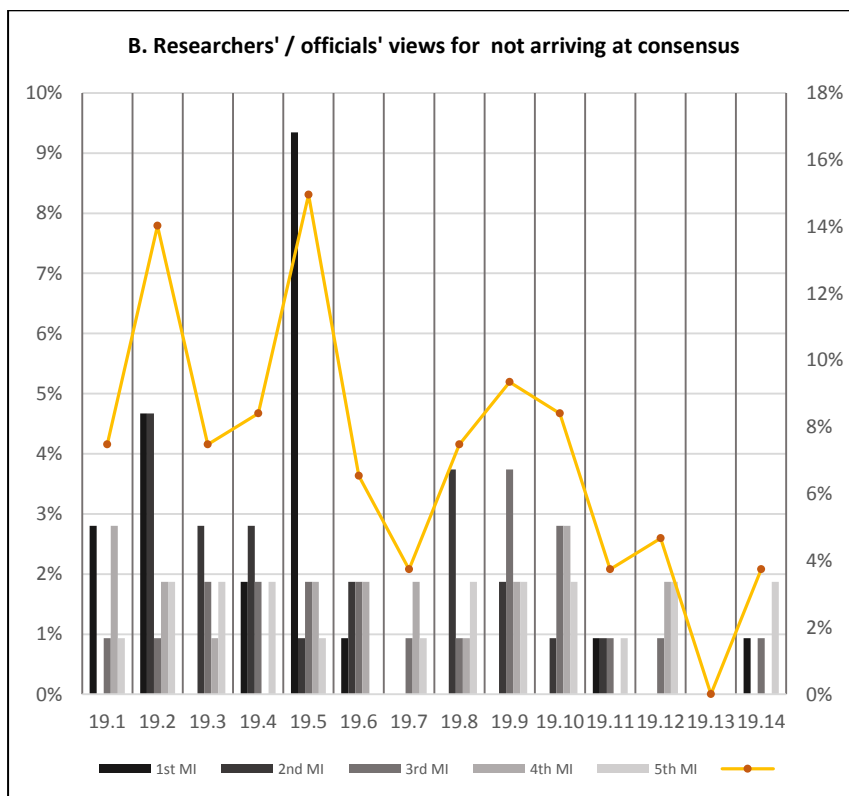
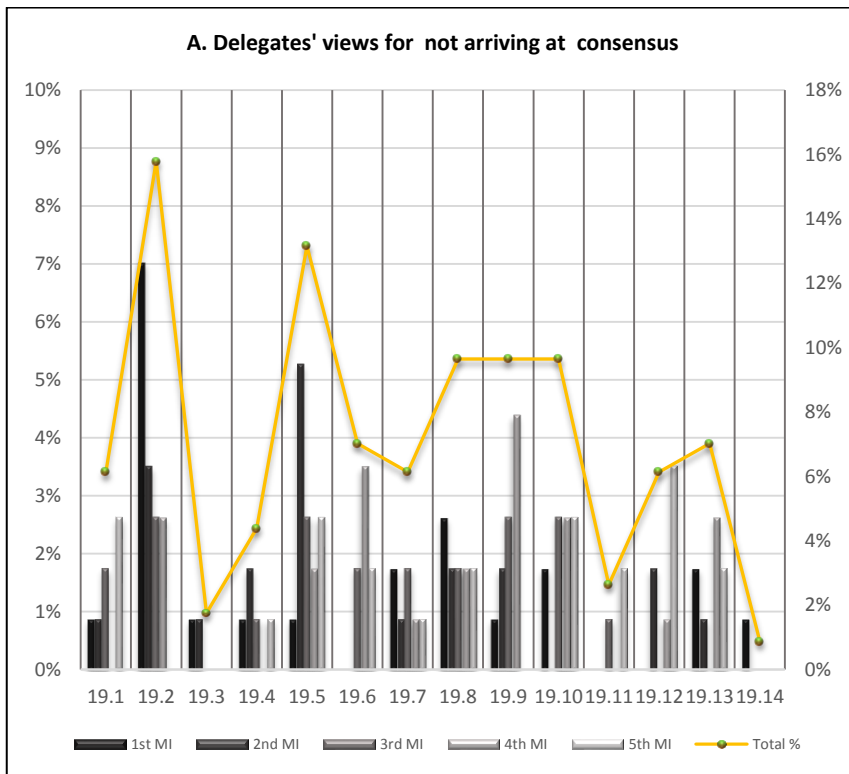


Figure 3.20: (A) Delegates' and (B) researchers'/officials' views on why consensus was not achieved

The three most important rankings of delegates and researchers/officials

(Appendix C: Tables C-63, C-64, C-66, C-67, C-68, C-76 C-77, C-79 & C-80 provides numbers and percentages for rankings of delegates and researchers/officials.)

The first three rankings of the factors were further analysed as a percentage of each rank, and thereafter as a percentage of individual groups.

As depicted in Figure 3.21, trade policies of major trading partners (19.2), changes in the dynamics between now and when AoA was signed in 1994 (19.5), lack of trust, transparency and inclusiveness in negotiations (19.9), and low interest in the MTS after the long haul of DDA (19.10) were the reasons for not arriving at a consensus selected by the delegates within the three most important ranks.

A third of delegates selected trade policies of major trading partners (19.2; 32% of responses) as the most important reason for the impasse, followed closely by changes in the dynamics between now and when AoA was signed in 1994 (19.5; 29%). This was confirmed by the third main reason with the selection of lack of trust, transparency and inclusiveness in negotiations (19.9; 14%) and low interest in the MTS after the long haul of the DDA (19.10; 14%) with the same proportion of responses.

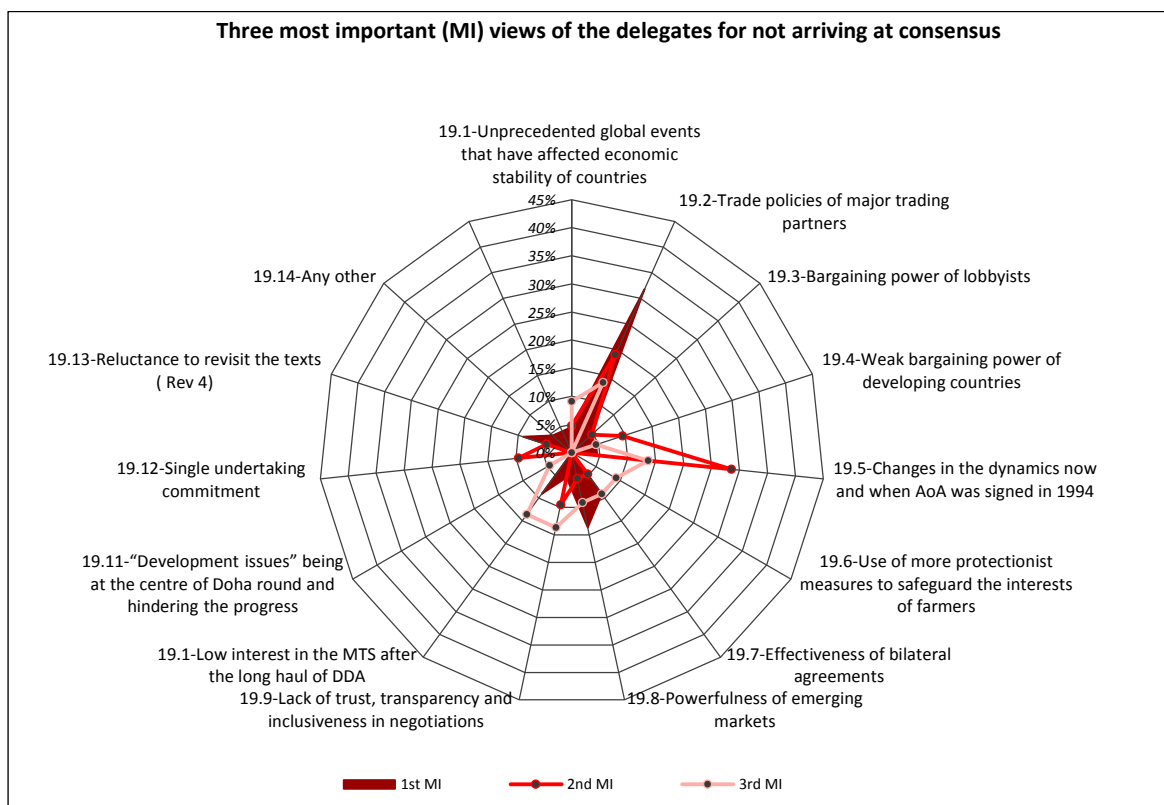


Figure 3.21: The three most important views of the delegates for not arriving at consensus

Figure 3.22A illustrates that, among the delegates, the first and the second-ranking views – the impact of trade policies (19.2; 38% of responses) and changes in dynamics (19.5; 33%) – were shared by the developing country member representatives as their first and second rankings. While sharing the same two views, LDC representatives also considered as important reasons the reluctance to revisit Rev 4 (19.13), bargaining power of the lobbyist (19.3) and powerfulness of emerging economies (19.8). Displaying a slightly different opinion, developed country representatives (Figure 3.22B) rated effectiveness of bilateral agreements (19.7; 29%) as the most important reason for not achieving consensus, followed by trade policies of major trading partners (19.2; 29%) and single undertaking commitment (19.12; 29%), then thirdly, lack of trust, transparency and inclusiveness (19.9; 29%).

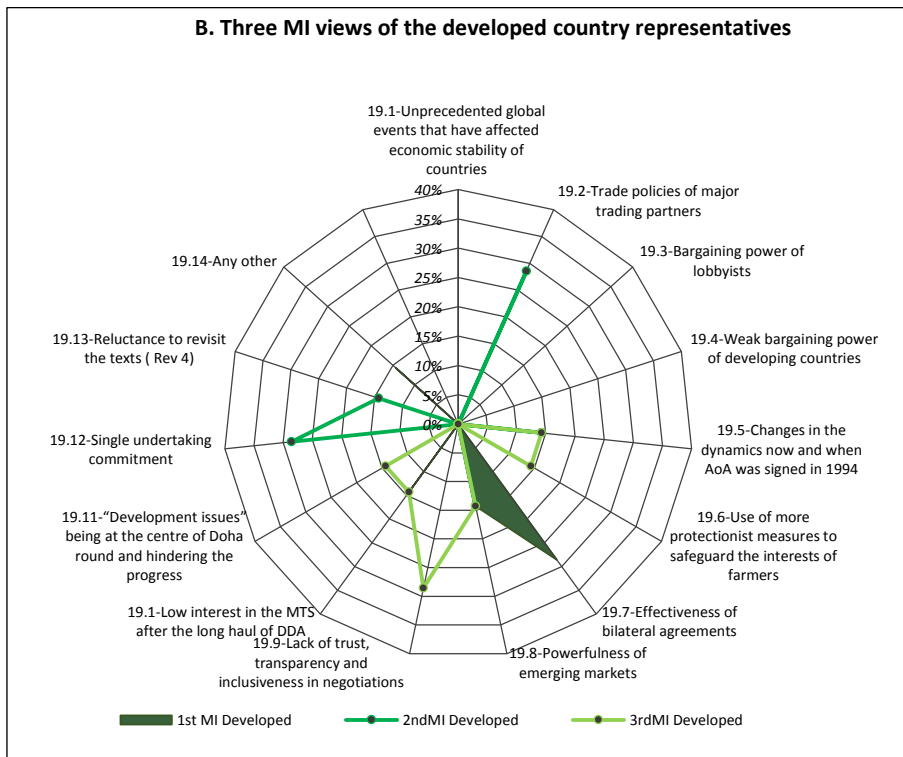
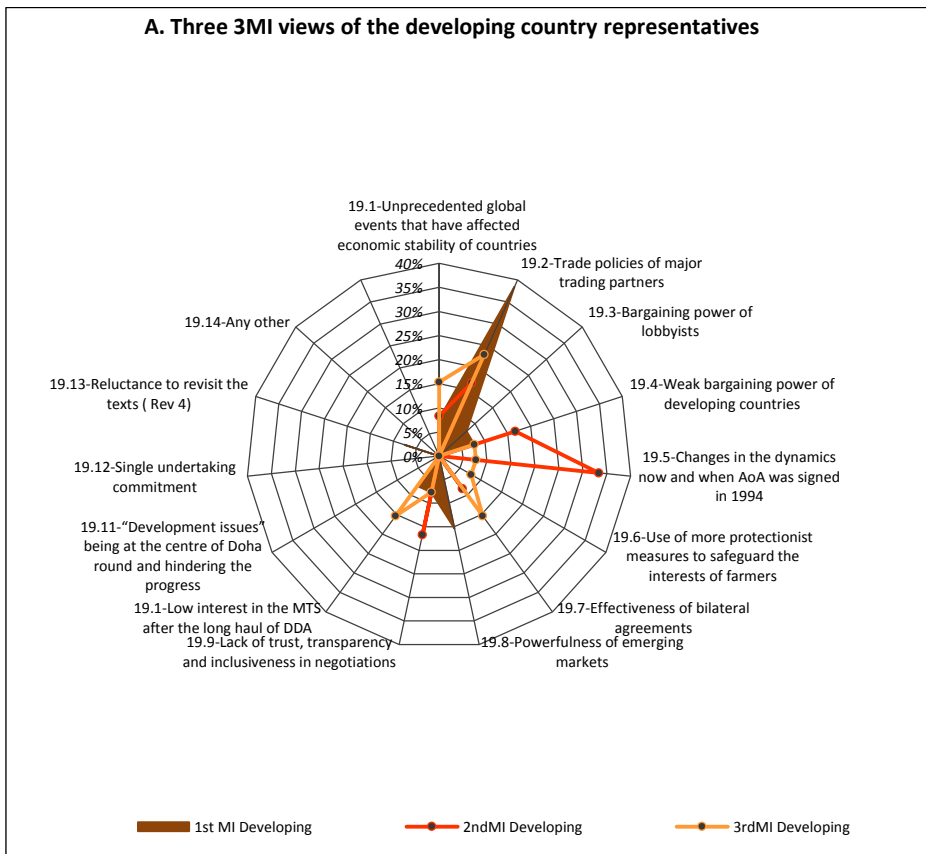


Figure 3.22: The three most important views of developing and developed country delegates for not arriving at consensus

The delegates and researchers/officials groups had relatively close opinions (see Figure 3.23). Among them, 43% were of the view that the main reason was changes in the dynamics between now and when AoA was signed in 1994 (19.5). Twenty-three per cent attributed the trade policies of the major trading partners (19.2) and another 18% the powerfulness of the emerging markets (19.8) as the second main cause. Yet another 18% considered lack of trust, transparency and inclusiveness in negotiations (19.9) to be the third main reason for the inability to reach a consensus.

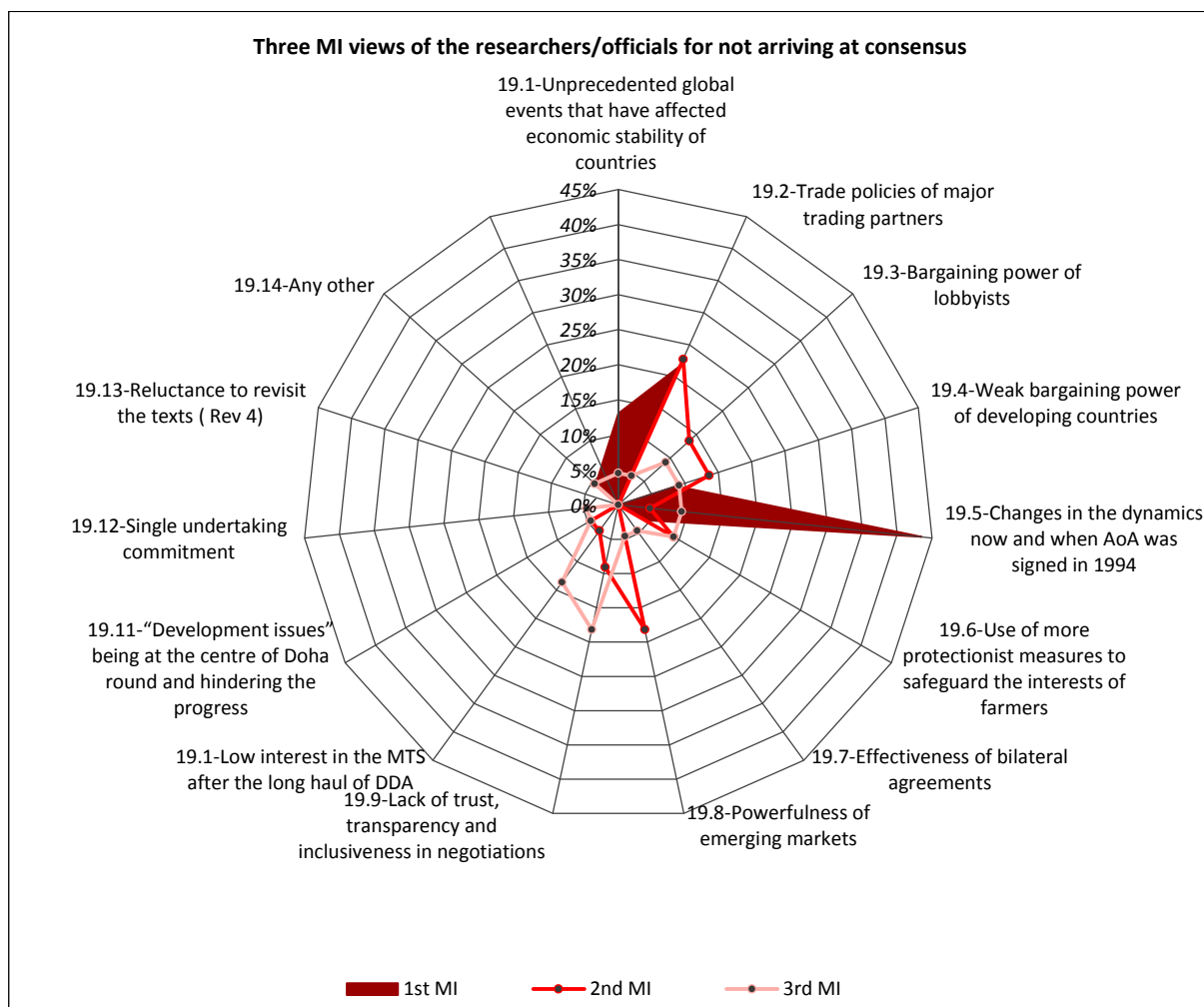


Figure 3.23: The three most important views of researchers/officials for not arriving at consensus

Figure 3.24A shows that, among this group, 27% of researchers viewed trade policies of the major trading partners (19.2) and changes in the dynamics between now and when AoA was signed in 1994 (19.5) to be the main reasons. The former was believed to be the second cause as well, with a rating of 21%. Lack of trust, transparency and inclusiveness (19.9; 21%) was researchers' third reason for not continuing with negotiations.

On the other hand, officials expressed stronger views. Figure 24B shows that 75% of officials considered the main cause to be changes in the dynamics between now and when AoA was signed in 1994 (19.5). Their second main cause was trade policies of major trading partners (19.2; 25%) bargaining power of the lobbyists (19.3; 25%) and powerfulness of emerging economies (19.8; 25%). The weak bargaining power of developing countries (19.4; 25%) was confirmed as the third reason for the standstill.

Key points – Question 19

Of the many reasons for not arriving at a consensus at the WTO on agriculture issues, both groups attributed it mainly to the trade policies of the major trading partners and changes in the dynamics between now and when AoA was signed in 1994, with the contribution of powerful emerging markets and lack of trust, transparency and inclusiveness in negotiations. Other important causes that they identified are the bargaining power of lobbyist and developing countries, the effectiveness of other trade agreements, and the impasse in the DDA negotiations.

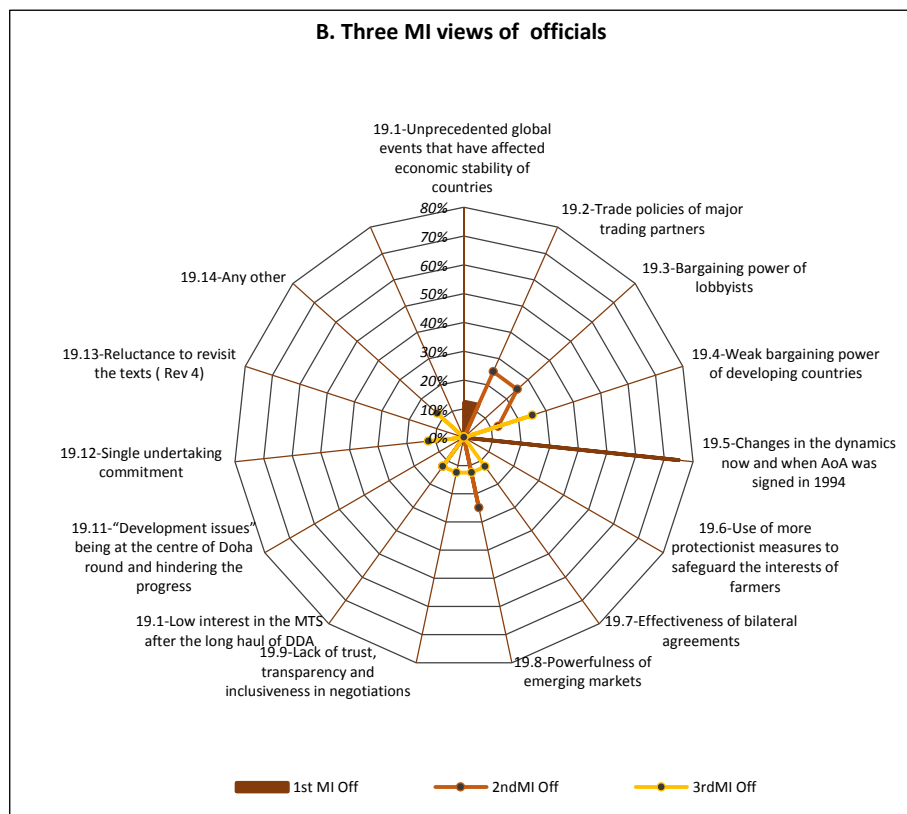
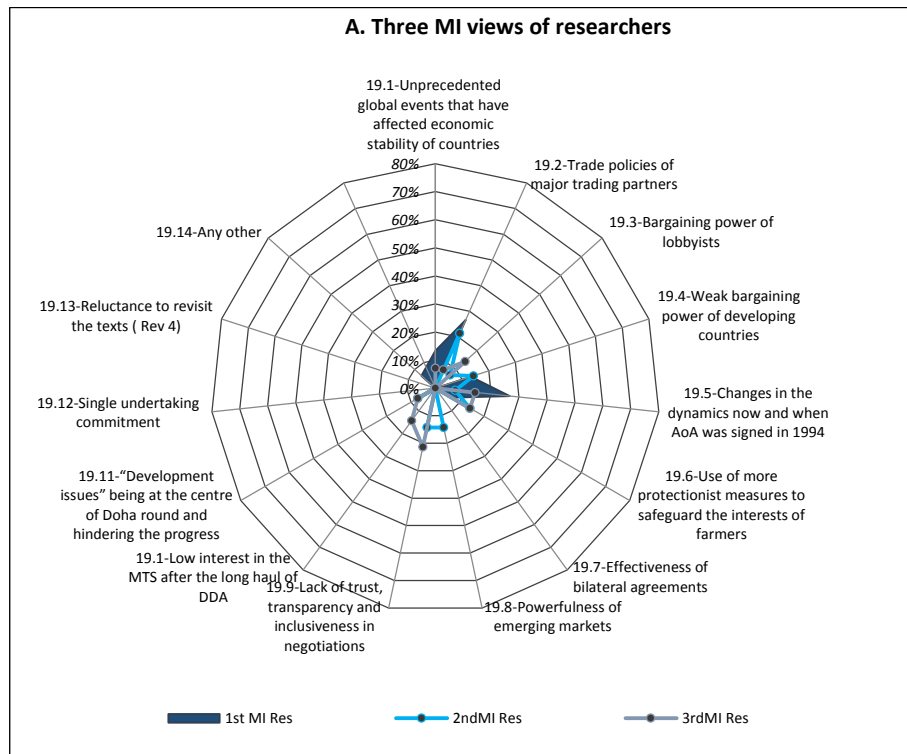


Figure 3.24: The three most important views of (A) researchers and (B) officials for not arriving at consensus

The views of the delegates and researchers/officials on trade policies and previous WTO proposals for the effectiveness of import and export restrictions are discussed under Questions

20 and 21, with their responses depicted in Figure 3.25. (See Appendix C: Tables C-91 & C-92).

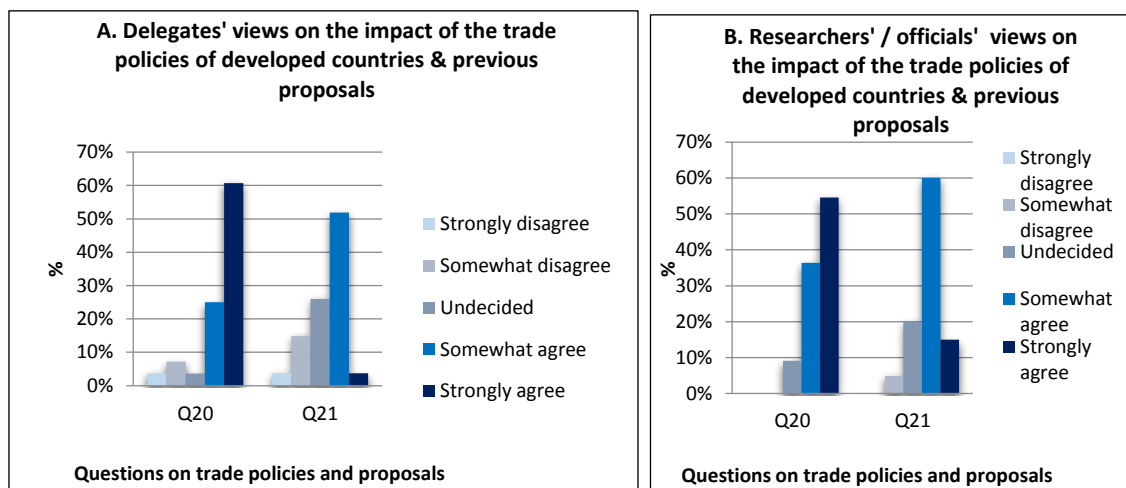


Figure 3.25: (A) Delegates' and (B) researchers'/officials' views on the impact of trade policies of developed countries and previous proposals.

Qu 20: Trade policies of the developed countries (e.g.: US Farm Bill and the EU Common Agricultural Policy [CAP]) have market distorting elements.

As shown in Figure 3.25, more than 50% of delegates (A) as well as researchers/officials (B) strongly agreed that these policies distort trade. Although respondents from developing, least-developed and one-third of developed countries seem to hold a strong position, mixed opinions were ascertained from developed country respondents.

That researchers held a very strong view (64%) on this statement compared to officials (37%) is clearly when considering the group's overall view that these policies are trade-distortive in nature.

Qu 21: Previous food security–related proposals that were submitted or discussed but not agreed at the WTO can be considered as still relevant that they should be negotiated again.

Most respondents of both the groups (delegates and researchers/officials) were somewhat in agreement with this statement, that previous food security–related proposals (mostly in reference to Rev 4) that had been submitted or discussed at the WTO, but not agreed, are still relevant. This view was shared across all individual categories within a 50%–62% response range. Nonetheless, disagreement was observed from some respondents from developed countries (14%), developing countries (23%) and officials (14%). However, the undecided

rates for developed (29% of responses), developing (22%) and least-developed countries (50%), and for researchers (23%) and officials (14%) cannot be overlooked.

Key points: Questions 20–21

It was widely viewed that the trade policies of developed countries contain trade-distortive elements. The proposals on food security which are tabled at the WTO are considered relevant, but their fate seems to be uncertain.

Views of the delegates and researchers/officials on the Bali outcome and related negotiations are discussed under Questions 22, 23 and 24, with the respective responses presented in Figure 3.26. (See Appendix C: Tables C-93 & C-94).

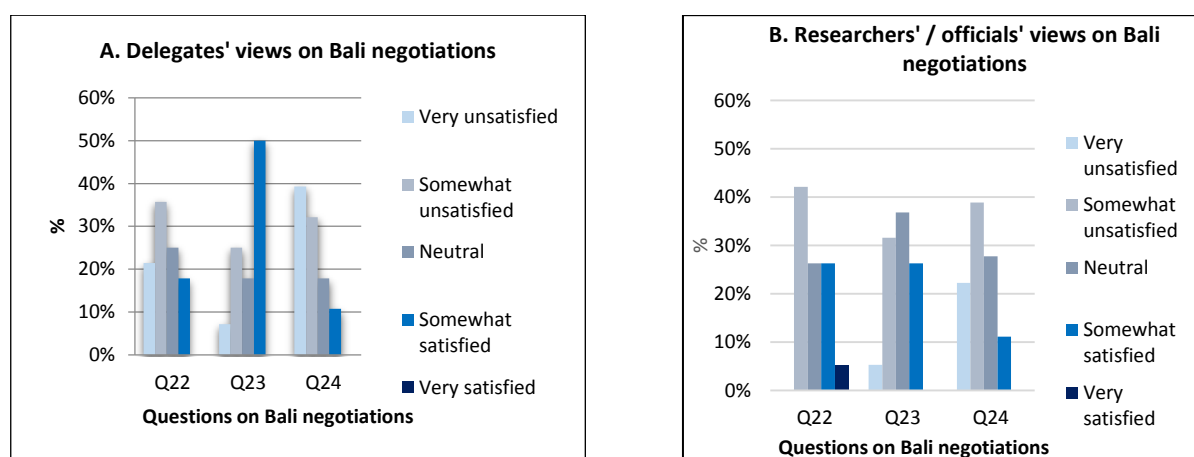


Figure 3.26: (A) Delegates' and (B) researchers'/officials' views on the Bali negotiations

Qu 22: Are you satisfied with the Bali outcome at the 9th WTO Ministerial Meeting held in 2013 on export subsidy decision?

On the whole, the common responses on the export subsidies decision at the 9th WTO Ministerial Meeting held in 2013 point towards dissatisfaction. One-fifth of all delegates expressed their very strong discontent with the export subsidy issue. This view was supported by 28% of developing country and 14% of developed country representatives. Another 36% of all delegates reported they were somewhat unsatisfied and 29% of developed, 39% of developing and 50% of least-developed country representatives also acknowledged this view. Around 42% of researchers and officials separately indicated they were somewhat unsatisfied with the Bali outcome on export subsidies. Of all the respondents, only 14% of officials were very satisfied with the decision.

The percentage holding a neutral position is noteworthy – one-quarter of both groups. This was quite high among the developed (43%) and least-developed countries (50%), and was supported by another 17% of respondents from developing countries, although one-fifth of the delegates and 26% of the researchers and officials group indicated that they were somewhat satisfied with the decision. Overall view, while tending towards dissatisfaction, seems very subjective and mixed.

Qu 23: Are you satisfied with the Bali outcome at the 9th WTO Ministerial Meeting held in 2013 on public stockholding decisions?

Although the decision was agreed by the ministers, it seems that none of the delegates were very satisfied. Against a backdrop of diverse feedback, around one-third (32%) of delegates, mostly from developed (57%) and developing (28%) countries, were somewhat or very unsatisfied with the outcome, and another 50% of delegates, comprising mostly developing (61%) and least-developed countries (50%), indicated that they were somewhat satisfied with the decision.

Unlike the delegates' reactions, as depicted in Figure 3.26B, researchers' and officials' reactions were scattered and pointed more towards dissatisfaction. Forty-three per cent of the officials were somewhat unsatisfied with this decision. The neutral position was taken more by researchers/officials (37%) than by the delegates (18%). Among those with a neutral position were 42% of researchers and 29% of delegates from developed countries. Clearly, none of the groups were very satisfied with this decision.

Qu 24: Are you satisfied with the progress of post-Bali negotiation achieved so far on food security issues (public stockholding, export subsidies and work plans that need to be agreed by the end of 2014)?³⁸

Both groups expressed their dissatisfaction over the level of achievement of post-Bali negotiations. Thirty-nine per cent of all delegates, and 44% of developing countries, 14% of developed and 50% of from least-developed countries, separately, considered the progress to

³⁸ The responses were received during a period of eight months. Within this time, negotiations were dynamic and were at different levels. Therefore, the then prevailing condition of negotiations could have had an impact on how this question was rated.

be very unsatisfactory. Another 32% of all delegates, and 39% developing and 29% developed countries separately, considered the negotiations to have been somewhat unsatisfactory.

Similarly, the opinion of the researchers/officials group's also weighed more towards dissatisfaction, expressed by 22% as very unsatisfactory with another 39% considering it to be somewhat unsatisfactory. This view was supported mainly by 73% of researchers and 43% of officials.

A minority of delegates (11%) and researchers/officials (11%) indicated that the outcomes were somewhat satisfactory.

It is noted that 28% of the researchers/officials and 18% of the delegates gave a neutral position on the progress of the negotiations. This opinion was higher among the developed countries (43%) and officials (43%). (It is noted that three respondents from the developed countries and officials each opted to be neutral.)

Key points: Questions 22–24

Countries expressed mixed reactions on the Bali decision on export subsidies, pointing more towards dissatisfaction.³⁹ Views on the public stockholding decision were scattered. Although one-third of delegates seemed unsatisfied, broadly, they were more in favour of the decision than were the researchers/officials group. Both groups expressed their dissatisfaction over the progress made in the ongoing post-Bali negotiations. In essence, views on the Bali outcomes and negotiations were mixed, and weighed more towards dissatisfaction. It is noteworthy that a high percentage expressed their position as neutral.

3.4.2.5 Food security and political dimensions

Section 5 of the survey section deals with the “response” to the issues covering the political dimensions in the negotiation process. Opinions on the level of political involvement, as well as political decisions such as biofuel, self-sufficiency and right to food obligations, are covered in this section. Figure 3.27 captures the responses of the delegates and researchers/officials for survey Questions 25–27. (See Appendix C: Tables C-95 & C-96).

³⁹ Some of the following questions may be irrelevant with the ministerial decision to eliminate export subsidies at the 11th WTO ministerial meeting held in Nairobi in 2015.

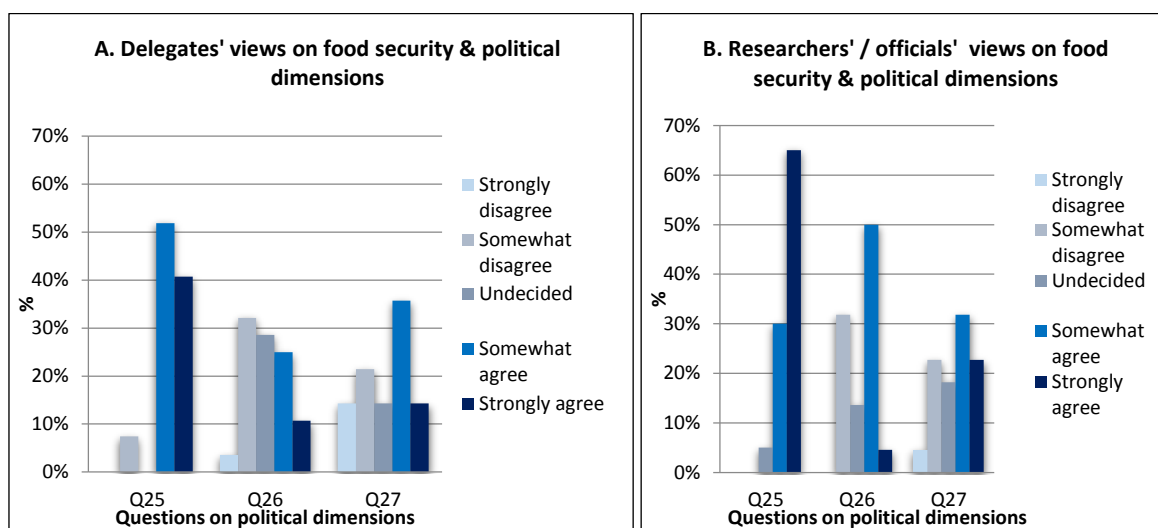


Figure 3.27: (A) Delegates' and (B) researchers'/officials' views on food security and political dimensions

Qu 25: Reaching a consensus on food security issues would involve highly political decisions.

Across the board, with an acceptance rate of more than 90%, both groups clearly agreed that food security issues are highly political in nature. Fifty-two per cent of delegates agreed somewhat and this view was shared largely by developed (83%) and least-developed (100%) delegates. Another 41% of the delegates' group strongly endorsed this statement, supported mainly by developing country delegates (56%).

Among the 65% of researchers/officials, 69% of researchers and 57% of officials strongly agreed with the view, and another 30% agreed somewhat.

Qu 26: Biofuel incentives are a decisive factor for food security.

As illustrated in Figure 3.27, the responses of the delegates and researchers/officials on biofuel as a decisive factor for food security purposes were very diverse. Thirty-six per cent of delegates, mostly from developed (57%) and developing (34%) countries, indicated disagreement, whereas another 36% from mostly developed (43%) and developing (39%) countries agreed it is a decisive factor.

It is noteworthy that, among the developed countries, the response was divided between somewhat disagree (57%) and somewhat agree (43%), unlike the more broadly distributed responses among developing countries.

Similarly, 55% of the researchers/officials reported these incentives to be a decisive element. This view was maintained strongly by the researchers (78%), although another 32% (researchers/officials group), predominantly officials (63%), somewhat disagreed with the statement. This was a clear contradiction of views.

In spite of the 100% response rate to the question, 29% of delegates (mainly from developing and least-developed countries) and another 14% of researchers/officials (mostly officials) were undecided about the impact of biofuel incentives.

Qu 27: Agreement on Agriculture contains sufficient provisions and flexibilities for a State to fulfil its right to food obligations and responsibilities.

Both groups seem to have a similar response pattern. Fifty-one per cent of the delegates and 55% of researchers/officials were in agreement (somewhat and strongly agree) that the AoA contains sufficient provisions and flexibilities for a state to fulfil right to food obligations and responsibilities. This viewpoint was strongly supported by delegates from developed countries (86%) and a majority of researchers (58%) and officials (50%).

By contrast, 35% of delegates, among them 44% developing countries, 100% LDCs and another 27% of researchers/officials (37% officials and 21% researchers), were of the view that the AoA is insufficient (somewhat and strongly disagree) in fulfilling obligations and responsibilities as expected by the constituencies.

Clearly, the developed countries were in favour of this agreement, whereas the developing country views were distributed more widely across the range of views. Further, 14% of delegates and 18% of researchers/officials were undecided.

The views of (A) the delegates and (B) the researchers/officials on self-sufficiency versus trade reliance are discussed next, with the responses presented in Figure 3.28. (See Appendix C: Tables C-97 & C-98).

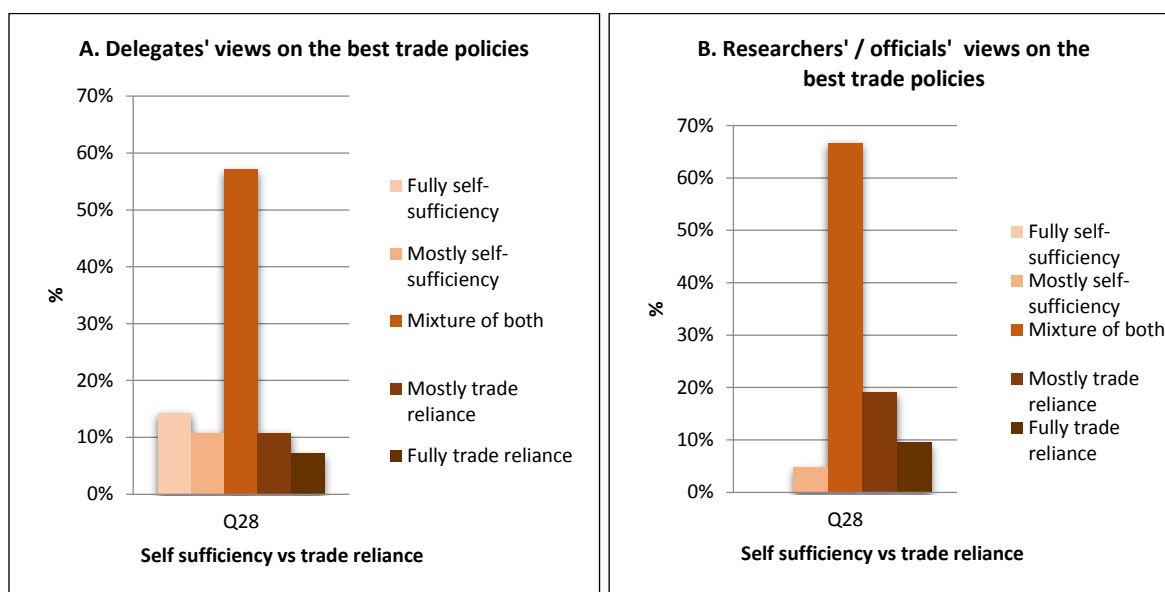


Figure 3.28: (A) Delegates' and (B) researchers'/officials' views on the best trade policies

Qu 28: How do you consider the relative importance of self-sufficiency & trade reliance (purely rely on import & export trade) policies for a country?

As shown in Figure 3.28, a majority of both groups selected a mixture of self-sufficiency and trade reliance as the best agriculture policy for a country. This view was shared by 57% of delegates from developed countries and 61% from developing representatives, as well as by 57% of researchers and 86% of officials. Among the delegates, 25% were of the view that the policy should lean more towards self-sufficiency, with another 18% favouring more trade reliance. Apart from the majority view, a “mixture of both”, the other developed country positions were distributed equally (14%) among the three options: fully self-sufficient, mostly trade-reliant and fully trade-reliant. However, 28% of developing countries favoured self-sufficiency policies. The views from LDC respondents were divided equally between mostly self-sufficient and mostly trade-reliant. None of the researchers/officials recommended a fully self-sufficient policy, but 29% were more inclined towards a trade reliance policy

Key points: Questions 25–28

Across the board, with a greater than 90% response rate, delegates and researchers/officials agreed that food security issues are highly political in nature. Diverse views were observed among the different groups as to whether biofuel incentives are a decisive factor for food security. Responses from developed countries were distinctly divided between somewhat disagree and somewhat agree, but developing country views were more scattered. A clear conflict of view was evident between the responses of researchers and officials, with 78% of

researchers considering biofuel incentives to be decisive for food security and 63% of officials disagreeing with this view.

Similarly, differing views were observed among the delegates developed and developing countries as to whether the AoA contains sufficient provisions and flexibilities for a state to fulfil its right to food obligations and responsibilities. Most developed countries considered it to be sufficient, however, developing country views were scattered.

A mixture of both self-sufficiency and trade reliance was preferred by a considerable proportion of the sample across all groups. However, one-quarter of delegates supported a policy of more self-sufficiency, in contrast to one-fifth favouring more trade reliance. Among the researchers and officials, none supported full self-sufficiency and around one-third considered trade reliance a better policy.

3.4.2.6 Food security and future prospects

The final section of the survey deals with the conclusion of the thesis, with particular focus on addressing the food security issues. Views were sought on two aspects, broadly: (1) any possible cooperation between WTO and other international organisations dealing with food security and (2) the role of FTAs and other regional agreements in addressing food security challenges, especially against a backdrop of stalled negotiations. Figure 3.29 captures the responses to Questions 29 and 30 of (A) the delegates and (B) the researchers/officials. (See Appendix C: Tables C-99 & C-100).

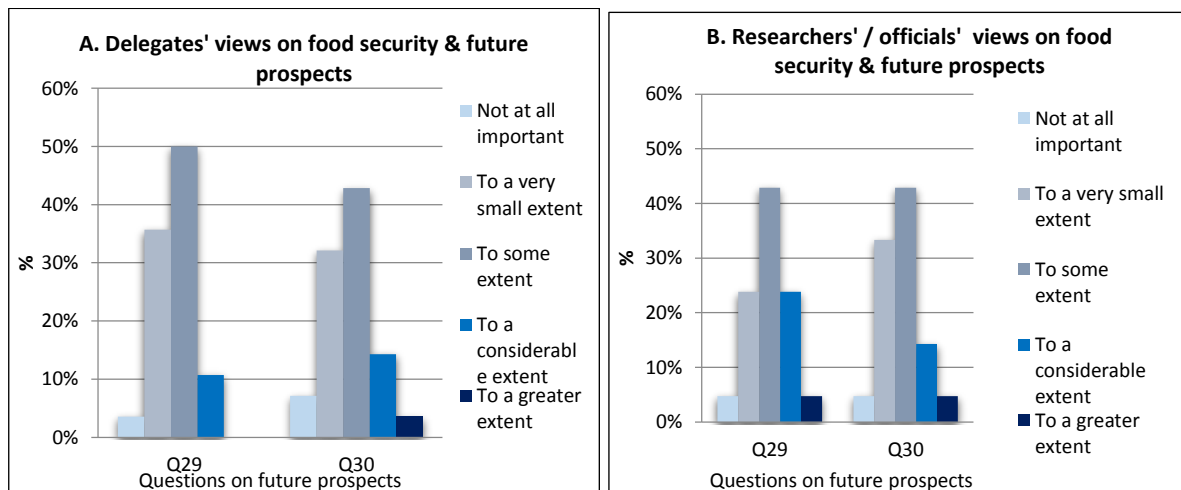


Figure 3.29: (A) Delegates' and (B) researchers'/officials' views on food security and future prospects

Qu 29: Can the cooperation extended under bilateral/regional free trade agreements be an effective solution in addressing food security issues?

As illustrated in Figure 3.29, a majority in both groups responded that cooperation extended through the bilateral/regional free trade agreements could address food security issues among the members to some extent. Fifty per cent of all delegates and 43% developed, 44% developing and 100% least-developed countries in their respective groupings, agreed with this position. However, 36% of the delegates, considered the solution to be effective to only a very small extent. This view was endorsed by 43% developed and 39% developing delegates.

Similar but more mixed opinions were ascertained from the researchers/officials group. Forty-three per cent of this group and individually 46% of researchers and 38% officials were of the view that cooperation under bilateral/regional free trade agreements has an effect to some extent. Notably, researchers seemed to consider this solution a better option than the officials, whose responses tended more towards the less important end of the scale.

Qu 30: In your view does the WTO engage adequately, and maintain effective cooperation with other related organisations (FAO, UN etc.) in addressing food security-related challenges?

The distribution pattern of the feedback of both groups was very similar. The responses of both groups indicated that currently there is evidence of some WTO engagement with other related organisations in addressing food security-related challenges, but towards the lower end of the response scale. Both groups attached 43% to some engagement and another 33% to minimal cooperation.

Eighty-six per cent of developed countries agreed that the involvement is to some extent, with the rest indicating minimal engagement. The developing country feedback was widely spread: very small (39%), no importance (11%), to some extent (28%), and at a considerable level (17%).

Among the researchers/officials, 39% of researchers and 50% of officials are of the view stated that there is some cooperation, and another 39% of researchers and 25% officials confirmed it is at a lesser level.

Key points: Questions 29–30

As a solution to the future direction of the WTO when dealing with food security issues, both groups have indicated that cooperation extended under bilateral/regional free trade agreements could only handle these issues to a certain extent. The cooperation between the WTO and other international organisations involved in food security issues was not seen to be engaged to a great extent.

3.5 Conclusion

The diversity of views among the respondents on food security issues, especially the delegates, was clearly observed in the survey.

The respondents have different views on the importance of food security. Developing and least-developed countries consider food security as a fundamental right of the people, giving prominence to the availability dimension. However, developed country interests focus more on the accessibility and nutritional elements of food security.

Both groups of respondents rely broadly on the MTS and agreed they have a role to play in addressing food security issues. They did not display high satisfaction with the current role of the MTS or its effectiveness in addressing these challenges. Their responses reflected inadequacy in the system's capacity to address food security challenges.

The respondents' perceptions on export and import restrictions and subsidies also differed. Even though they acknowledged them to be trade-distortive, respondents considered import and export restrictions to be trade policies with some effectiveness in ensuring food security in the short term. They believed that relevant rules (Article XI of GATT and Article 12 of AoA) are more effective in regulating import restrictions than are disciplining export restrictions. The majority agreed that developed countries are high users of the green box subsidies and their export subsidies have an impact on the imports and exports of the developing and least-developed countries. Respondents identified the need of non-trade distortive subsidies but expressed mixed views on their use by the developing and least-developed countries.

In spite of highly political nature of food security decisions, one of the main factors identified as having an impact on arriving at consensus on agriculture issues at the WTO was changes in the dynamics between now and when the AoA was signed.

These findings are discussed in detail in the following chapters.

Overall view of the research issue

Chapter 1: Introduction; Chapter 2: Literature review; Chapter 3: Survey results

Role of the MTS of the WTO in addressing food security challenges; views on food security and trade restrictions; food security and WTO negotiation; food security and political dimension; food security and future prospects

Concept of food security

Chapter 4
What is food security?

Research question

How can the global food security challenges be addressed in a MTS?

Adequacy of current rules

Chapter 6
The WTO mandate

Chapter 5

Food security, trade interests and levels of development

Response

Chapter 8

The dynamics hindering agriculture negotiations

Chapter 7

Trade restrictions and food security

Conclusion

Chapter 9

“How can the global food security challenges be addressed in a MTS?”

Chapter 4 What is food security?

4.1 Introduction

“Food security” is an evolving concept. It has been defined and modified over more than 40 years. The underlying motive is to address hunger in the world, and particularly in the developing world.

The widely accepted definition from the World Food Summit plan of action (FAO, 1996) explains that:

Food security, at the individual, household, national, regional and global levels. Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. (p. 1)

This FAO definition underscores **four (4) key dimensions** that are used and adapted as necessary, throughout the present study; namely, food:

- **availability**
- **accessibility** (economic and physical)
- **utilisation**
- **stability** (over time).

The food security concept is known for its broad, multidimensional, subjective and complex nature. It is interwoven with political, economic, financial, technological, social and cultural aspects. In this context, it is debatable whether the FAO definition, which has been subject to several modifications (Clay, in FAO 2002) is sufficient to cover the whole spectrum of issues associated with hunger.

In this respect, researchers have challenged the coverage and relevance of the 1996 FAO definition and have flagged the need to address a number of contemporary and complex issues. In particular, though some trade aspects are believed to be broadly encapsulated in the FAO definition, the extent of the coverage is not made explicit. Therefore, in view of the role that trade could play in addressing food security challenges, researchers such as Karapinar (2010), have emphasised that trade and related issues, among other aspects (e.g. climate change), should be reflected more clearly in the official definition of food security.

In a globalised context, reliance on international trade for the purposes of continuing economic growth and food security has become significant. Access to more open markets and global and regional value chains serves to lower costs and optimise profits (Baldwin 2013; Bhatia 2013; Goh 2013, Kimura 2013, Weil 2013, Wignaraja, 2013). Against this backdrop, in many countries the role of international trade in addressing food insecurities is becoming more apparent. The issue in addressing food security challenges within the current multilateral trade negotiation setting is viability and practicality.

Food security was discussed widely in the Uruguay Round of trade negotiations (Margulis, 2017). However, in the resulting 1994 legal texts it is referred to only once, as a “non-trade concern” among other issues (environment), in the preamble to the AoA (WTO n.d-i). Nevertheless, it states about these non-trade concerns, that “commitments under the reform programme should be made in an equitable way among all Members”.

With the vagueness of what food security is in the WTO context, the spark for further work on food security re-emerged recently in the context of the public stockholding proposal reintroduced in 2012⁴⁰, driven primarily by India. Thereafter, WTO members began to engage in more thought-provoking discussions around the meaning and coverage of food security and this attempt continued throughout the post-Bali (2013) and now the post-Nairobi (2015) periods (WTO 2014a; WTO 2015-b).

This chapter focuses on the “concept of food security” and “reasons for diverse views on food security”, and serves a stepping stone to more in-depth investigation into these issues. The objective of this chapter is to understand in greater detail what WTO members consider food security to be, including areas of commonality and difference, with a view to identifying ways to facilitate the negotiations.

The following sections analyse the responses received to interview Questions 1(a) “What is perceived as food security?” and 1(b) “Reasons for diverse views” on food security (see interview questionnaire in Appendix B 1.3) More specifically, this chapter explores certain enumerated orientations and dimensions in food security, and the importance attached to them by different country groupings in the multilateral trade negotiations. Moreover, it examines the

⁴⁰ G-33 proposal on Public Stockholding - JOB/AG/22 – 13 November 2012 and JOB/AG/25 – 3 October 2013.

dynamics and diversity at work within the concept of food security as understood in this context.

Finally, based on this analysis, the conclusion sheds light on specific observations made in this chapter and raises further questions, which are tested in Chapter 5.

4.2 Methodology

The data discussed in this chapter are derived from a series of interviews⁴¹ with delegates, researchers and officials. As discussed in section 3.2, a similar method was employed to select the interview respondents. A stratified sampling technique was used to select the agriculture delegates representing the 160⁴² WTO membership, which differentiated broadly based on the three development levels (least-developed, developing and developed, countries) and the different negotiation groups in each stratum (e.g. Cairns Group, G-33, ACP, African). Final selections were made using judgemental and convenience sampling methods.

For researchers and officials, judgemental and convenience sampling methods were used to select those who were either involved or responsible, or currently following the issues of interest to this research.

The views of 41 agriculture delegates, comprising 26 developing, 10 developed and 5 least-developed country representatives, as well as 10 researchers and 12 officials, were analysed (a total of 63 interviewees). The 26 developing country respondents represented five high-income, eight upper middle-income and 13 lower middle-income economies, according to the World Bank income classifications⁴³ (World Bank 2017). The delegates' and researchers'/officials' responses are presented separately, in view of their differing roles; however, the main focus is on the views of delegates who are directly involved in negotiations. The delegates' views are supplemented by the independent responses of researchers and officials. Altogether, there were 145 responses from 41 delegates and as well, there were 80

⁴¹ The bulk of the one-on-one interviews were conducted in Geneva during the month of November 2014.

⁴² Although at 29.07.2016 there are 164 members, when selecting the sample in May/June 2014 the membership was 160.

⁴³ The World Bank income classifications for 2014 are based on 2013 GNI per capita calculations, using the World Bank Atlas method: Low income < \$1,045, lower middle income \$1,045 – \$4,125, upper middle-income \$4,125 – \$12,746, high income > \$12,746.

responses from 10 researchers (33) and 12 officials (47), which are grouped into a 12-cell matrix to facilitate the analysis, as well as series of graphs and tables.

The responses of the delegates were categorised further according to (1) development levels, (2) vulnerability to food security, (3) negotiating groupings at the WTO and (4) other groupings with political influence. This selected “top-down” approach serves to fine-tune the analysis by considering first the generalised overall view of delegates, and then the more focused views of the different groups they represent.

The delegates’ responses were categorised according to their country of representation in line with the WTO identification of development levels⁴⁴: least-developed, developing and developed countries. Country representation and the numbers of responses are depicted in Table 4.1.

Table 4.1: Distribution of views among the development levels

Development level	Country representation	% of total sample	No. responses	% of total responses
LDC	10	25%	33	23%
Developing (Dev)	26	63%	94	65%
Developed (D)	5	12%	18	12%
Total	41	100%	145	100%

Delegates were also categorised as NFIDCs and the rest of the sample. The NFIDCs are identified by the WTO for their vulnerability to food security needs. Pursuant to the Marrakesh Ministerial Decision (WTO n.d-h) adopted as a part of the Uruguay Round negotiations on agriculture, reform programs were suggested to address possible negative effects on the LDCs and NFIDCs in particular⁴⁵. The decision recognised that, as the reform process was

⁴⁴ Development levels as identified by the WTO. On accession to the WTO, countries are assigned to a development level, although the developing group is a self-identifying group. The least developed countries are recognised by the UN (UN 2017). (See *World Trade Report 2013*, p. 58.)

⁴⁵ The NFIDCs members are defined in the G/AG/3 of 24 November 1995 on Decision by the committee on agriculture at its meeting on 21 November 1995 relating to the establishment of a list of WTO net food-importing developing countries for the purposes of the Marrakesh Ministerial Decision on measures concerning the possible

implemented progressively, it would generate increasing opportunities for trade expansions and economic growth to benefit WTO members. Most importantly, it has recognised any possible negative impact on the LDCs and NFIDCs related to availability of adequate supplies of basic foodstuffs from external sources on reasonable terms and conditions, and short-term difficulties they may encounter in financing normal levels of commercial imports of basic food stuffs (Article 16 of the AoA [WTO n.d-p]). These interests of the NFIDC group in the agriculture sector are reflected mainly in the preamble, Article 16 and 20 of the AoA (WTO n.d-p).

The NFIDCs comprise the LDC members of the WTO, plus the 31 developing countries identified in WTO Decision G/AG/5/Rev.10, dated 23 March 2012⁴⁶. As at May 2016 there were 36 LDC members of the WTO (United Nations 2017). These 67 NFIDCs represent 40% of the total 164 WTO membership⁴⁷. The sample in this study comprises 11 NFIDC members (from five least-developed and six developing countries), representing 17% of the WTO NFIDC members.

The number of responses and the representation of delegates from countries categorised as NFIDCs and the rest (including developing countries that are non-NFIDCs, as well as developed countries) are summarised in Table 4.2.

Table 4.2: Distribution of views among NFIDC respondents and the rest of the sample

	Development levels	Country representation	Total no. countries	% of sample	No. responses	Total no. responses	% of responses
NFIDCs	LDC	5	11	12%	18	40	12%
	Developing	6		15%	22		15%
Rest	Developing non-NFIDC	20	30	49%	72	105	50%
	Developed	10		24%	33		23%
Total			41	100%	145	145	100%

negative effects of the reform programme on the least developed and net food-importing developing countries ("The Decision"). The latest WTO List of NFIDCs – G/AG/5/Rev.10 of 23 March 2012.

⁴⁶ The latest as at 24.02.2017.

⁴⁷ WTO has 164 Members as at 26.07.2016.

As illustrated in Table 4.2, both NFIDC representatives and their percentage of total responses form 27% of the total sample. The remaining 73% of the delegate group is distributed between non-NFIDC developing countries (49% of countries in the sample, 50% of responses) and developed countries (24% of countries in the sample, 23% of responses).

The delegates were further categorised according to their affiliation with negotiating groups (WTO 2017-b) in the multilateral agriculture trade negotiations. These negotiation groups are created among a set of members who have similar concerns or interests. Except for the African Group, the groups have been established solely for negotiating agriculture issues. The African Group is included in view of the importance of food security for the African region and the group's engagement in food security-related discussions.

The Cairns Group is a coalition of agriculture-exporting nations lobbying for agricultural trade liberalisation. Of its 19 members, the views of 17 are captured in this study. This is a mixed group of developed and developing countries with agricultural market-access interests.

The G-20 is a coalition of developing countries pressing for ambitious agricultural reforms in developed countries to provide flexibility for developing countries. This group has been active recently in eliminating developed countries' export subsidies. The group currently has 23 members; 17 of its countries were interviewed as part of this study.

The G-10 is a coalition of countries lobbying for agriculture to be treated as diverse and special because of non-trade concerns. There are currently nine members, 4 of which participated in this research. This is a mixed group of developed and developing countries.

The G-33 coalition of developing countries insists on flexibility for developing countries for limited market-access commitments in agriculture. This group is also known as the "Friends of special products" in agriculture. Of its 47 members, the views of 17 are included in this analysis. The G-33 has been vocal in recent years, and has been supportive of the public stockholding proposal driven primarily by one of its major members, India. This is a mixed group of least-developed and developing countries.

The ACP consists of African, Caribbean and Pacific members promoting agriculture preferences in the EU. It contains 62 members. The views of 11 of its members are captured in this study. This is a mixed group of least-developed and developing countries.

The African Group is a regional group that deals with general issues of its members. There are 43 least-developed and developing country members among the WTO members. Of them, nine took part in the study.

In addition, the **OECD**⁴⁸ and **APEC**⁴⁹ are important for their ability to exert political pressure on the WTO deliberations. These two groups are active in crafting, influencing the food security policies of their memberships, and in conducting regional programs on food security issues. Of the delegate respondents, 11 represented OECD members and 13 came from APEC economies.

Country representation and the number of responses of the various negotiating groups and other groups are presented in Table 4.3.

Table 4.3: Distribution of views among negotiating groups

Groupings	Development level			Representation	
	LDC	Developing	Developed	Total no. countries	No. responses
Cairns	-	76% (13)	24% (4)	17	65
G-20	-	100% (17)	-	17	64
G-10	-	25% (1)	75% (3)	4	18
G-33	12% (2)	88% (15)	-	17	62
ACP	36% (4)	64% (7)	-	11	29
African	45% (4)	55% (5)	-	9	23
OECD	-	18% (2)	82% (9)	11	40
APEC	-	54% (7)	46% (6)	13	52

Empirical research methods were used to analyse the responses for Questions 1(a) and 1(b)⁵⁰. The interview transcripts were coded using thematic analysis. Thereafter, simple or frequency percentages were calculated based on the total number of group responses and presented in

⁴⁸ The OECD has 35 members as at 24.04.2017 and they are all WTO members (OECD 2017).

⁴⁹ APEC has 21 members as at 24.04.2017 and they are all WTO members (APEC 2017).

⁵⁰ See Appendix B-2.

heat charts and tables, as well as cloud tags, using statistical tools including Excel, NVivo and Stata.

Some limitations were observed in the analysis. Although NVivo was considered initially to analyse data, owing to the bulkiness of information covered in 64 interviews, these transcribed responses were mostly categorised into themes manually. The inability to reveal the identity of the respondents in order to fulfil the Ethics approval of the University is another limitation in this research: respondent's views are organised as group views according to different classifications.

4.3 Defining the food security concept

The interview responses to Question 1(a) "What is food security?" are set out in a 12-cell matrix of four **dimensions** and three **orientations**, designed to interpret the concept of food security.

Respondents were discouraged from referring specifically to the formal FAO definition of food security. Therefore, an impromptu question was included to capture the first thought that came into the minds of the participants when mentioning "food security".

The intuitive responses either referred to or were categorised under the four dimensions of food security – availability, accessibility, utilisation and stability – found in the FAO 1996 definition (cited in FAO 2006):

Food availability: The availability of sufficient quantities of food of appropriate quality, supplied through domestic production or imports (including food aid).

Food access: Access by individuals to adequate resources (entitlements) for acquiring appropriate foods for a nutritious diet.

Utilization: Utilization of food through adequate diet, clean water, sanitation and health care to reach a state of nutritional well-being where all physiological needs are met. This brings out the importance of non-food inputs in food security.

The concept of stability refers to both the availability and access dimensions of food security, as referred to next in the same source:

Stability: To be food secure, a population, household or individual must have access to adequate food at all times, including access to food during sudden shocks (e.g. an economic or climatic crisis) or cyclical events (e.g. seasonal food insecurity).

Noting the close and overlapping nature of the availability, accessibility and stability dimensions, those dimensions were redefined within the framework of the FAO interpretation for the purposes of the current research, while retaining the FAO's interpretation of the utilisation dimension. The three refined dimensions are:

Availability: Being able to source adequate food either through (a) production *or* (b) imports *or* (c) resource availability (arable/farming land).

Accessibility: The economic or physical access to food by (a) individual people or (b) the country.

- (a) Individuals can access food at an affordable price *or* have the financial resources to purchase their food requirements *or* can obtain the needed food without difficulty.
- (b) Countries are able to import sufficient amounts of food at an affordable price, to import or export without any trade-related restrictions, and to generate economic resources or income in transactions.

Stability: Ensuring an adequate supply of food for people through production *or* trading *or* a stable supply of resources.

In addition to the four dimensions, participants' responses were associated with three different focuses or orientations. These were broadly categorised as (a) **people-** (b) **trade-** and (c) **resources-**oriented views:

- (a) People orientation – views were focused on people, population or individual food requirements were categorised as people orientation
- (b) Trade orientation – references to import and export trade, trade policies and markets
- (c) Resource orientation – views expressed from the perspective of livelihood or income generation through farming or land used for production.

A 12-cell matrix was developed to illustrate the three orientations and four dimensions, as set out in Table 4.4. This matrix format is used as the basis for the following discussion of the views expressed in the responses, both overall and within each of the different respondent groups in the sample.

Table 4.4 Orientations and dimensions of the food security concept revealed through respondents' comments

Orientations	Dimensions			
	Availability	Accessibility	Utilisation	Stability
People All responses are focused on people, individual/s, household, population, family etc.	Sufficient quantities of food either from domestic production or imports.	Food is affordable and there are adequate economic resources to purchase food and physical access to food.	Food is healthy and safe, enabling people to reach a state of nutritional well-being where their physiological needs are met.	Access to adequate food at all times even during shortages, price volatilities etc.
Trade All responses are from a trade perspective. Import /export trade, markets, suppliers, buyers, trade policies etc.	Sufficient quantities of food available through importation.	Importing countries relying on international trade have access to food at an affordable price, and have economic access and the ability to import without being constrained by export restrictions. Exporters' able to generate income and ensure supplies to markets.	Nutrition content in the exported /imported food ensures a healthy and safe diet.	Adequate food at all times, even during shortages, export restrictions and price volatilities in the international market.
Resources All responses focus on land availability, livelihood, income generation etc.	Sufficient arable land for agriculture production to fulfil country or global demand for food	Income generation in a country through livelihood in the agricultural sector	(N/A)	Stable supply of resources

Source: This matrix was developed by the researcher based on interview responses and FAO explanations of dimensions (FAO, 2006)

The overall view of food security of the three groups (delegates, researchers and officials) is examined in this section. The response percentages for different combinations of orientations and dimensions are fitted into the 12-cell matrices and are presented in the form of heat charts (Tables 4.5 and 4.6). Darker shades denote higher values and lighter shades indicate lower values.

Table 4.5: Delegates' views on orientations and dimensions (%)

	Availability (%)	Accessibility (%)	Utilisation (%)	Stability (%)	Total (%)
People	21	20	12	17	70
Trade	8	9	2	5	24
Resources	2	3	-	1	6
Total	31	32	14	23	100

Source: Interview responses

Table 4.6: Researchers' and officials' views on orientations and dimensions (%)

	Availability		Accessibility		Utilisation		Stability		Total	
	Res. (%)	Off. (%)	Res. (%)	Off. (%)	Res. (%)	Off. (%)	Res. (%)	Off. (%)	Res. (%)	Off. (%)
People	21	21	21	21	21	11	16	19	79	72
Trade	6	9	9	9	-	-	3	9	18	27
Resources	-	-	3	1	-	-	-	-	3	1
Total	27	30	33	31	21	11	19	28	100	100

Source: Interview responses

As shown in Tables 4.5 and 4.6, the overall outcome demonstrates a similar thinking pattern among delegates, researchers and officials. All three groups of respondents placed a high importance on people orientation, representing over 70% of their responses in each case. Approximately another quarter of responses identified the trade aspects of food security. The resources orientation in food security is given the least prominence across all dimensions. All responding groups identified accessibility and availability as the two main dimensions associated with the concept of food security. The delegates' and officials' groups identified stability of food supply as the third most important dimension, followed by utilisation. The researcher group ranked the utilisation dimension ahead of stability.

Overall, most of the respondents were **people-oriented**. They associated **access** to adequate financial resources and unrestricted supply of food at an affordable price, with **availability** of

food, whether by means of importation or domestic production, valuing them as the most important components of food security.

Next to be examined is whether there are greater variations between the priorities given to the dimensions and orientations to food security among the different trade-negotiating groupings of the delegates. It is important to break down the comments of delegates to elucidate the differences and commonalities among and within the various representative groups. The reasons behind divergence and difficulties in reaching consensus in trade negotiations may be better understood by examining the standpoints within the different groups.

The groups are differentiated based on (1) development levels, (2) vulnerability to food security, (3) negotiating positions and (4) ability to influence. In the first instance, the delegates' responses were categorised as developing (Dev), LDC and developed (D) countries.

Depicted in Table 4.7, of the three orientations, people orientation was the main focus for countries at each level of development. It was highest among the LDCs (84%), followed by developed respondents (72%) and developing countries (67%). Trade was the next focus, with developing countries attaching higher importance (28%) to this orientation than the other groups. Despite its much lower recognition, all three development levels identified the resource aspect of food security in the availability dimension.

Among the four dimensions, the most important for delegates were availability and accessibility, followed by stability in food supply. However, apart from the responses from the developed countries, lower levels of recognition were observed for the nutrition aspect of food security, particularly among the LDCs and to some extent by the developing representatives.

As for individual rankings, within people orientation, the LDCs rated availability and accessibility equally with a rating of 28% on each dimension. Developing countries ranked availability somewhat higher (21%) than the other dimensions. Notably, for the developed country representatives, all four dimensions within the people orientation were equally important, with 18% for each dimension. For the trade and resources orientations, the accessibility and availability dimensions were the primary areas of interest to the delegates.

In summary, though a number of similarities were noted between the different development levels, there also appeared to be differences. This raises the possibility that such differences may be based on the needs of countries and respondents' aspirations according to the level of development. This is subject of more detailed statistical analysis in the following chapter.

Secondly, the NFIDCs (some of the least-developed and developing countries) are recognised in the WTO for their vulnerability in securing food needs. Tables 4.8 and 4.9 compare the views of this group with the rest of the interview sample, including the non-NFIDC developing countries (RDev) and developed countries (D).

Among the groups, people orientation was again common and high among the NFIDC respondents (75%).

Across all dimensions, accessibility was the NFIDC group's most commonly reported dimension (38%), followed by availability (33%) and stability (20%). Conversely, developed countries ranked accessibility and availability equally across all orientations, whereas non-NFIDC developing countries ranked availability above accessibility on the people orientation as well as overall.

The nutrition component of food security (utilisation dimension) was acknowledged more by the rest of the sample than by the NFIDC respondents. Similarly, the trade orientation was viewed as more important by the rest of the group, and particularly by those from non-NFIDC developing countries. Conversely, resource orientation (on the accessibility and availability dimensions) was considered important more by the NFIDC respondents than by the rest. In essence, the NFIDCs' interests in food security appear to differ from the rest to some extent. Compared to the rest, NFIDC responses reflect high recognition of accessibility as the main dimension.

In an attempt to understand different viewpoints, delegates were grouped further according to their affiliation with the main negotiating groups in the agriculture negotiations at the WTO. Table 4.10 and Figure 4.1 capture the respondents' views according to the six negotiation groups. The charts in Figure 4.1 also separate out the responses according to the level of development (least-developed, developing and developed countries) within each group. (See Appendix D-1: Tables D-1.1 to 1.9 for more analysis of each group.)

Table 4.7: Comparison of views among development levels of delegates on orientations and dimensions (%)

	Availability			Accessibility			Utilisation			Stability			Total		
	LDC (%)	Dev (%)	D (%)	LDC (%)	Dev (%)	D (%)	LDC (%)	Dev (%)	D (%)	LDC (%)	Dev (%)	D (%)	LDC (%)	Dev (%)	D (%)
People	28	21	18	28	19	18	6	11	18	22	16	18	84	67	72
Trade	6	10	6	6	11	6	-	2	3	-	5	6	12	28	21
Resources	6	1	3	-	3	3	-	-	-	-	1	-	6	5	6
Totals	39	32	27	33	33	27	6	13	21	22	22	24	100	100	100

Source: Interview responses. Note: Because of rounding, totals do not necessarily add up to 100 (%).

Table 4.8: Comparison of views of NFIDC respondents and the rest on orientations and dimensions (%)

	Availability		Accessibility		Utilisation		Stability		Totals	
	NFIDCs (%)	Rest (%)	NFIDCs (%)	Rest (%)	NFIDCs (%)	Rest (%)	NFIDCs (%)	Rest (%)	NFIDCs (%)	Rest (%)
People	23	21	25	18	8	13	20	16	75	68
Trade	8	9	8	10	3	2	-	7	18	27
Resources	3	2	5	2	-	-	-	1	8	5
	33	31	38	30	10	15	20	24	100	100

Source: Interview responses. Note: Because of rounding, totals do not necessarily add up to 100(%).

Table 4.9: Comparison of views of respondents from NFIDCs and other development levels on orientations and dimensions (%)

	Availability			Accessibility			Utilisation			Stability			Totals		
	NFIDCs (%)	RDev (%)	D (%)	NFIDCs (%)	RDev (%)	D (%)	NFIDCs (%)	RDev (%)	D (%)	NFIDCs (%)	RDev (%)	D (%)	NFIDCs (%)	RDev (%)	D (%)
People	23	22	18	25	18	18	8	11	18	20	15	18	75	67	73
Trade	8	10	6	8	11	6	3	1	3	-	7	6	18	29	21
Resources	3	1	3	5	1	3	-	-	-	-	1	0	8	4	6
Total response rate	33	33	27	38	31	27	10	13	21	20	24	24	100	100	100

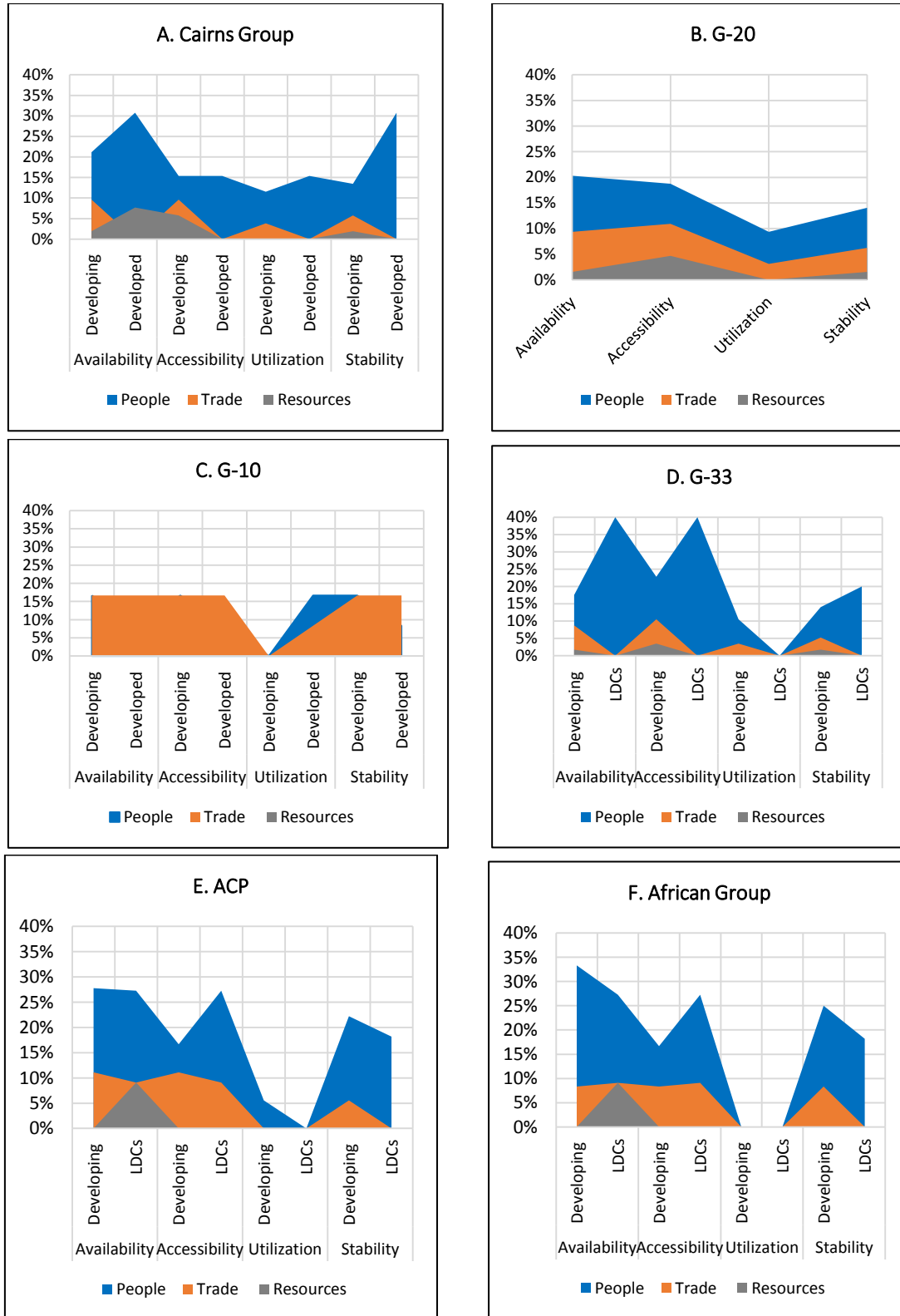
Source: Interview responses. Note: Because of rounding, totals do not necessarily add up to 100 (%).

Table 4.10: Comparison of views of negotiation groups on orientations and dimensions (%)

Groups / Orientations	Cairns			G-20	G-10			G-33			ACP			African		
	Dev (%)	D (%)	Total (%)	Dev (%)	Dev (%)	D (%)	Total (%)	LDC (%)	Dev (%)	Total (%)	LDC (%)	Dev (%)	Total (%)	LDC (%)	Dev (%)	Total (%)
People	61	92	68	62	50	42	42	100	65	68	73	72	73	73	75	74
Trade	29	-	23	30	50	58	58	-	28	26	18	28	24	18	25	22
Resources	10	8	9	8	-	-	-	-	7	6	9	-	3	9	-	4
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Source: Interview responses. Note: Because of rounding, totals do not necessarily add up to 100 (%).

Figure 4.1: Reaction of negotiating groupings: (A) Cairns Group, (B) G-20, (C) G-10, (D) G-33, (E) ACP and (F) African Group



Source: Interview responses

As depicted in Table 4.10, **people orientation** was the main focus of food security for all the groupings except G-10. Evidently, availability is the main dimension for the Cairns, African and ACP groups, but accessibility is the main dimension sought by G-33 and availability and accessibility are the main dimensions for G-20 respondents. The G-10 viewed all four dimensions as equally important. (See Appendix D-1: Tables D-1.1 to 1.6 for more analysis of each group.)

In considering the interest of subgroups, the Cairns, G-20, G-10, G-33, ACP and African groups hold developing countries in their affiliations. As illustrated in Appendix D-1 Tables D-1.1 to 1.6, availability is the most preferred dimension for the developing country members of the Cairns, ACP and African groups. Accessibility is the prime dimension for G-33, and G-20 members support both availability and accessibility in their responses associated with food security. The G-10 developing country members supported availability, accessibility and stability equally. The LDCs within the G-33, ACP and African groups identified availability and accessibility in equal proportions in their responses.

Within the subgroups, only the Cairns and G-10 groups included developed country members. The developed country members of the Cairns Group supported availability and stability equally. Notably, the G-10 developed country members identified the utilisation dimension.

The **trade orientation**, which was largely overshadowed by the people orientation, was recognised mostly by G-10 respondents and a quarter of other respondents.

Availability and accessibility within the trade orientation were observed to be equally important dimensions for the developing country members in the Cairns, ACP and African groups. The LDCs within the ACP and African groups expressed a similar view. Conversely, the focus for G-20 and G-33 developing country respondents was accessibility to trade. Yet another viewpoint was expressed by the G-10 developed and developing country members, who claimed to pursue availability, accessibility and stability equally as food security-related dimensions.

Resource orientation is discussed by the groups irrespective of the low importance attached to it. Cairns followed by G-20 and G-33 discuss this aspect more than the other groupings. Developed country members of Cairns and LDC members of ACP and African consider the availability while developing country members of Cairns, G-20, and G-33 have attached more importance to accessibility.

In conclusion, divergence in views on the orientations and dimensions of food security can be observed among the negotiating groups and development levels within the groupings.

Table 4.11: Comparison of OECD and APEC members' views on orientations and dimensions of food supply (%)

Groups \ Orientations	OECD			APEC		
	Dev (%)	D (%)	Total (%)	Dev (%)	D (%)	Total (%)
People	45	69	63	69	80	73
Trade	55	24	33	31	15	25
Resources	-	7	4	-	5	2
Total	100	100	100	100	100	100

Source: Interview responses

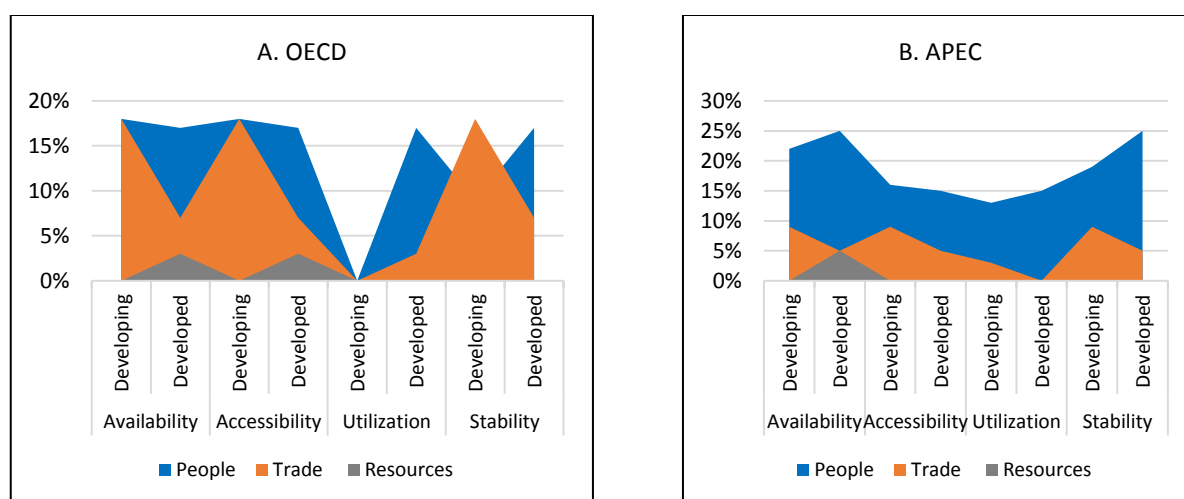


Figure 4.2: Reaction of other groupings: (A) OECD, (B) APEC

The OECD and APEC are two influential groups that include developed and developing countries. Table 4.11 and Figure 4.2 compares the responses of members of the two groups. (See Appendix D-1, Table D-1.7 to D-1.9 for further analysis of each group.)

The main focus of OECD and APEC members, except for the developing group of countries within the OECD, was the people orientation. Both groups supported the availability dimension and the OECD respondents placed equal importance on accessibility. Notably, stability was clearly considered to be important among the APEC responses.

In conclusion, the interests of the OECD and APEC and the proportions assigned to orientations and dimensions mostly resemble those of the other groups, with the notable

exception of high overall ratings (13%) for the utilisation dimension⁵¹ compared to other individual groups.

4.3.1 Summary

The responses of the sample were categorised under three orientations and four dimensions in a 12-cell matrix.

The observed orientations were people, trade and resources. Irrespective of levels and groupings, the majority of views were associated with the basic food security needs of people over those of trade and resources. For the whole sample, food security meant food stocks that assure humanitarian values and concerns for the society.

As for dimensions, the responses aligned well with the FAO dimensions of availability, accessibility, utilisation and stability. This demonstration of mutual understanding leads to the assumption that there is a common acceptance of FAO dimensions among the WTO members, officials and researchers, which the two organisations can develop further in the different food security aspects.

Among the overall dimensions, availability and accessibility were commonly pursued needs. Some importance was attached to stability. Utilisation or the nutrition component of food was the least recognised, and sought more by the developed countries.

The summary of the groups' views and diverse views among the groupings is displayed in Appendix D, Table D-2.1: The groups' views at a glance. Among the observations, responses from least-developed and developing countries focused more on people's survival, via the availability and accessibility dimensions. Further, the trade aspect of the accessibility dimension was recognised mostly by the developing country respondents. The developed group maintained an equal level of importance among the four dimensions in relation to the people orientation. Among them, the G-10 group focused more on the trade aspect.

The reasons for the diversity of views are discussed in detail in the next section.

⁵¹ It is the responses from the OECD developed countries rather than the developing countries that have contributed to the outcome from the OECD. A breakdown of preferences is provided in Appendix D-1: Table D-1.8.

4.4 Analysis of responses on the varied reasons for diverse views

This section address interview Question 1(b) “What are the reasons for diverse views on food security?” The interest here is the differences between the views of researcher/officials and the delegates, and the differences between the views of individual countries. The purpose is to begin to identify the implications for food security negotiations. The views of the 26 developing countries, 5 LDCs, 9 developed countries and 22 researchers/officials were collated and analysed. The analysis is presented in two different ways:

1. Analysis of the most frequently used words

With the use of NVivo, two separate cloud tags showing their most frequently used words are presented in Figures 4.3 (delegates) and 4.4 (researchers/officials).

2. Categorisation of diverse views as 7Cs.

Individual views expressed by the respondents were grouped as “7Cs” in Table 4.12. These seven categories are **concept, contextual constraints, commodity, core objective, commercialisation, challenges** and **classification**. It is argued that elements of these categories are the origins of the respondents’ different views on food security.

First, the overall views of the two samples of delegates and researchers/officials are illustrated in two separate cloud tags based on the frequency of the words used in the interviews. Most of the words used by the two groups (e.g. “country”, “different”, “think”, “people”, “producing”, and “trade”) are similar, but the strength of the usage or the weight attached differs, indicating a difference of views between the two groups.

Compared to the researchers/officials group, delegates attached more prominence to the words “country”, “policy”, “import”, “export” and “issue”. This can be interpreted as putting greater weight on trade policies and related issues. Because import and export polices are related to the implementation aspects of food security, it can be suggested that the delegates attached more importance to those aspects of food security.

Researchers gave more prominence to words such as “different”, “think”, “people”, “level”, “national”, “producing”, “trade” and “household”. Therefore, they can be interpreted as it appears they think more about the people perspective of food security at national and household levels and about ensuring availability and accessibility through trade and production.



Figure 4.3 Word frequency cloud tag of comments by delegates



Figure 4.4: Word frequency cloud tag of comments by researchers and officials

Next, the interview responses were categorised according to seven “C” words (7Cs), as presented in Table 4.12. The table contains a brief description of each C and comments and quotes from the respondents (researchers/officials and delegates). The delegate’s views are further grouped by the development levels of their countries.

Table 4.12: The diverse views on food security, categorised as 7Cs

Development Differences	LDC	Developing	Developed	Researchers/Officials
<p>Concept: Diversity due to the nature of the concept</p>	<ul style="list-style-type: none"> • Multifaceted and diverse concept 	<ul style="list-style-type: none"> • Very broad concept with multifaceted and multidisciplinary approaches; cross-cutting issue • Different aspects, interpretations, discordances and perspectives on “social, political, economic, cultural dimensions make the issue complex” • A “flexible concept” that enables people and countries to define and interpret to suit different situations and contexts • Confusions between food security and self-sufficiency 	<ul style="list-style-type: none"> • Many elements instrumental in diverse opinions, factors combined with cultural, economic, preferences and different challenges • Recognised as “controversial” and “sensitive” 	<ul style="list-style-type: none"> • A complex multidimensional phenomenon holding wide and diverse interpretations, aspects, interest, positions and backgrounds that could even change with time • A “sensitive” topic misunderstood with the term “right to food, self-sufficiency and food safety” • “A loosely fitting, convenient concept that could be used in many different ways” • Some concern at individual, household, country and global levels
<p>Contextual constraints: Diversity based on country situations</p>	<ul style="list-style-type: none"> • Every country has unique consideration depending on individual capabilities, challenges, backgrounds and circumstances • Cannot compare small countries with highly populated, fast-growing countries or with big countries having arable land or farming potential • Some countries can produce, but lack financial resources • Some lack arable land. but have financial resources to procure food from the international market 	<ul style="list-style-type: none"> • Particular cultures and generation gaps in countries • Needs differ at different development stages • Differences in size and population, consumption and production • Different climatic conditions, resource availabilities, productivity and capacities levels • Food security need of small countries that lack resources is different than that of large countries with large populations or countries with resources or the ability to produce a wide variety of crops to feed the people without having to rely on imports 	<ul style="list-style-type: none"> • Geographic elements such as land, environment, climate which define the capacity to produce or not to produce • Challenges and resource endowments • Other policies on agriculture, trade, environment, social and unemployment within the country and perspective of neighbouring country/ies influence food security of a country • Past situation and experiences of a country have led to, e.g., decision on subsidising the farmers or social safety nets 	<ul style="list-style-type: none"> • Countries/people can interpret food security depending on the culture, social background and situation of different time periods, e.g. where food security becomes a national security issue during conflict • Different levels of aggregation at individual, household, country level • Determined by the level of development, poverty, hunger, availability and access to food, trade status whether an NFIDC or a net food exporter • Food security is seen from the country’s own level of development. Therefore, it can be difficult for the developed countries to understand

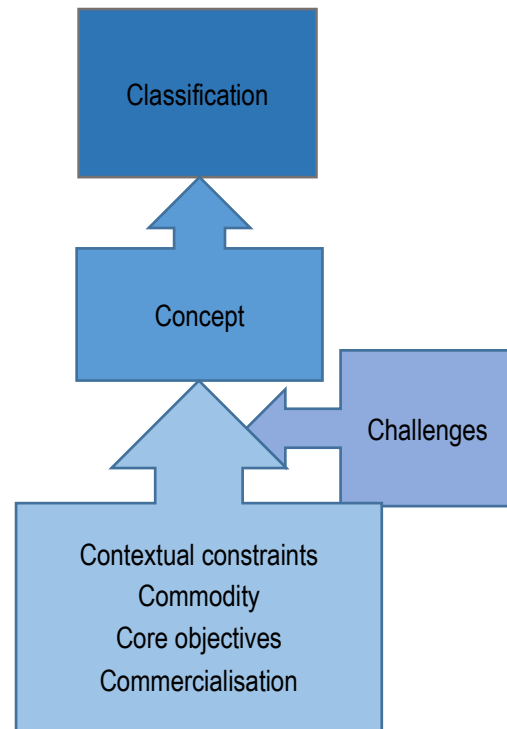
Development Differences	LDC	Developing	Developed	Researchers/Officials
	<ul style="list-style-type: none"> • Some lack resources (land and financial) and rely on donations (food aid) • Some countries can afford to subsidise social safety nets for their poor people to access food • Constraints are limited arable land (NFIDCs), budgets, technology, techniques (use of conventional Vs mechanical farming), landholding issues, large populations to feed, reduction of cultivatable land due to population pressure and high food prices, etc 			the different perspectives of a developing country and vice versa”
Commodity: Different views of individuals and countries on what is meant by food	<ul style="list-style-type: none"> • Basic food requirement for living 	<ul style="list-style-type: none"> • Staple food or variety of food • Quantity or quality of food • Nutritious food • Diverse food needs • High- or low-priced food 	<ul style="list-style-type: none"> • Basic requirement for the poor • Different food preferences • Quality food • Nutritious food 	<ul style="list-style-type: none"> • Basic food requirement • High- and low-priced food
Core objective: Country’s interpretation of food security differs depending on its focus, domestic needs and interests	<ul style="list-style-type: none"> • Fulfilling “basic requirement of food for the survival of people” • Farming and production as source of food and a livelihood • Drive for food self-sufficiency • For some countries, reliance on domestic production and stockpiling 	<ul style="list-style-type: none"> • Addressing hunger and food insecurity is considered a “government’s basic responsibility”, “a legitimate objective of a country” and “a human right” • Perceived as a political issue • What is meant by food security and the level of fulfilment can differ 	<ul style="list-style-type: none"> • Political priorities • Feeding people • Decision on self-sufficiency or self-reliant • More exports to ensure steady supply of trade • Preference and reliance on imports over exports or vice versa linked to different country positions 	<ul style="list-style-type: none"> • Basic needs of people, has social and political implications • Country obligation or sovereign right to produce domestically • Securing food, sustaining the existing production and increasing it with growing population while protecting farmers

Development Differences	LDC	Developing	Developed	Researchers/Officials
	<ul style="list-style-type: none"> Ensuring availability, stable supply, access to food Creation of income to strengthen purchasing power of the people and countries Different objective of food-producing countries and NFI countries Considering objectives of subsistence and manual farmers in LDCs 	<ul style="list-style-type: none"> Viewed as a source of rural development and livelihood rather than trade orientation Achieving aspects related but beyond hunger, e.g. nutrition and trade security Addressing the interests of subsistence farmers Balancing self-sufficiency, domestic production, imports and exports and deciding the mix for a country 	<ul style="list-style-type: none"> More production needed to reduce international price Countries having offensive interest or mix of offensive and defensive or defensive interest in agriculture. 	<ul style="list-style-type: none"> Ensure food supply through self-sufficiency or importation (national vs global) Managing different objectives of cash crop producers targeting the world market and poor subsistence farmers producing for survival Diverse objectives feeding poor consumers or addressing concerns of small holders or subsistence farming community and other consumers
<p>Commercialisation: Trade as a mode of creating availability, accessibility and stability of food supply</p>	<ul style="list-style-type: none"> Trade restrictions viewed especially by LDCs (also NFIDCs) as a constraint to food security due to effect on food prices High food prices in international market 	<ul style="list-style-type: none"> Food security is different for suppliers and consumers Suppliers focus on production and logistics; consumers focus on availability, accessibility, affordability of food Views of importers and exporters, and of net importers and net exporters, differ Competitive advantage of a country, market access and trade liberalisation are considerations mostly of exporters High prices in the international market, trade restrictions and protectionist measures generate different views 	<ul style="list-style-type: none"> Views of importing and exporting countries differ Exporters view trade as an “opportunity to export more to ensure the supply of food as a solution to address food insecurity” and prefer agriculture trade liberalisation Importers view food security as “more of self-sufficiency or being self-reliant” Export restrictions, protectionist measures and high prices cause different views Food security is more important for importers and less for developed country exporters because they can feed their populations 	<ul style="list-style-type: none"> Need to address both supply and demand sides of food at the same time Exporters and importers have different interests and perceptions Exporters prefer trade liberalisation, having export interests Food security is less important for exporters than for importers Exporters oppose import bans whereas importers reject export bans High prices threaten importers but are favoured by producers
<p>Challenges: World challenges associated with or having an impact on food security</p>	<ul style="list-style-type: none"> Increasing populations Poverty Hunger 	<ul style="list-style-type: none"> Population growth, climate change, sustainable development, world crisis affect perception of global food security 	<ul style="list-style-type: none"> Poverty Hunger Long-term global view on food security 	<ul style="list-style-type: none"> “There is enough food in the region but people do not have access due to high prices and strong link to poverty”

Development Differences	LDC	Developing	Developed	Researchers/Officials
	<ul style="list-style-type: none"> • Constraints, e.g. lack of resources 			<ul style="list-style-type: none"> • “Availability issues are due to distribution or low production or famine” • Calorie deficiencies • Low productivity due to lack of water resources, a shared global issue
<p>Classification: International relations, political interference, and defining of food security by countries and organisations affect negotiations</p>	<ul style="list-style-type: none"> • Country positions are based on their own situations and interpretations of food security 	<ul style="list-style-type: none"> • Different organisations have different interpretations and definitions to cover different aspects • Country positions are based on their own situations and interpretations of food security 	<ul style="list-style-type: none"> • “National organisations with national initiatives may have a common understanding on food security needs within a country” • International organisations use definitions to suit their respective contexts rather than definitions that are commonly agreed internationally • Variations due to different instruments attached to different international organisations • Geopolitics play a role as negotiation bodies / institutions are represented by states • Country positions are based on their own situations and interpretations of food security • Global vs domestic food security issues • There is no differentiation between a long-term or an immediate domestic issue; there is need to persist in finding a collective long-term solution 	<ul style="list-style-type: none"> • Domestic versus global food security is a critical argument • Diverse national views and positions are negotiated based on context and policies that could conflict with those of other countries • Food is related to a country’s sovereignty; too much dependence on the supplier can be political at international level • Food security is more of an international-level topic with strategic implications

Source: Interview responses

Figure 4.5 summarises the relationships between the 7Cs. The analysis attempts to explain the position of economies in relation to “classification”; that is, the country positions on food security in negotiations. The idea is that differences in country characteristics lead to the adoption of different concepts of food security. That connection is mediated, however, by the understanding and perception of external challenges. The adopted concept of food security is then translated into negotiating positions.



Source: The concept was developed by the researcher from the interview responses.

Figure 4.5 Analysis of the relationship of the 7Cs and the impact on negotiations

There are four country components: contextual constraints, commodities, core objectives and commercialisation.

Contextual constraints lead to diverse views owing to unique situations and constraints. Lack of resources (natural, financial), country sizes, development levels, climatic challenges and high population are a few among many conditions revealed that pose major threats to food security.

The weight given to particular **commodities** differs and is shaped by particular country situations. For the LDCs, the context of food security is that it is the basic staple requirement

for life. Even though some developing and developed countries are concerned with the nutrition content, quality and quantity of food, LDCs are focused on the need to satisfy hunger. The term “staple” is noted as having diverse references, as many types of food are considered to be “staple” across various regions and countries; for example, rice, wheat, maize, millet, roots (cassava).

Core objectives differ among countries in their attempt to address food security issues, especially feeding people within specific country situations. One of the key objectives is the mode of feeding people. Governments may decide to rely on self-sufficiency or international trade, leading to another reason for diversity of core objectives.

Further, developing country respondents viewed food security as a fundamental right, where the responsibility of providing food rests with the governments. The majority of least-developed and developing country responses focus on policies that ensure availability and accessibility of food and the ability to manage one’s own livelihood, especially the interests of subsistence farmers. However, some respondents viewed food security as a “sensitive”, “controversial”, “flexible” and “loose fitting” concept, allowing the justification and implementation of different policy instruments that can cause challenges to neighbouring countries and trading partners.

Commercialisation is one of the viable solutions for food security, however, as was revealed, interpretations differ according to country situations and development levels. Developed country respondents and researchers were of the view that food security, combined with hunger and poverty, is more relevant to the importing, least-developed and developing countries. According to some respondents from developed countries, a desirable solution to food security is to increase availability and accessibility through greater production and exports, with a consequent price decline. However, this solution challenges the views of some least-developed and developing countries as it may not address their livelihood and rural development objectives. Further, all parties agreed that importer and exporter interests differ and result in different views. The countries currently facing or having experienced export restrictions in 2007–2009, volatile food prices in the international market and protectionist measures reflected these conditions in their interpretations.

Differences in country characteristics lead to different views/ **concepts** on the nature of food security, which are linked to different classifications of the issue, that is, negotiating positions,

but with the mediation of external **challenges**. Population growth, depletion of resources, climate change, poverty and hunger levels are examples of the external challenges.

There are significant differences in countries' **classifications** of food security, and the elements therefore of negotiating positions or issues for treatment in negotiations. For example, the respondents from importing countries and NFIDCs shared the view that high commodity prices and export restrictions are constraints on food security. Some importers support domestic production and self-sufficiency policies, even it is a less competitive option. By supporting domestic production these countries attempt to address other country objectives, such as livelihood needs, and encourage consumption of traditional staple foods that are of little interest to major producers. In contrast, developed countries, also producers of staple foods and having the resources to feed their own population, encourage more trade liberalisation and self-reliance policies as a solution to food security. The scope of the negotiations remains an issue. Respondents differentiated between domestic and global food security challenges. Some considered domestic issues as internal or urgent needs to be addressed immediately, compared to global issues, which were seen as being more long-term oriented, with a need to find collective and progressive solutions. Because domestic and global aspects have not been defined clearly, respondents had different views on differentiation, coverage and overlapping positions.

One researcher explained the diversity behind this multifaceted concept: “food security is seen from its own level of development and situations, therefore it can be difficult for the developed to understand different perspectives of a developing country and vice versa”.

4.5 Conclusion

The two questions, “What is food security?” and “What are the different reasons for diverse views?” were analysed from different angles to identify the diverse and common views of the delegates, researchers and officials. Delegates' responses were categorised further according to the development levels, vulnerability to food security, negotiating groups and other groupings.

The majority of respondents agreed that food security is about providing basic food needs for the poor. Some perceived it as a “humanitarian cause”. It was also viewed as a political issue both domestically and internationally. Some also identified the importance of trade in addressing food security issues.

As explained in the 7Cs in Table 4.12, there are many reasons to hold diverse views about the food security concept, which is known to be broad, diverse, multifaceted and containing multidisciplinary aspects. There is a relationship between these views and their representation in the agendas sought by various groups in negotiations in international forums.

The outcomes in sections 4.3 and 4.4 identified some specific issues in the notion of food security which are important to the scope, design and progress of negotiations. These are discussed further in Chapter 5:

- Does any relationship exist between the dimensions related to the people orientation to food security and countries' development levels?

Within the orientation on which respondents placed most important, the people orientation, least-developed and developing countries mostly prefer availability and accessibility, followed by stability. In addition, developed country respondents acknowledged the nutrition aspect. Does this mean that the food security dimensions of the people orientation have a progressive relationship with the countries' development levels?

- How important is trade in addressing food security issues?

The developing countries rated the trade aspect as more important than the other countries did. Does this mean that the trade aspect of food security is more important for them? On the other hand, some respondents from developed countries and researchers viewed enhanced production, exports and market access as a solution for food security. Is trade liberalisation the most effective solution for world's food security needs? Some domestic situations are consequences of global issues. In this context, can the domestic and global food security challenges be clearly defined?

- What is the impact of diverse views in negotiations?

Diverse views were observed among the different groups. In this context, what impact can the individual country positions and negotiation groups have on food security negotiations?

Overall view of the research issue

Chapter 1: Introduction; Chapter 2: Literature review; Chapter 3: Survey results

Role of the MTS of the WTO in addressing food security challenges; views on food security and trade restrictions; food security and WTO negotiation; food security and political dimension; food security and future prospects

Concept of food security

Chapter 4
What is food security?

Chapter 5
Food security, trade interests and levels of development

Research question

How can the global food security challenges be addressed in an MTS?

Response

Chapter 8
The dynamics hindering agriculture negotiations

Adequacy of current rules

Chapter 6
The WTO mandate

Chapter 7
Trade restrictions and food security

Conclusion

Chapter 9
“How can the global food security challenges be addressed in a MTS?”

Chapter 5 Food security, trade interests and levels of development

5.1 Introduction

This chapter focuses on three key issues derived from delegates' responses to the initial interview questions discussed in Chapter 4. Those interview questions were (1a) "What is food security?" and (1b) "What are the reasons for diverse views on food security?" (See Appendix B-2.) The three key issues are:

1. People orientation and development levels – Is there any relationship between people orientation and development levels, and the four dimensions of food security within the people orientation and development levels of countries?
2. Importance of trade – Is the trade aspect of food security more important for developing country members than for others?
3. Impact on negotiations – What impacts do the diverse interests of countries and negotiating groups have on food security–related trade negotiations?

The theme is the relationship between levels of development and positions taken on various dimensions of the food security agenda. The three issues are analysed separately in sections 5.3–5.5. The first step, however, is to review the methodology applied, which is the topic of section 5.2.

5.2 Methodology

This chapter uses different techniques to analyse the delegates' views to determine whether there is a significant relationship between the country's development level and its position taken on an aspect of the food security agenda.

The analyses in the previous chapter used frequency percentages based on the total number of responses of the respective groups: a total of 145 responses from respondents from 94 developing, 18 least-developed and 33 developed countries. In this chapter, however, the responses on the three key issues stated above are further analysed by calculating frequency percentages and testing the hypotheses using Fisher's exact test. For this purpose, the frequency percentages were calculated based on the number of country responses; that is, as a percentage of 41 countries, represented by 26 developing, 5 least-developed and 10 developed countries. Because the views tested were diverse, small in number and fragmented across the development levels, Fisher's exact test, which accommodates such small unit values, was used

in preference to the chi-squared test, which is suitable when all expected frequencies are 5 or more.

The hypotheses were developed and Stata was used to test for any statistically significant relationship between the variables in question. In testing the hypotheses, suitable null (H_0) and alternative (H_1) hypotheses were postulated and p-values⁵² calculated using a Fisher's exact⁵³ test (Fisher 1935; Mehta and Patel 1986).

The level of significance (α) of the test or the threshold for rejecting H_0 was set at 0.05 (5%) level. Therefore, if $p \leq \alpha$ (0.05), the H_0 (null hypothesis) is rejected and H_1 (alternative hypothesis) is favoured. If $p > \alpha$ (0.05), the H_0 (null hypothesis) is not rejected and H_1 (alternative hypothesis) cannot be established.

In this chapter, H_0 is defined as “no statistically significant relationship exists between the variables in question”. In addition, Venn diagrams are used to cluster any overlapping relationships in responding to the third issue, trade negotiation impacts.

The responses were then analysed according to other data relating to the respondents, in particular orientations, dimensions, development levels, vulnerability, income and views on trade.

Three assumptions are made when testing hypotheses and interpreting results:

- That the views of the delegates who negotiate for the countries, expressed when answering the question “What is food security?”, reflect the dimensions or issues that are of most concern to their countries/them, because the question was spontaneous and they had no opportunity to prepare answers.
- That a high percentage of responses on a particular dimension/issue indicates greater concern, and vice versa.

⁵²P-value: “probability of obtaining a test statistic as extreme or more extreme as the one observed in a sample, assuming the null hypothesis is true” (StataCorp 2015, p. 128.).

⁵³Fisher's exact test: “is an exact small-sample test of independence between rows and columns in a 2x2 contingency table. Conditional on the marginal totals, the test statistic has a hypergeometric distribution under the null hypothesis. Power two proportions and tabulate two way”. (StataCorp 2015, p. 86).

- That the views of the stratified sample representing different development and income levels can be taken to indicate the population view of the members of the WTO.

For the purpose of analysis in this investigation, people and trade orientations are defined as follows:

- **People orientation:** All country responses that identified one or more of the food security dimensions under people orientation are considered people-oriented.
- **Trade orientation:** All country responses that identified one or more of the food security dimensions (excluding utilisation) under trade orientation are considered trade-oriented.

The country responses associated with the same four dimensions defined in the previous chapter (*availability, accessibility, stability and utilisation*) are considered separately; however, except where otherwise indicated, only the first three dimensions are considered in this chapter. In discussion of the trade orientation, utilisation was excluded for two reasons: because of its low response rate (see Tables 4.5 and 4.7 in section 4.3: Defining the food security concept of the previous chapter) and because it could be argued that it is of more relevance to the WHO purview than in a trade-negotiating body such as the WTO.

The sample was divided into two categories – development levels and income levels.

Development levels: The 41 delegates from 26 developing, 5 least-developed and 10 developed countries are grouped under their country development levels: least-developed (LDC), developing (Dev) and developed (D).

Income levels: To consider both the development and income aspects of the countries represented, the responses of the 41 delegates are further classified into five income levels⁵⁴ (World Bank 2017): highest (all developed countries), high-income developing (>\$12,746), upper middle-income developing (\$4,125–\$12,746), lower middle-income developing (\$1,045–\$4,125) and low-income (all LDC) economies. Of the developing countries, there were 5 high-income, 7 upper middle-income and 14 lower middle-income countries – 26 in all.

⁵⁴ The World Bank income classifications as at 1 July 2014 are based on 2013 GNI per capita calculations using the World Bank Atlas method (World Bank 2017).

The average GDP per capita income for the five-year period 2010–2014 for the 41 countries was considered in categorising these delegates.

In this chapter, income levels were considered only under trade orientation (section 5.4), as the focus is on WTO and trade negotiations.

5.3 People orientation and development levels

The main issue under consideration in this section is whether the four dimensions of people orientation are of different degrees of concern among respondents from countries at different development levels. The counterview (and the null hypothesis) is that all development levels have similar interests.

The present world hunger situation lays the foundation for this discussion. As stated in the FAO, IFAD & WFP report, *The state of food insecurity in the world – 2015*, 795 million people in the world, or more than one in nine people, are undernourished or chronically hungry or do not have enough food to lead a healthy and active life. Of these people, 779.9 million are from least-developed and developing countries. As a percentage of their respective populations, this represents 26.7% of least-developed and 12.9% of developing countries. A further three-quarters of them live in rural areas and depend overwhelmingly on agriculture for their food and livelihood (FAO 2009). Serious levels of hunger were reported among these people during 2014–2016 in Southern Asia (281 million people) and in Sub-Saharan Africa (220 million), which accounts for 29.4% and 32.2% of the population in these regions (FAO, IFAD & WFP 2015 and the International Food Policy Research Institute (IFPRI) Global Hunger Index 2015).

As a whole, these 779.9 million constitute nearly two-thirds of the 1.2 billion poor people unable to meet the poverty threshold of US \$1.25 a day⁵⁵ (World Bank 2015). Therefore, according to the FAO, these hungry people in the developing world are not only poor but also undernourished (FAO, IFAD & WFP 2015). Although that report records developed country hunger rates at less than 5%, it also reports malnutrition concerns associated with becoming overweight and obesity rates that increase the risks of non-communicable diseases.

⁵⁵ US\$1.25 a day was identified in 2008 by the World Bank as the global benchmark indicator of extreme poverty. In October 2015, the World Bank changed that figure to \$1.90 a day. However, US\$1.25 has been used in the FAO publication referred to in this section.

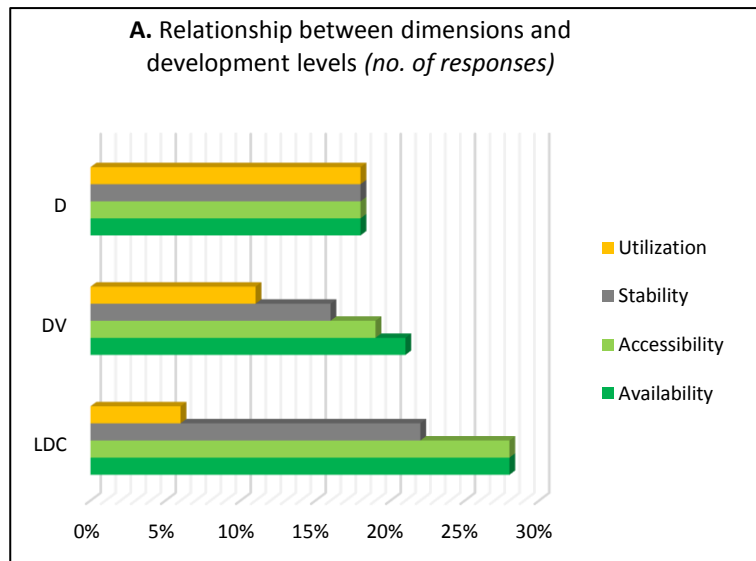
These facts and the outcome of the Chapter 4 imply that hunger and undernourishment is a major problem among the poor that could result when food is lacking in any of the four dimensions (availability, accessibility, stability and utilisation). Therefore, it was considered pertinent to compare the responses of least developing, developing and developed countries within the sample for any significant differences in views.

The remainder of this section examines whether any relationship exists between development levels and dimensions associated with people orientation.

First, the responses in the sample are analysed using charts and line graphs based on frequency percentages. It is assumed that high percentages indicate greater concern on a particular dimension, and vice versa.

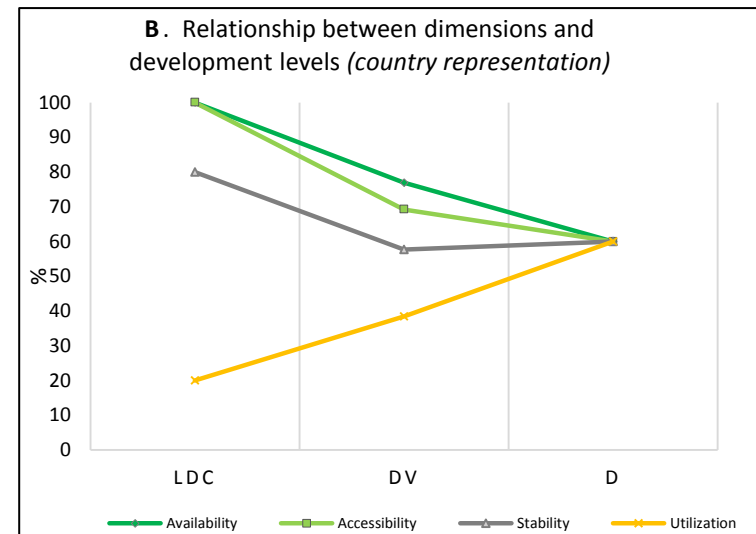
Secondly, hypotheses are tested and p-values ascertained to determine if any statistically significant relationships exist between people orientation and development levels, and any of the four dimensions and people orientation.

The clustered bar chart (Figure 5.1A) based on the number of responses (145), and the line graph (Figure 5.1B) based on the country representation (41), present the responses received from least-developed, developing and developed country respondents for people orientation in connection with the availability, accessibility, stability and utilisation dimensions.



C.

	LDC	Dev	D
Availability	28%	21%	18%
Accessibility	28%	19%	18%
Stability	22%	16%	18%
Utilisation	6%	11%	18%



D.

	LDC	Dev	D
Availability	100%	77%	60%
Accessibility	100%	69%	60%
Stability	80%	58%	60%
Utilisation	20%	39%	60%

Source: Interview responses

Figure 5.1: Dimensions and development levels: (A) bar chart, (B) line chart, (C) table for the bar chart, and (D) table for the line chart

The bar chart in Figure 5.1A is derived from the data contained in Table 4.7 in section 4.3: Defining the food security concept, and calculated from the total number of responses. As noted, developed country respondents placed equal importance (18%) on all four dimensions. In contrast, the responses from the least-developed and developing countries were staggered. For the developing countries, the availability, accessibility, stability and utilisation dimensions account for 21%, 19%, 16% and 11% of responses respectively, whereas LDC responses acknowledged availability and accessibility equally (28%), followed by stability (22%) and utilisation (6%).

To examine further if any possible order or relationship exists, frequency percentages were calculated based on the country responses as presented in the table and line chart in Figure 5.1D & 5.1B. The outcome of the frequency percentages in the table (Figure 5.1D) is similar to the results presented in the table for the bar chart in Figure 5.1A. The line chart suggests a possible connection between the percentages allocated to the food security dimensions and the different development levels.

In the line chart for Figure 5.1B, the availability and accessibility lines point downward from left to right, depicting an inverse relationship between the dimensions and development levels. As seen, the availability and accessibility of food is more important to the least-developed than to the developing countries, followed by developed countries. Between the latter two, availability is observed as more important to the developing countries. The stability line is curved, with a slight dip in the middle capturing developing country responses. However, as shown in the table, the response percentages of developing and developed countries are close. The utilisation line slopes upward from left to right, depicting a direct relationship between the dimension and the development levels. As observed, the LDC respondents placed the least importance on utilisation, followed by respondents from the developing countries, whereas the respondents from developed countries placed higher importance on it.

The next step was to determine if there are any statistically significant relationships between the weight on the people orientation in responses and development levels, and between the weight on the four dimensions of food security and development levels. The hypotheses were tested and p-values were ascertained. The results are depicted in Table 5.1 and 5.2.

Table 5.1 contains the results of frequency percentages and p-values for the hypothesis tested to examine if the views (country responses 41) reveal any statistically significant relationships exist between the variables people orientation versus other orientations (trade and resources)

and development levels (least-developed, developing and developed). Column 2 contains p-values for each development group separately and as an overall value.

An overall p-value was ascertained for the following hypothesis, tested for the overall views of the development levels and the people orientation versus other orientations.

H₀: There is no statistically significant relationship between people orientation versus other orientations and development levels.

H₁: There is a statistically significant relationship between people orientation versus other orientations and development levels.

The separate p-values were derived from the hypotheses tested for people orientation versus the other two orientations (trade and resource orientations), and the views of each development level versus those of the other two development levels. (The individual hypotheses are listed in Appendix E-1.1)

Table 5.1: Frequency percentages and p-values for people orientation and the corresponding development levels (%)

Development Levels	People orientation	
	(1)	(2)
	% of country responses	Fisher's exact p-values
LDC (<i>n</i> =5)	100	1.000
Dev (<i>n</i> =26)	96	1.000
D (<i>n</i> =10)	90	0.433
Total % responded / overall p-value	95	0.604

Source: Interview responses

As depicted in Table 5.1, among the three development levels, respondents from LDCs (100%) gave greater acknowledgment to the importance of people orientation, followed by those from developing countries (96%). However, an overall p-value of 0.604 was obtained for people orientation and development levels considered as a whole. As this is $p > 0.05$, H₀ was not rejected and no statistically significant relationship was found between the development levels of the respondents and their views on the people orientation.

Further hypothesis testing was conducted to clarify if there is a relationship between the individual development levels and people orientation. In this exercise, the responses on people orientation from each development level were compared with the other two (see Appendix E-1.1). The results in column 2 indicate $p > 0.05$ for all three hypotheses, therefore clearly there is no statistically significant relationship between respondents' development levels and their views on the people orientation.

Table 5.2 shows the results of the hypotheses that were tested to examine if any statistically significant relationship exists among responses on the four dimensions under the people orientation and development levels. The hypotheses tested to obtain overall and individual p-values are listed in Appendix E1.2 and E-1.3.

Appendix E-1.2 lists the hypotheses tested to ascertain the overall p-values for each dimension of people orientation versus other three and overall development levels.

Appendix E-1.3 lists the hypotheses developed for testing each dimension of people orientation versus the other three, and the views of the selected development level versus other two development levels.

Table 5.2: P-values for hypothesis testing on availability, accessibility, stability and the utilisation dimension and development levels

Development Levels	Dimensions			
	Availability	Accessibility	Stability	Utilisation
	P-values: Fisher's exact			
LDC	0.310	0.298	0.632	0.382
Dev	1.000	1.000	0.742	0.745
D	0.222	0.441	1.000	0.270
Overall p-values	0.259	0.407	0.802	0.326

Source: Interview responses

As depicted in Table 5.2, the hypotheses were tested to investigate if any statistically significant relationship exists between the attention to individual dimensions and each development level of respondents. In this exercise, the responses for each dimension on people orientation of each development level were compared against the other two (see hypotheses and p-values in Appendix E-1.3). All results indicate $p > 0.05$, therefore there is no statistically significant relationship between responses related to availability, accessibility, utilisation and

stability dimensions and individual development levels. The overall p-values tested for different dimensions and overall development levels also do not record any significance between the variables.

5.3.1 Summary: people orientation

This section examined whether there is any relationship between people orientation /its four dimensions and development levels.

The people orientation of food security is recognised as an important aspect by a majority of the members. However, a statistically significant relationship is not established between the reference to the people orientation and development levels. Although frequency percentages indicate a pattern or a relationship in importance given to the four dimensions by the least-developed, developing, and developed countries, which could be useful in understanding the needs of the countries at negotiations, the results of the hypothesis testing confirms that such a relationship does not exist. In addition, there is no statistically significant relationship between the availability, accessibility, stability and utilisation dimensions and the categorisation of respondents by development levels.

5.4 Is the trade aspect of food security more important for developing country members than for others?

Developing countries' share of world trade has increased in recent years, even with trade barriers. Notably, there has been rapid expansion of developing country trade in the past three decades, with an annual growth rate of 8.2% for the period 1980–2010 compared with 6.6% for the developed countries. China's exceptional performance throughout the three decades and India's performance in the past two decades are further noted (Michalopoulos 2014). More specifically, the developing countries' share in world exports and imports rose from 34% to 47% and from 29% to 42% respectively for the years 1980 and 2011 (*World trade report* 2013).

The findings presented in the previous chapter reveal that, although the major emphasis reflected in the responses is a people orientation to food security, respondents identified the trade aspects of food security as the second most significant orientation. As depicted in Chapter 4, Table 4.5, 24% of delegates' responses were aligned with the overall trade orientation. When disaggregated, 28% of developing country members supported this view (Table 4.7) compared to those from least-developed (12%) and developed countries (21%). Similar patterns were observed among the negotiating groups, NFIDCs and the rest and other

groups, as illustrated in Tables 4.9 to 4.11, Figures 4.1 and 4.2, Appendix D-1, and as discussed in section 4.3: Defining the food security concept.

This section now examines whether the trade aspect of food security is more important for the developing country members and, if so, from what perspectives. The analysis is based on the responses to interview Question 1(a) “What is food security?” (See Appendix B-2.)

The responses from the sample are categorised by development and income levels. Development levels are based on the World Bank classifications (see section 5.2). Income is relevant because of its direct relationship with the accessibility dimension of trade, which deals with the purchasing power of countries and people and was the most commonly reported of the four dimensions of trade orientation. This view is complemented by Amartya Sen’s concept of entitlement: he affirmed that accessibility in terms of purchasing food power encompasses the availability of food (Sen 1981-b, 1985).

Within this conceptual framework, four sets of relationships are now considered:

1. The overall relationship between trade orientation and development levels
2. The relationship between the three dimensions of trade orientation and development levels
3. The overall relationship between trade orientation and income levels
4. The relationship between the three dimensions of trade orientation and income levels

The analysis consists of frequency percentages and hypothesis testing. Frequency percentages were calculated from the country responses across development and income levels. In testing hypotheses, p-values were ascertained to determine whether any statistically significant relationship exists between the variables. The results of the analysis of these four relationships are now presented and these results are summarised in section 5.4.5.

5.4.1 The overall relationship between trade orientation and development levels

Table 5.3 presents the frequency percentages of countries across development levels that responded with reference to the importance of trade orientation.⁵⁶ Hypotheses were tested (See

⁵⁶ The delegates’ responses for the three dimensions (availability, accessibility and stability) in trade orientation were considered. The utilisation aspect was excluded for the reasons given in section 5.2.

Appendix E-2.1) to examine whether or not any statistically significant relationships exist between the responses on the trade orientation versus other orientations (people and resources) and development levels (least-developed, developing and developed).

Column 2 in Table 5.3 contains p-values for each development group separately and as an overall value. The overall p-value interprets if any statistically significant relationship exists between trade orientation versus other two orientations and development levels as a whole. The separate p-values indicate if there is any relationship between trade orientation and each development level versus the other two development levels (see Appendix E-2.2).

Table 5.3: Frequency percentages and p-values for trade orientation and its corresponding development levels (%)

Development levels	Trade orientation	
	(1)	(2)
	% of country responses	Fisher's exact p-value
LDC (<i>n</i> =5)	20	1.000
Dev (<i>n</i> =26)	38	0.305
D (<i>n</i> =10)	20	0.458
Total % responded / Overall p-value	32	0.536

Source: Interview responses

Comparison of the frequency percentages shows that developing country respondents acknowledged the trade aspect over the others. However, in hypothesis testing, p-values derived are $p > 0.05$ overall and for each development level. Because this suggests that there is no statistically significant relationship between trade orientation and development levels, H_0 is not rejected.

5.4.2 Relationship between the three dimensions of trade orientation and development levels

Table 5.4 presents frequency percentage for countries that responded to the availability, accessibility and stability dimensions of trade orientation as important, across the development levels. Further hypothesis testing (see Appendix E-2.3 and E-2.4) was conducted and the associated p-values obtained are listed in columns 2, 4 and 6.

The overall p-values in columns 2, 4 and 6 were derived from the hypotheses tested for each dimension versus other dimensions in connection with the development levels as a whole. The separate p-values indicate each development level versus other two development levels in connection with a particular dimension (availability or accessibility or stability).

Table 5.4: Frequency percentages and p-values for availability, accessibility and stability and its corresponding development levels (%)

Development levels	Dimensions					
	Availability		Accessibility		Stability	
	(1)	(2)	(3)	(4)	(5)	(6)
	% of country responses	Fisher's exact p-value	% of country responses	Fisher's exact p-value	% of country responses	Fisher's exact p-value
LDC (<i>n</i> =5)	20	1.000	20	1.000	0	0.567
Dev (<i>n</i> =26)	35	0.480	38	0.305	19	1.000
D (<i>n</i> =10)	20	0.694	20	0.458	20	1.000
Total % responded / Overall p-value	29	0.781	32	0.536	17	0.704

Source: Interview responses

It can be seen from Table 5.4 that, among the three development levels, developing country frequency percentages are higher than those for least-developed and developed countries for availability and accessibility, and close to the developed countries' percentage for stability.

A value of $p > 0.05$ was recorded for all three relationships (development levels and availability/accessibility/stability) examined in the hypotheses, failing to establish any statistically significant relationship between the development levels and the three dimensions at either an overall or individual level. Therefore, H_0 was not rejected.

The outcome of the previous two sections affirms that there was no statistically significant relationship between trade orientation and development levels, but developing country interests were observed in their respective frequency percentages for trade orientation. There is value in this case, however, in considering variations at a lower level of aggregation. This is because there is considerable variation in incomes within some groups. Next, the income levels of the respondents' countries were analysed further to understand if any particular income level is more interested in trade than the others.

5.4.3 Overall relationship between trade orientation and income levels

Table 5.5 presents frequency percentages of countries that responded to trade orientation across income levels. As well, column 2 depicts associated p-values of the hypothesis (see Appendixes E-2.5 and E-2.6) to determine if any statistically significant relationship exists between trade orientation and income levels, overall or separately. The overall p-values in column 2 are derived from the hypotheses tested for trade orientation versus the other two orientations in connection with the overall income categories of the countries represented (Appendix E-2.5). The separate p-values indicate each income level versus other levels in connection with trade orientation (Appendix E-2.6).

Table 5.5: Frequency percentages and p-values for trade orientation and its corresponding income levels

Income levels	Trade orientation	
	(1)	(2)
	% of country responses (41)	Fisher's exact p-values
High-income developing ($n=5$)	100%	0.002**
Upper middle-income developing($n=7$)	14%	0.399
lower middle-income developing($n=14$)	29%	1.000
LDC - Lowest income group ($n=5$)	20%	1.000
Developed - Highest income group ($n=10$)	20%	0.458
Total % responded / Overall p-value	32%	0.015*

Source: Interview responses. ** indicates significance at the 1% level. * indicates significance at the 5% level.

The data in Table 5.5 depict that high-income developing country respondents identified trade orientation in their responses significantly more than the other groups. The lower middle-income group attached the next most importance within the rest of the group.

Hypothesis testing recorded a p-value of 0.015 in the overall results for the relationship between trade orientation and overall income levels. With $p \leq 0.05$, H_0 is rejected and H_1 is accepted, as the results show a statistically significant relationship between trade orientation and income levels as a whole.

Among the separate p-values in column 2, a p-value of 0.002 was recorded for the relationship between trade orientation and the high-income developing group. Therefore, H_0 is rejected and H_1 is favoured, confirming a statistically significant relationship between references to the trade

orientation and membership of the high-income developing group. Because relationships with other income levels recorded $p > 0.05$ in column 2, H_0 is not rejected, as these data failed to establish any statistically significant relationships.

5.4.4 Relationship between the three dimensions of trade orientation and income levels

Having identified a relationship between trade orientation and the high-income developing group, further analysis was conducted to examine if this relationship is consistent with all three dimensions.

Table 5.6 presents frequency percentage of countries that responded to the availability, accessibility and stability dimensions of trade orientation across the income levels. Hypotheses were tested (see Appendix E-2.7 and E-2.8) and p-values ascertained to determine if any statistically significant relationship exists overall or separately. As depicted in columns 2, 4 and 6, the overall p-values were derived from the hypotheses tested for each dimension versus the others in connection with overall income levels (Appendix E-2.7). The separate p-values indicate each income level versus other levels in connection with a particular dimension (availability or accessibility or stability) (Appendix E-2.8).

Table 5.6: Frequency percentages and p-values for the three dimensions (availability, accessibility and stability) of trade orientation and their corresponding income levels

Income levels	Dimensions					
	Availability		Accessibility		Stability	
	(1)	(2)	(3)	(4)	(5)	(6)
	% of country responses	Fisher's exact p-value	% of country responses	Fisher's exact p-value	% of country responses	Fisher's exact p-value
High-income developing (n=5)	100%	0.001**	100%	0.002**	60%	0.028*
Upper middle-income developing (n=7)	14%	0.651	14%	0.399	0%	0.321
lower middle-income developing (n=14)	21%	0.494	29%	1.000	14%	1.000
LDC - lowest income group (n=5)	20%	1.000	20%	1.000	0%	0.567
Developed - highest income group (n=10)	20%	0.694	20%	0.458	20%	1.000
Total % responded / Overall p-value	29%	0.010**	32%	0.015*	17%	0.088

Source: Interview responses. ** indicates significance at the 1% levels. * indicates significance at the 5% levels.

The frequency percentages show that high-income developing country respondents identified availability, accessibility and stability as issues in connection with trade orientation more than the other income categories did.

In the overall results for the hypothesis testing, $p \leq 0.05$ was recorded. Hence, H_0 is rejected and H_1 is accepted, as there is a statistically significant relationship between the availability and accessibility dimensions and the overall income levels of the delegates' countries. (Although the p-value ascertained for stability was $p > 0.05$, it is a relatively low value.)

As depicted in columns 2, 4 and 6, p-values of 0.001, 0.002 and 0.028 were observed for high-income developing countries and each of the three dimensions. Since they are $p \leq 0.05$, H_0 is rejected and H_1 is accepted, confirming a statistically significant relationship between the three dimensions (availability, accessibility and stability) of trade orientation and the high-income developing group. Even among those, a stronger relationship is noted between the high-income developing category and the availability (0.001) and accessibility (0.002) variables. Because $p > 0.05$ was reported for other relationships listed in columns 2, 4 and 6, H_0 is not rejected for these hypotheses as these variables failed to establish any statistically significant relationships.

5.4.5 Summary: trade orientation

This section explored whether the trade aspect of food security is more important for developing country members than for others.

Frequency percentages indicate that developing countries acknowledged trade aspects in their responses more than the least-developed and developed countries did. However, a statistically significant relationship was not established between reference to the trade orientation and respondents' country development levels. When disaggregated further, across the income levels, a statistically significant relationship was noted between the adoption of a trade orientation and income levels, and the availability and accessibility dimensions and income levels. Further analysis confirmed that high-income developing countries that have a per capita income over \$12,746 are outliers and main drivers within the developing group. A hundred per cent of the respondents from this group of countries reflected trade aspects in their responses. They are therefore seen as accountable for such a significant relationship.⁵⁷

5.5 What impacts do the diverse interests of countries and negotiating groups have on food security–related trade negotiations?

Views of the delegates across development and income levels under people and trade orientations were discussed in Chapter 4 and in Chapter 5, sections 5.3 and 5.4. Both people and trade orientations are seen as important for the whole membership because a statistically significant relationship was not established between these orientations and the respondents' country development levels. However, when the delegates were segregated further, it was found that high-income members of the developing economy group were more likely to place weight on the trade orientation. This puts those economies at odds with others in the group. In order to anticipate the consequences for negotiations related to food security, the next step is to explore the ways in which WTO members are organised into groups for the purpose of managing the negotiations and ways in which these groups are managed and interact.

⁵⁷ The responses to the interview Question 1(a) "What is food security?" were analysed to reach these outcomes. Delegates were not specifically asked for the trade impact. This could be the reason for the high non-response rates. As Question 1(a) was an impromptu question [that arose in the interviews] it was assumed that the most important issues were reflected in their responses.

Groups at the WTO are formed among members with common characteristics (or regional objectives) on an ad-hoc basis. These can be “bloc-type” (ACP and African) groups that cover different issue areas (logrolling) or issue-specific (Cairns), to pursue offensive or defensive agendas (Wolfe 2006; Narlikar & Tussie 2004). These groups could be homogenous or heterogeneous. They register their concerns, defend joint positions or exert influence using political will, solidarity and collective market power (Wolfe 2006) to “allow greater negotiating weight to the weak”. This tactic has been used by least-developed and developing countries faced with constraints (e.g. market share, competitive advantage, colonial legacies, security threats) (Narlikar 2003). Groups were also organised to counterweight the Quad (EU, USA, Japan and Canada) and to bargain and to register concerns in negotiating agendas (Draho 2003). According to Narlikar and Tussie, although past coalitions were either issue-based or block types, the present trend is to address both types of issues within the coalitions (G-20 is an example).

Apart from Cairns, other coalitions were formed during the WTO Cancun meeting and are still functional (Draho 2003; Narlikar & Tussie 2004). Examples are the following.

- The *Cairns* Group was formed with both developing and developed agriculture exporting countries (collectively, these members export more than the US), during the Uruguay Round negotiations with the aim of liberalising trade. Australia’s leadership in maintaining unity among members and the group’s technical and analytical capabilities is reflected in group proposals rather than rhetorical demands, and is a noted success of this group (Narlikar & Tussie 2004; Tyres 1993 & Draho 2003; Costantini, et al. 2007).
- The *G-20*, comprising all developing country members and including the largest and smallest economies, was formed under the leadership of Brazil and India, with China on board. This group was an immediate response during the Cancun WTO meeting in 2003 to the unexpected EU and USA joint negotiating text on agriculture. The G-20 countries contain two-thirds of world population and 69% of world farmers, and have a collective weight economically and politically. The G-20 coalition is known as a proactive group rather than one with a blocking agenda. It is an offensive group forcing reduction in domestic support, including green box support provided by the developed countries (Narlikar & Tussie 2004; Costantini, et al. 2007; Clapp 2006).
- The *G-33*, consisting of all developing NFI country members, was formed under the leadership of Indonesia and the Philippines, along with another 16 countries and have

expanded to its current 46. The main purpose of the G-33 was to bargain for an SSM to protect domestic markets of developing countries from the import surge that can result from trade liberalisation. (Costantini, et al. 2007 and Narlikar & Tussie 2004).

- The *G-10* group, a combination of developing and developed economies, is a defensive group with a conservative approach that relies on existing policies. These members are keen to protect their domestic markets by retaining high tariffs (Costantini, et al. 2007).

In addition, there are two other developing and least-developed country groups: the ACP and Africa.

- The *ACP* and *African* groups, blocs with overlapping interests on SDT, have been forceful in waivers and were able to include some of their concerns in the DDA. The ACP and African groups and the LDCs functioned as the G-90 in Cancun to be more forceful in negotiations (Costantini, et al. 2007).

These groups are not very formal entities and do not restrict members from obtaining membership in other coalitions dealing with issues of interest to them. Therefore, some of these members discussed above have overlapping membership in offensive and defensive groupings. For example, the Philippines is a member of the G-20, Cairns and G-33; India is a member of the G-20 and G-33, and South Africa is in the G-20, Cairns, ACP and African group. However, Narlikar and Tussie (2004) point out that this situation can "... reduce the credibility of these coalitions and, in turn jeopardised the effectiveness of these coalitions further".

Table 5.7 illustrates these different agriculture-related negotiating groups in the WTO, their trade interests, and the orientations already discussed in section 4.3.

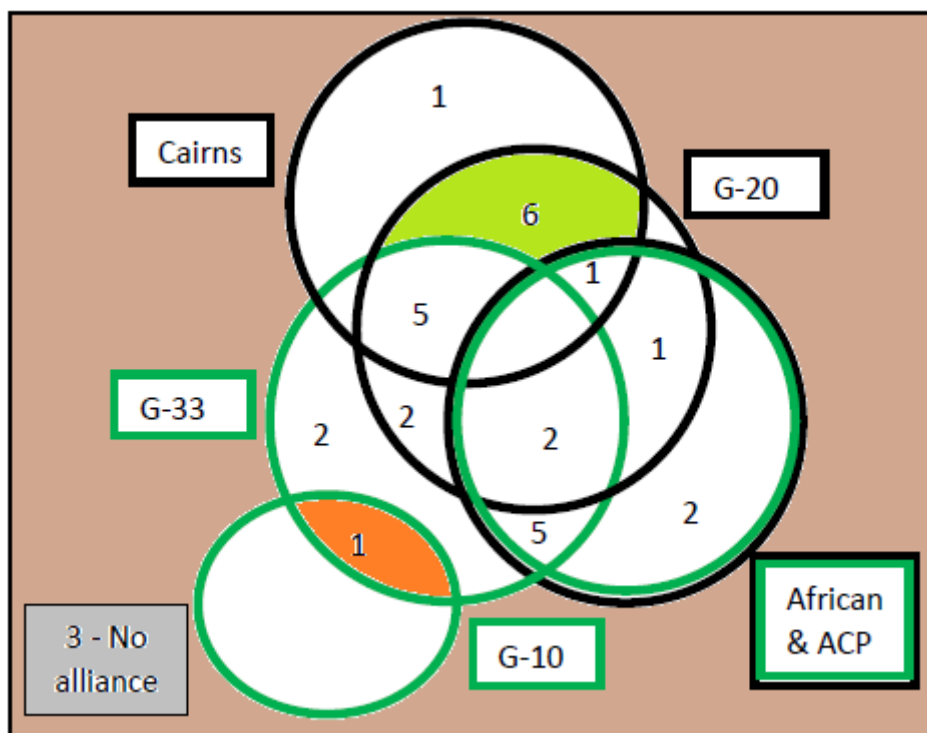
Considering the trade orientations of the groups identified in this research, one-quarter of respondents have taken a trade orientation in their views on food security. Among them, G-10 (56%) and G-20 (30%) placed a higher value on this orientation compared to the other groups (Appendix D-1: Tables D-1.1 to 1.6). The groups' trade interests are broadly categorised as "offensive" and "defensive", based on the group interests declared by the WTO (WTO 2017-b; Wolfe 2006). Taking a high orientation to trade does not mean the group may also take an offensive position in negotiations. The G10, for instance shows a high frequency of references to trade but adopts a defensive position.

Table 5.7: Trade interests and key dimensions of the agriculture negotiating groups

Agriculture negotiating groups	Trade/group interest		Extent of orientation to trade
Cairns (Developed & developing)	Offensive	Exporters supporting trade liberalisation	As a group: 23% Developing only: 29%
G-20 (Developing)	Offensive	Reforms in agriculture in developed countries such as export restrictions	30%
G-10 (Developed & developing)	Defensive	Agriculture as diverse because of non-trade concerns	As a group: 56% Developing only: 50%
G-33 (Developing)	Defensive	Limited undertaking for developing country members	26%
ACP (Developing & LDC)	Offensive & defensive	Agriculture preferences in EU	24%
African (Developing & LDC)	Offensive & defensive	General issues in the region	22%

Source: Interview responses and WTO categorisation of negotiating groups

The different memberships maintained by the developing and least developing countries covered in this research are identified in Figure 5.2. This includes 26 developing country and five LDC representations across the diverse groups, namely, Cairns, G-20, G-33, G-10, ACP and Africa. Black (offensive) and green (defensive) circles are used to denote the nature of their interests.



Source: Based on the developing and least-developed country representation. Orange indicates membership in both G-33 and G-10, and green indicates membership in both Cairns and G-20

Figure 5.2: Country representation and trade interests of the developing and least-developed countries of respondents

Among the sample, three countries have no alliances, another 5 have a single alliance, seven have offensive interests and three have defensive interest only. The rest (also the majority) have overlapping interests. The main point is that developing countries' positions are distributed across defensive and offensive, which complicates the resolution of negotiations on agricultural issues.

In the context of the results of the last section (5.4), of more interest here is the impact of the views of the five higher income members, which are out of line with other developing economy members as a whole. However, these economies are scattered across the groups, which have different interests and which their presence reinforces. Their positions are represented in the shaded areas of Figure 5.2. Three of the higher income countries are members of the Cairns and G-20 groups, with offensive interests, advocating trade liberalisation and agriculture reforms in the developed countries. Their presence will strengthen the offensive position of those groups. One is a member of the G-33 and G-10, with a defensive interest. The other is a

recently acceded member (RAM) and is in the no alliance group. The positions of these particular economies, despite their strong trade orientation, does not make the resolution of negotiations any easier, since their presence consolidates the already divergent opinions of the groups to which they belong.

5.6 Conclusion

This chapter examined three issues raised in Chapter 4, including the relationship of respondents' reference to particular orientations to food security to development and income levels and the implications for negotiations. It was found that members do not have significantly different views on both orientations⁵⁸. A qualification of this conclusion is the position of high-income countries that do place more weight on the trade orientation. However, when categorised into negotiation groups, the trade interests differ among the developing economy groups. Some support trade liberalisation solutions to food security (offensive), whereas others favour a protectionist (defensive) approach. These contradictory positions indicate the difficulties members would encounter in negotiations; even if the orientations in thinking about food security and resolutions are similar, the methods used will differ. This is also the case within the high-income group of developing countries, which places relatively more weight on trade.

An effort was made to characterise the positions and interactions of the various negotiating groups in the WTO and then to identify the implications of the results so far for negotiations. The framework clarifies the differences of opinion and highlights the scattered position of the high-income developing countries across the different positions on trade (offensive and defensive). Identifying the different orientation of this high-income group towards trade compared to that of other developing countries has been an important contribution. However, because of the conflicts between the positions on trade within the group, this identification does not help provide a way to resolve the impasse in negotiations. The question of how the negotiations might be resolved in this situation is pursued in more detail later in the thesis when the debate over particular policy instruments is examined in Chapter 7. There, the analysis

⁵⁸ No significant relationship was established for delegates for people orientation and development levels; four dimensions related to people orientation and development levels; people orientation and income levels; people orientation and individual negotiating groups; trade orientation and development levels; dimensions related to trade orientation; and development levels and trade orientation and individual negotiating groups.

refers again to the role of the high-income developing countries in their various groups and in driving positions. Chapter 8 then elaborates on differences within the developing economy group and the impact of those differences on negotiations.

The next chapter discusses whether the WTO as the trade-regulating body has the mandate and modalities in place to engage and address the food security issues of its members.

Overall view of the research issue

Chapter 1: Introduction; Chapter 2: Literature review; Chapter 3: Survey results

Role of the MTS of the WTO in addressing food security challenges; views on food security and trade restrictions; food security and WTO negotiation; food security and political dimension; food security and future prospects

Concept of food security

Chapter 4
What is food security?

Chapter 5
Food security, trade interests and levels of development

Research question

How can the global food security challenges be addressed in a MTS?

Response

Chapter 8
The dynamics hindering agriculture negotiations

Adequacy of current rules

Chapter 6
The WTO mandate

Chapter 7
Trade restrictions and food security

Conclusion

Chapter 9
“How can the global food security challenges be addressed in a MTS?”

Chapter 6 The WTO: mandate

6.1 Introduction

This chapter explores the trade orientation in food security. It focuses on the respondents' views on the WTO mandate and capacity to address food security issues. The latter depends on the adequacy of the rules by which it, and by implication the MTS, operates.

The scope and the coverage of the mandate of the WTO can be examined broadly in light of the objective of its creation, the reference made to food security under WTO rules, and WTO negotiations on food security. As manifested in the Marrakesh Agreement Establishing the WTO (WTO 1994), the focus of the WTO is to improve the trade and development of its membership. This includes raising the standard of living and generation of employment, income, production and demand with awareness of global responsibility towards using and protecting natural resources. It also recognises the differences in economic development levels and its members' needs. In terms of the rules on food security, this concept is identified only once in the preamble of the AoA (WTO n.d-i), where it is referred to as a “non-trade” concern associated with the reform programs prescribed in the AoA. According to Margulis, food security issues were expected to be minor items related more to the subgroup NFIDCs; however, recently, this concept has gained immense attention (Margulis 2017). The SSM proposal discussed in the (DDA) negotiations in 2008, the global food crisis experienced by WTO members during 2007–2009 and, more recently, the public stockholding proposal resubmitted by India with the support of the G-33, have diverted attention towards food security at the WTO.

The WTO is a “rules-based organization” (WTO n.d-q) and the system in which it operates is known as the MTS (WTO n.d-r)⁵⁹. The rules⁶⁰ within the MTS are at the core of this member-driven organisation. The Uruguay Round agreements and the latest Trade Facilitation Agreement (2017)⁶¹, ministerial decisions, annexes and other understandings agreed by the membership from time to time are referred to as “WTO agreements” or “WTO rules”. Rules broadly promote trade liberalisation among the nations, and provide a forum to negotiate and act upon consensus of members, and a mechanism for settling trade disputes among the members. Any mandate for food security would be implemented with reference to this set of rules.

In this context, based on the views of a representative sample, this chapter questions: “Does the WTO have a mandate⁶² to address food security issues?” It further explores members’ expectations and views on the limitations to addressing food security issues within the framework of the WTO. This chapter applies two types of analysis. First, to complement the discussion, reference is made to the outcomes of the relevant survey questions in Chapter 3, which facilitated drafting of the interview questions. This is the content of section 6.2. This leads to the main focus of this chapter, which is the analysis of the interview questions, which is reported in section 6.3 onwards.

⁵⁹ The MTS is:

... the system operated by the WTO. Most nations – including almost all the main trading nations – are members of the system. But some are not, so “multilateral” is used to describe the system rather than “global” or “world”.

In WTO affairs, the word “multilateral” also contrasts with actions taken regionally or by other smaller groups of countries. (This is different from the word’s use in other areas of international relations where, for example, a “multilateral” security arrangement can be regional.) (WTO, n.d.-r)

⁶⁰ The terms “rules” and “agreements” are used interchangeably.

⁶¹ The Trade Facilitation Agreement was agreed at the 9th WTO Ministerial Conference held in Bali, 2013. It entered into force on 22 February 2017.

⁶² “Mandate” is used interchangeably with words such as “agenda”, “responsibility” and “role”.

6.2. Analysis of the survey findings

The survey responses on having a “mandate” and adequacy of “rules” discussed in the Chapter 3 are considered further in this section. The anonymous online survey conducted prior to the interview, gathered feedback from 49⁶³ respondents comprising 27 delegates (18 from developing countries, 7 from developed countries, and 2 from LDCs), 14 researchers and 8 officials. The views are presented in two groups: delegates, and researchers and officials.

Survey Questions 3, 4, 5 and 6, which were analysed in Chapter 3 are relevant to this chapter, are discussed further through a breakdown of respondents’ views. Questions 3 and 5 examine the role of the MTS and how satisfactory the role has been in addressing food security challenges. Questions 4 and 6 inquire into the effectiveness of the MTS, and the extent to which solutions can be found for food security issues within the WTO system. Full percentage tables for the discussion in this section are included in Appendix F-1.

The cumulative response rates in the overall results for survey Questions 3–6, discussed in Chapter 3, are presented in Figure 6.1 to restate the outcome.

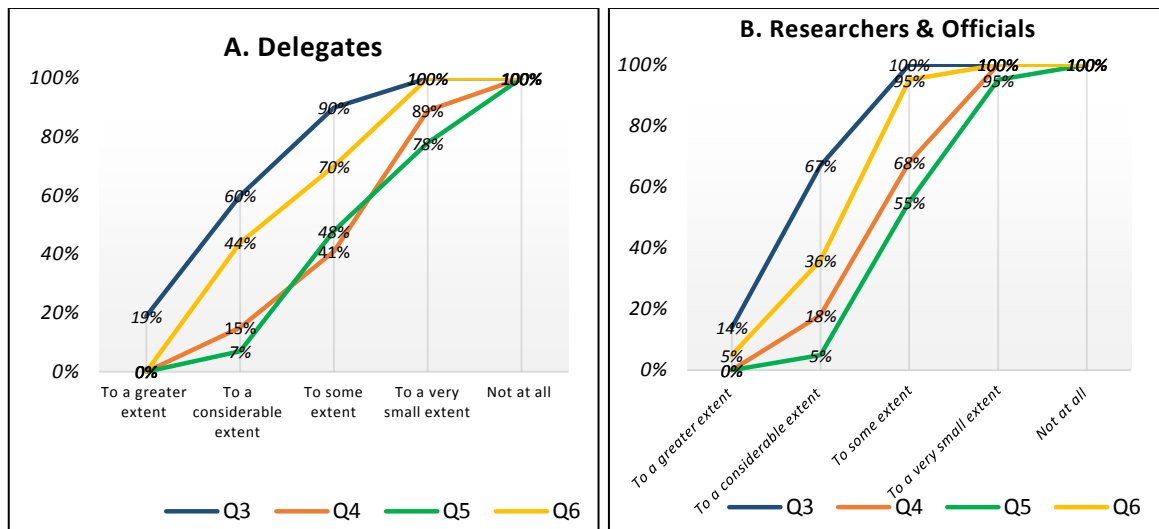


Figure 6.1: Cumulative response rate of (A) delegates and (B) researchers and officials for survey Questions 3–6

⁶³ As explained in Chapter 3, although there were 50 respondents, one delegate did not identify the development level of the country represented. Therefore, that response was removed in this analysis.

As depicted in Figure 6.1, more than 60% of the delegates and 67% of researchers and officials suggested that the MTS has a considerable role to play in addressing global food security challenges (Question 3). More than half of respondents in both categories were not very satisfied with the role played or with the effectiveness of the system (Question 5). According to 42% of delegates, solutions can be found “to a considerable extent”. However, only 36% of the researchers and officials group gave that response. (Question 6)

In response to survey Question 3, “In your view does the MTS have a significant role to play in addressing global food security challenges?”, respondents from all categories believed that the MTS has a role to play in addressing global food security challenges. Sixty per cent of delegates considered the role to be significant to a considerable (41%) or greater extent (19%). This view was shared more by delegates from least-developed (100%) and developed countries (72%), than by those from developing countries (50%). Thirty per cent (comprising seven developing and one developed country respondent) believed it is significant only to some extent. Within the group of researchers and officials, 66% of respondents believed the role is significant to a considerable (52%) or greater extent (14%). Among them, 46% of researchers and 63% of officials believed it is significant to a considerable extent, and another 23% of researchers believed it is very significant. Although the level of agreement differs, none of the respondents from either group denied that the MTS has a role in addressing global food security challenges.

Responding to survey Question 5, “Are you satisfied with the role played by the WTO in addressing these challenges?”, irrespective of development level or capacity, the inclination of delegates, researchers and officials was towards being somewhat dissatisfied. Twenty-two per cent of the delegates who are developing country representatives (6 – one-third of the developing country sample) consider the role played by the WTO as not at all satisfactory. Of the total responses from all development levels, 30% (1 least-developed, 4 developing countries and 3 developed countries) considered that the WTO’s role is very small, which was interpreted as a low level of satisfaction. However, 41% were somewhat satisfied and these views were shared by eight delegates from developing countries and three from developed countries. Among the researchers and officials group, 5% of the total respondents, expressed dissatisfaction with the role. Another 40% (6 researchers and 3 officials) considered the role to be very small. In addition, 50% of this sample (7 researchers and 4 officials) were somewhat satisfied with the role. None of the respondents were fully satisfied with the role played by the WTO in addressing food security challenges.

When inquiring into the effectiveness of the MTS in addressing food security challenges, the responses to survey Question 4, “In your view how effective has the MTS been in addressing global food security challenges?” showed mixed results. The results mostly indicated limited effectiveness, with responses from 74% of delegates and 82% of researchers and officials falling within the range “very small” to “to some extent”. Forty-eight per cent of delegates considered its effectiveness as very small. This view was shared by 50% (9) of developing and 57% (4) of developed country delegates. Another 26% of delegates considered it is effective to some extent (1 least-developed, 5 developing and 1 developed country). Of the total number of delegates (three from developing countries), 11% considered the MTS to be not at all effective. Among the researchers and officials as a group, 50% (including 64% of researchers) considered the MTS to be effective to some extent. Thirty-two per cent of that group, including 50% (4) of the officials, considered the effectiveness of the MTS to be very small. No responses rated it not at all effective, but overall, compared to delegates, the views of the researchers and officials group were more positive. However, none of the respondents believed that the MTS addresses food security challenges to a great extent.

Responding to survey Question 6, “To what extent do you think WTO members can find solutions for global food security challenges within the WTO system?”, the responses from the group of developed countries and the group of researchers were more positive than the feedback from the other group, which was scattered. Of the total number of delegates, 44% (7 developing and 5 developed country respondents) believed that the WTO is the place to find solutions “to a considerable level”, compared with 30% of delegates (1 least-developed, 5 developing and 2 developed countries) who considered that solutions can be found to a very small extent. Fifty per cent of LDC delegates and 33% from developing country delegates considered that solutions can be found only to some extent (26%). From the researchers and officials group, 59% (50% of researchers and 75% of officials) thought it could be useful only to some extent. Another 32% (6 researchers and 1 official) considered that solutions could be found to a considerable extent. However, none of the respondents denied the role of WTO in finding solutions and none of the delegates considered that better solutions can be found.

In conclusion, the results indicate that most of the respondents believe that the MTS has a role to play in addressing global food security challenges. However, irrespective of development level or capacity, a majority of respondents expressed their dissatisfaction over the way the MTS operates. The views on the effectiveness of the MTS in addressing food security challenges were not straightforward; they were mixed and indicated there were limitations.

Although none rejected the possibility of finding solutions to global food security challenges within the MTS, developed country respondents and researchers were more positive than the rest of the sample, their views varying within the categories. Therefore, these outcomes are explored further in the interviews, as presented in the next section.

6.3 Analysis of the interview findings

The balance of this chapter focuses on the interview findings and the analysis of the views of the stratified sample of delegates, researchers and officials expressed at interviews and in the online survey.

The interview responses of 64 respondents, comprising 41 agriculture delegates (from 26 developing, 9 developed and 6 least-developed countries)⁶⁴, 10 researchers and 13 officials were evaluated. Because of the differing roles played by the respondents in the negotiation process, the views of delegates, researchers and officials are presented separately.

Empirical research methods were used to analyse responses to interview Questions 2(a), 2(b) and 3 (Appendix B-2). Using thematic analysis, interview transcripts were coded and themes identified to address specific research questions covered in this chapter. Stata software was used to calculate the frequency percentage of these themes, ascertain confidence intervals to draw standard error bars to detect any diversity in views and, whenever deemed necessary hypotheses were developed and tested for any statistically significant relationships.

The overall frequency percentages for delegates are calculated based on country representation (41). Further, delegates' views are categorised by their countries' development levels and percentages are calculated against the total number represented in each category (LDC = 6, Dev = 26, D = 9). For researchers and officials, the frequency percentages are calculated based on their individual group responses (group = 23, researchers = 10, officials = 13).

Standard errors bars are drawn to identify diversity in views within the agreement levels across different groups. The same dataset for calculating frequency percentages is used to calculate estimate values, lower and upper limits. Stata is used to derive positive and negative values to draw the error bars in Excel. The existence of any diversity is checked by comparing

⁶⁴ In tables and charts, developing countries are referred to as Dev and developed countries as D.

these bars. Non-overlapping bars depict significantly different⁶⁵ views among the group, whereas overlapping bars suggest no statistical differences.

In **testing hypotheses**, p-values are derived using Fisher's exact test to determine the existence of any relationships between variables. The data in this section comprise small sample values across different categories. Therefore, Fisher's exact is chosen rather than the Chi-square⁶⁶ test as it can be applied to small values to ascertain associated p-values.

The level of significance (α) of the test or the threshold for rejecting H_0 is set at the 0.05 (5%) level. Therefore, when $p \leq \alpha$ (0.05) the H_0 (null hypothesis) is rejected and H_1 (alternative hypothesis) is favoured, a statistically significant relationship is assumed to exist between the variables tested. In the case of $p > \alpha$ (0.05) the H_0 (null hypothesis) is not rejected and H_1 (alternative hypothesis) cannot be established.

Two assumptions are made:

- In this chapter, the views of respondents on interview Questions 2(a), 2(b) and 3 were broadly discussed due to time constraints (limited time allocated for interviews) and the broad nature of the food security concept. More specific issues have been covered in the preceding chapters.
- The respondents were clear that only trade-related food security challenges were covered in these questions. At this stage, the interview questions did not specify any specific trade-related food security issues. Therefore, the respondents' expressions were based on their subjective understanding of what trade-related food security issues are covered under the WTO.

To further explore the views on the WTO mandate and rules, the responses of the delegates, researchers and officials to interview Questions 2(a), 2(b) and 3 are analysed in the following three sections (6.4–6.6). (See also interview questionnaire in Appendix B-2)

The analysis and discussion in the first three sections – on the WTO having a mandate to address food security issues (6.4), addressing food security in the MTS (6.5) and the

⁶⁵ The confidence level chosen was 95%.

⁶⁶ The Chi-square test is used to obtain the test statistic and its associated p-values whenever the value of each cell is 5 or higher.

inadequacy of rules (6.6) – are based on the direct responses received to the respective interview questions.

The analysis of the balance of the chapter is schematically illustrated in Figure 6.2.

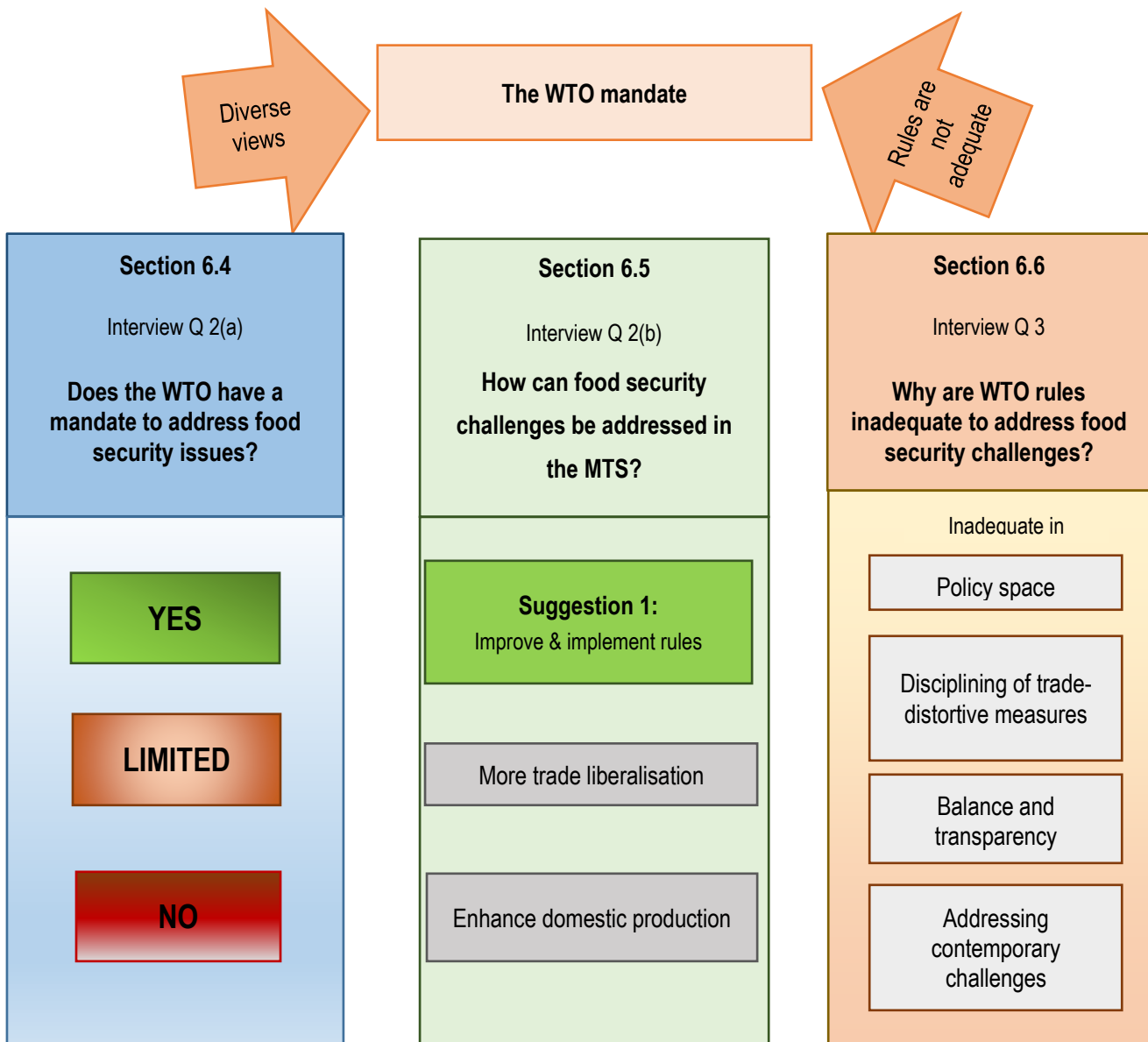


Figure 6.2: Framework of the analysis of interview responses

6.4 Does the WTO have a mandate to address food security issues?

The responses⁶⁷ to the impromptu interview Question 2(a): Does the WTO have a mandate to address food security issue? were analysed to explore the three views on the mandate and their relationship with the different categories of respondents:

1. Views on the mandate – The mutually exclusive responses of delegates, researchers and officials to interview Question 2 (a) are categorised as three groups of views:

Agree	There is a clear mandate.
Limited	There is a limited mandate or not a very clear mandate.
Disagree	There is no mandate.

2. Relationship between the three views and different categories of respondents

Frequency percentages were calculated, standard error bars compared and hypotheses tested, as explained in section 6.3: Analysis of the interview findings.

The views of delegates, researchers and officials are presented separately in this section.

6.4.1 Delegates' views

The mutually exclusive responses of the 41 delegates were categorised as “agree”, “limited” and “disagree”, and tested for any relationships between the views and development levels. In total, 15 delegates agreed that there is a mandate, 21 viewed it as being limited and five considered that the WTO does not have a mandate to negotiate food security issues.

In view of their significance and direct impact on the WTO negotiations, the delegates' arguments for supporting the three views are presented below. Further, their comments have been categorised whenever possible under: objectives of the WTO, rules, trade policies, institutional perspective, and global trading.

⁶⁷ The interviews were conducted during November 2014 after the Bali Ministerial meeting, where Ministers had given clear instructions on the way forward.

Agree: There is a mandate

The respondents cited different justifications for their view that the WTO has a mandate to address food security issues.

Some delegates considered that trade liberalisation, which is an objective of the WTO, is evidence of a mandate, as trade liberalisation is a means of addressing some food security issues that come under the WTO's purview.

Referring to WTO rules and decisions, some cited the mention of food security in the preamble of the AoA itself as a mandate to discuss instruments and parameters within the purview of the AoA provisions. A delegate who flagged this view stated that "in the context of agriculture as a non-trade concern, there is a mandate and now, after Bali, there is a stronger mandate, as the Bali Ministerial Declaration (2013) had reconfirmed the agenda for further negotiations". Some delegates considered that a mandate exists because the rules include export/import restrictions, safeguard mechanism and disciplining of market distortions. It was also observed that the trade policies of member countries are monitored and shaped by the rules, bindings and commitments, and therefore in this sense the WTO has a role to play in food security.

From an institutional perspective, a few respondents suggested that the WTO has a mandate because it is an adjudicating body that can enforce the legitimate trade-related concerns of its members, unlike the FAO, which does not have the rules or legal bindings, predictability or obligation. According to a delegate:

WTO has a perfect body, to ensure that countries would not undermine others' food security or legitimate concerns and policy orientations in pursuing their own food security. Whereas, FAO is unable to discipline because it's not an organisation that has the rules with teeth.

Furthermore, in the context of global trading, agriculture is viewed as an important sector for the developing world. An LDC delegate emphasised that food security has an "intricate relationship for the least-developed and developing country members that comprise more than two-thirds of the WTO membership, therefore WTO as the trade regulator has a mandate to address food security-related issues". Along similar lines, some delegates considered as evidence of a mandate that food security aspects mainly affecting developing and LDC members are cited in the DDA, and because they are development issues.

Finally, one delegate posed a challenge, claiming that “mandates are given by the members, therefore issues of importance to members supported by facts should be willingly embraced and dealt regardless of personal inclinations”.

Limited: There is a limited mandate

More cautiously, some arguments endorsing a limited mandate did not completely deny the existence of the role, but were sceptical or uncertain.

The comment was made that the WTO has a mandate through its objective of “ensuring economic activities from the perspective of keeping the markets well functional and removing distortions but a specific and limited mandate in addressing food security issues”. The main reason cited for such views was the nature of the food security concept: a “large concept, bigger than the WTO, with issues beyond the scope of the WTO to deal with”.

Respondents considered the mandate to be unclear from the rules, vague and limited because “food security ... [is] stated as a non-trade concern in the AoA”. This provides a lack of clarity as to whether food security issues could be addressed at the WTO.

From an institutional perspective, some considered food security to be more of a production-oriented issue falling under the remit of the FAO, although acknowledging that trade has some role to play. Along the same lines, some strongly believed the “WTO cannot fully address food security issues without coordination and cooperation with the FAO, UNCTAD, and other organisations dealing with food”. Extending this belief was the view that “there should be a coherent agenda among the different players, including government, organisations, society as a whole as food security is a global public good”. In this respect, they favoured a limited mandate.

Although food security may not be the core mandate of the WTO, some respondents judged that the WTO can play a complementary role in steering governments to select the right types of sustainable policies over the long term, to address food security effectively.

Disagree: There is no mandate

The remainder, who disagree that the WTO has a mandate to address food security, argued mainly that food security is either “something that’s not explicitly part of the mandate right now” or “WTO is not the primary place to deal with [it] because it is the mandate of the FAO”

or “food security is related to domestic policies and the responsibility of the respective governments to deal [with] and not the WTO”.

Relationship between delegates’ views and development levels

These mutually exclusive views are further analysed and depicted in Table 6.1 and Figure 6.3, which illustrates standard error bars. The table presents frequency percentages across development levels and p-values for the following hypotheses tested.

H₀: There is no statistically significant relationship between the overall view on the mandate and development levels.

H₁: There is a statistically significant relationship between the overall view on the mandate and overall development levels.

Table 6.1: Delegates' views on the mandate

Agreement levels	Development levels			
	Total % n = 41	LDC n = 6	Dev n = 26	D n = 9
Agree	37%	83%	38%	0%
Limited	51%	17%	54%	67%
Disagree	12%	0%	8%	33%
	100%	100%	100%	100%
P-values- Fisher's exact	0.007*			

Source: Interview responses. *indicates significance at % level

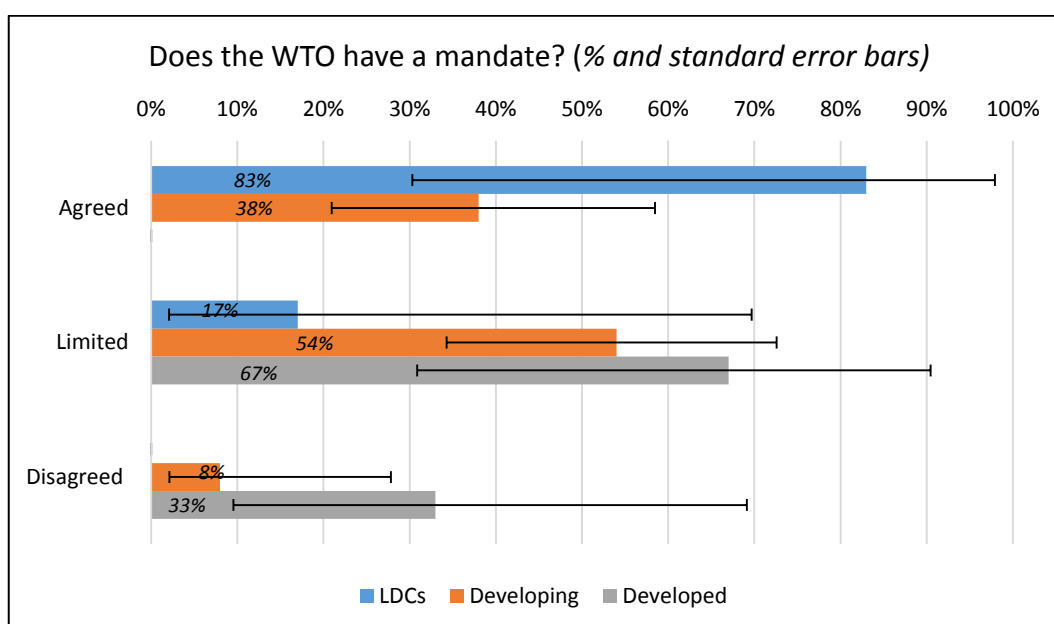


Figure 6.3: Delegates' views on the mandate

As depicted in Table 6.1, the majority of delegates were of the view that the WTO has a limited mandate to address food security issues. These responses contain arguments favouring both extreme views, but categorically do not fully support either. Sixty-seven per cent of developed country respondents and 54% of developing country respondents considered that the WTO has a limited mandate. Eighty-three per cent of LDC respondents and 38% of developing country respondents believed there to be a clear mandate. The views of developed representatives leaned more towards a pessimistic belief, with 33% clearly confirming that there is no mandate (see Figure 6.3).

The standard error bars drawn in Figure 6.3 are based on frequency percentages to identify any significant differences between the views of representatives from least-developed, developing and developed countries. All error bars drawn within each agreement level overlap with each other, showing that delegates among the respective groups share similar views.

When comparing views among the development levels, the standard error bar for LDC views that there is a limited mandate overlaps with its own bar for views that there is a mandate (i.e. limited cf. agreed). Similarly, the standard error bar drawn for developed country respondents' views that there is a limited mandate overlaps with its own bar not having a mandate (i.e. limited cf. disagree). This is further confirmation of the depth of disagreement between the views of least-developed and developed countries, which is reflected in the frequency percentages. In addition, a divide in views is noted among the developing country delegates on their view on the mandate. For this group, the standard error bar for having a limited mandate overlaps with the bar drawn for having a mandate (i.e. limited cf. agreed), but the bar not having a mandate does not overlap with the bar for having a limited mandate (i.e. disagree cf. limited). Therefore, the diversity in views within this group is evident. Developing country respondents who considered there is a limited mandate were more optimistic about the mandate. However, the non-overlapping bars indicate that there is a group among the developing country representatives strongly rejecting the idea that the WTO has a mandate to deal with food security issues. This leads to an important observation that there is a diversity of views among the developing group of countries.

Next, the hypotheses were tested to discover if there is any relationship between agreement levels and development levels. An overall p-value of 0.007 was recorded between the two variables (overall view on the mandate and development levels), rejecting H_0 as $p \leq 0.05$ and favouring H_1 , suggesting that different perceptions or different levels of agreement are significantly associated with the development levels of respondents' countries.

6.4.2 Researchers' and officials' views

The researchers' and officials' views on the mandate are discussed in this section.

Table 6.2 and Figure 6.4 with standard error bars, depict the views of 10 researchers and 13 officials who responded to interview Question 2(a). The analysis contains frequency percentages and the p-value for the following hypothesis, tested for any relationship between overall views and the represented group.

H₀: There is no statistically significant relationship between the overall view on the mandate and the researchers and officials group.

H₁: There is a statistically significant relationship between the overall view on the mandate and the researchers and officials group.

Table 6.2: Researchers' and officials' views on the mandate

Agreement levels	Total % n = 23	Researchers n = 10	Officials n = 13
Agree	44%	70%	23%
Limited	30%	20%	39%
Disagree	13%	10%	15%
<i>Non-responses</i> ⁶⁸	13%	-	23%
	100%	100%	100%
P-value Fisher's exact	0.160		

Source: Interview responses

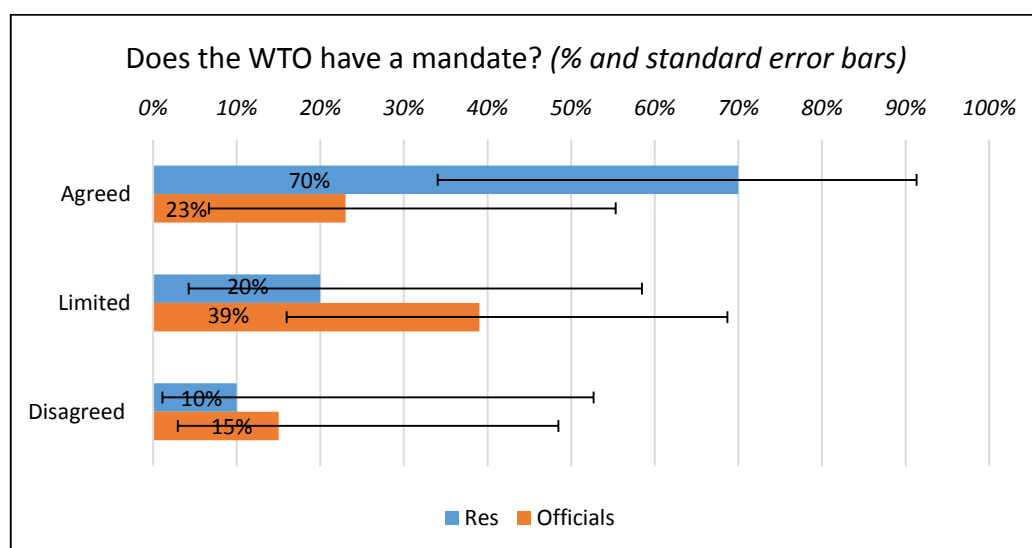


Figure 6.4: Researchers' and officials' views on the mandate

⁶⁸ 23% (3) officials either refrained from answering or considered they were not competent to answer this question. They are represented in the 13% of the total percentage.

Like the delegates' responses, the researchers' and officials' views on the mandate were diverse. Seventy per cent of the researchers were of the understanding that the WTO has a mandate, 20% considered it to be limited and 10% disagree that the WTO has a role. Among the officials, 39% considered that the WTO has a limited mandate, 23% agreed that it has a mandate and another 15% rejected that it has a mandate.

The overlapping standard error bars indicate that there is no significant difference between the responses of researchers and officials within or among the three views.

The results of the hypothesis testing (0.160) conducted on the researchers' and officials' views confirm that there is no statistically significant relationship between the variable "overall view on the mandate" and the overall view of the researchers and officials group, tested for p-value of $p \leq 0.05$, therefore H_0 is retained.

6.4.3 Summary

The diverse comments and arguments justifying the subjective views of delegates, researchers and officials were grouped broadly into three (3) sets of views; namely, having a mandate, having a limited mandate, and having no mandate to address food security challenges in the WTO.

A majority of the delegates (51%), consisting mostly of developed (67%) and developing (54%) countries, agreed that the WTO has a limited mandate or role in addressing trade-related food security issues. However, at the two extremes were the least-developed and developed country representatives, with 83% of LDC respondents agreeing that there is a mandate and 33% of developed country respondents' rejecting the idea. The standard error bars do not show a significant difference in opinions within each view, but they do confirm the extreme difference in views of least-developed and developed country respondents. In addition, the diversity of views among the developing group is also mirrored in the standard error bars.

The outcome of these responses reveals a noteworthy relationship between the country responses and their development levels, and this is revealed in the hypothesis testing. In particular, there is a greater agreement that the WTO has a mandate among less developed countries than among the more developed countries, which are uncertain that there is one. Hence, based on the outcome of this study, when negotiating food security at the WTO (where

other factors⁶⁹ are neutral), LDCs are more likely and developed countries are least likely to agree that there is a mandate, whereas developing countries present a mixed response.

The researchers' views appear to be stronger than those of the officials', more in line with LDC views. However, mixed opinions were observed among the officials, who shared similar comments as the developing and developed respondents.

6.5 How can food security challenges be addressed in the MTS?

This section focuses on respondents' comments on interview Question 2(b) "How can the MTS be improved to address food security challenges?" and includes a detailed analysis of the following areas:

1. Suggestions for improving the ability of the MTS to address food security challenges.

The diverse responses of the respondents are divided into three main groups:

- a. Improvements to and better implementation of rules
- b. More trade liberalisation
- c. Enhancing domestic production.

2. Relationship between the three suggestions and different categories of respondents.

Frequency percentages are calculated, standard error bars are compared and hypotheses are tested for any relationship between the three views and different categories of the respondents, including the development levels, as described in section 6.3: Analysis of the interview findings.

The views of delegates, researchers and officials are presented separately in this section.

6.5.1 Delegates' views

The mutually nonexclusive responses of the 41 delegates to interview Question 2(b), were categorised broadly into three main areas. These varied arguments, and some reasons they considered it necessary to improve the MTS to address food security challenges, are elaborated below.

⁶⁹ Factors such as package deals, political intervention etc.

Improvements and better implementation of rules

Referring to the rules as the heart of the MTS, the delegates suggested the need to improve openness, predictability and transparency to enable better implementation of the existing rules. Examples of current inadequacies were avoiding the notifications stipulated by provisions and “not taking this requirement seriously”.

For improvements to rules, delegates suggested granting more flexibility, regulating trade and reforms to AoA by “adjusting”, “reforming” and “amending” the relevant provisions in the existing rules. Respondents suggested more SDT and flexibilities instead of constrained policy space, to address the food security needs of developing and vulnerable countries. Even though there is ample space in the green box, it was believed that rules could be improved, targeting the food insecurities of needy members. However, another group maintained that the rules for these flexibilities should contain well-defined limits and have clear monitoring instruments.

While supporting more flexible rules for deserving members, some took the view that rules are also needed to regulate members’ domestic policies to avoid negative consequences for others. As one delegate commented, “rules are needed because countries are trying to justify their policies in the guise of food security narratives”.

Among the suggested improvements to regulate trade were tighter safeguard measures and provisions that are capable of addressing market failures, market distortions, distortive programs and trade implications. Many suggestions highlighted the need for well-defined parameters and stringent measures to discipline export restrictions and subsidies, were considered to be trade-distortive. Some considered that rules on box shifting should be tightened for domestic subsidies⁷⁰.

Stabilising staple food prices and avoiding inflatable prices to accommodate the poor and vulnerable countries was another suggestion for regulating trade.

Further, delegates considered that the AoA needs to be “rectified”, “reformed” and “modified” to address the food security needs of some members. To do this, to ensure a level playing field for agriculture, rules should eliminate current inequalities by applying the reforms to the AoA recommended in the 1994 Uruguay Round (Article 20 of the AoA –WTO n.d.-i). According to

⁷⁰From distortive subsidies (amber box) to less distortive subsidies (green box).

one delegate, “reforms have not been taking place for the last 20 years and AoA is a square nail ruling that has not taken care of the needs of developing countries.”

According to some respondents, defining food security as a non-trade concern in the AoA is a stumbling block that needs redefining. Another perceived it as “a dilemma, whether to have a separate agreement for food security or to reflect food security in the current framework”.

More trade liberalisation

Respondents indicated that trade liberalisation, a primary objective of the MTS, could assuage difficulties faced with the food security issues. They commented that the MTS could provide greater and effective market access and ensure food availability by removing tariff and non-tariff market barriers. In addition, well-functioning markets could lower the cost differences between exports and imports and assure a reasonable and stable international food price.

Enhancing domestic production

The arguments specifying the need to enhance domestic production to ensure countries’ food security came from many different angles.

Some respondents suggested that rules should support domestic production to address domestic food security needs, feed growing populations and sustain livelihoods. Others argued that increases in domestic production are needed to increase incomes and encourage exports.

Some mentioned that it is essential to enhance domestic production, as distortive measures have undermined countries’ production. Their comments raised the need to invest more heavily in the agriculture sector. Specifically, some “developing and African countries need to have agriculture infrastructure in place to produce at least the food they need because low-priced subsidies have affected these countries”.

One view was that “developed countries ensure self-sufficiency by producing and feeding their population and in fairness the other members also should be given some flexibility to enhance their domestic production”.

Another, that “leaning towards domestic production for food does not mean closing international trade but to assist and develop domestic agriculture sector to feed and produce”.

This section focuses further on the three suggestions discussed so far, analysing these mutually nonexclusive responses of the delegates according to their development levels. The following hypothesis is examined:

H₀: There is no statistically significant relationship between nominating the reasons given in Table 6.3 and development levels.

H₁: There is a statistically significant relationship between nominating the reasons given in Table 6.3 and development levels.

Table 6.3 contains frequency percentages and p-values for the hypotheses presented in Appendix F-2.1, and Figure 6.5 presents standard error bars.

Table 6.3: Delegates’ suggestions to improve MTS, and the corresponding development levels

Suggestions	Total % <i>n</i> = 41	Development levels			P-value Fisher's exact
		LDC <i>n</i> = 6	Dev <i>n</i> = 26	D <i>n</i> = 9	
Improvements and better implementation of rules	95%	100%	96%	89%	0.604
More trade liberalisation	63%	67%	65%	56%	0.894
Enhancing domestic production	44%	50%	54%	11%	0.102

Source: Interview responses

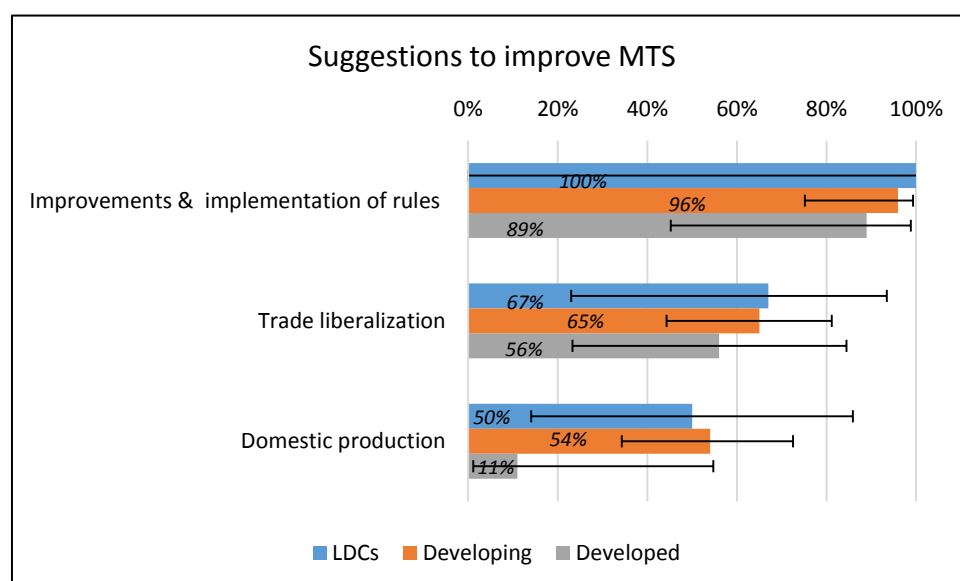


Figure 6.5: Delegates’ views on suggestions to improve MTS

Of the three broad views, 95% of the delegates were of the opinion that rules should be improved and properly implemented to address food security issues. Notably, respondents gave a high rating irrespective of their countries’ development levels. Sixty-three per cent suggested more trade liberalisation; all three development levels acknowledged this need, with relatively

close ratings. The third view, enhancing domestic production, was recognised in 44% of responses, with higher prominence given by delegates from least-developed and developing countries than by those from developed countries.

The standard error bars illustrate there is no significant difference between delegates' views on the suggestions for improving and implementing rules, trade liberalisation and enhancing domestic production. However, when comparing standard error bars for the three views for developing country delegates, the bars for improving and better implementation of rules and for enhancing domestic production do not overlap, indicating there are diverse views within this group.

There is no statistically significant relationship between individual suggestions and development levels, with p-values of $p > 0.05$. The lowest p-value among the three views is for enhancing domestic production and development levels. On the whole, as observed, individual ratings are very close, therefore, a significant relationship between the three suggestions and the development levels is not established. This outcome could be a result of these suggestions being important to the countries, irrespective of their development levels.

6.5.2 Researchers' and officials' views

In this section, the mutually nonexclusive responses of 10 researchers and 13 officials to interview Question 2(b) are categorised into the same three main suggestions discussed for the delegates. The frequency percentages and the standard error bars are depicted in Table 6.4 and Figure 6.6. The p-values for the hypotheses listed in Appendix F-2.2 indicates that there is no significant relationship between the suggestions and the overall group view of researchers and officials.

Table 6.4: Researchers' and officials' suggestions to improve the MTS

Suggestions	Total % <i>n</i> = 23	Researchers <i>n</i> = 10	Officials <i>n</i> = 13	P-value Fisher's exact
Improvements and better implementation of rules	83%	80%	85%	1.000
More trade liberalisation	35%	50%	23%	0.221
Enhancing domestic production	30%	20%	38%	0.405

Source: Interview responses

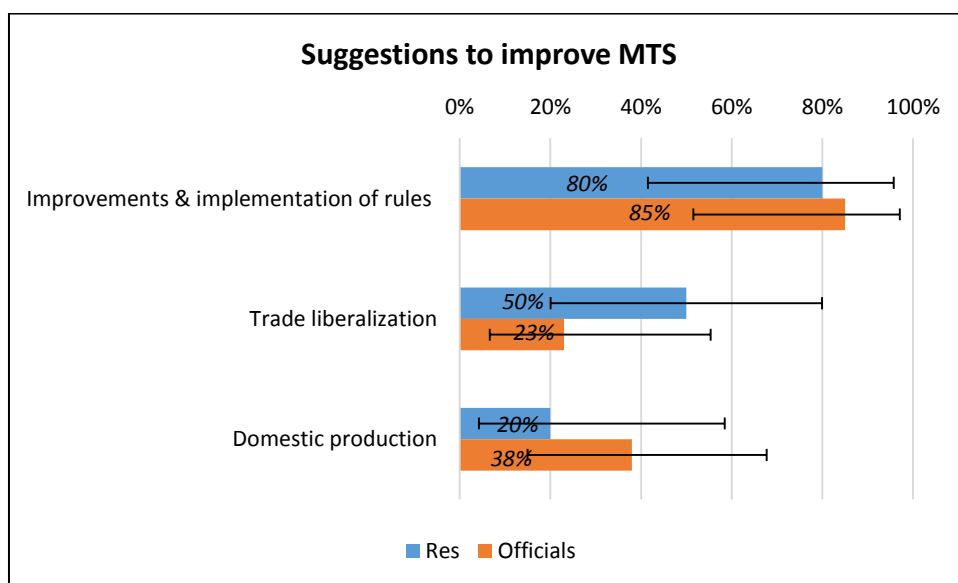


Figure 6.6: Researchers' and officials' suggestions to improve MTS

Similar to the delegates' views, with a greater than 80% response rate, both groups flagged the need for improvement and better implementation of current rules. As their second suggestion, the researchers considered that more trade liberalisation is important, compared to the officials, who supported enhancing domestic production. The views of the two groups are not significantly different, as they are depicted by overlapping standard error bars.

6.5.3 Summary

The analysis in this section focused on the responses received to interview Question 2(b) on suggestions for improving the MTS. Responses were grouped into three main suggestions; namely, improvements and better implementation of rules, more trade liberalisation, and enhancing domestic production.

With a majority of at least 80%, all parties (delegates, researchers and officials) suggested that improvements to the current rules and better implementation of them are an important element in addressing trade-related food security challenges.

Across development levels, the second most frequent suggestion to improve the MTS was greater trade liberalisation. Representatives from the least-developed and developing countries gave a high rating to enhancing domestic production. Among the other group, researchers suggested more trade liberalisation, whereas officials suggested enhancing domestic production.

However, a statistically significant relationship was not established between individual suggestions, which indicates that these suggestions are commonly viewed as important among the membership.

6.6 Why are WTO rules inadequate to address food security challenges?

In responding in the previous section, 6.5 to the question of how food security challenges can be addressed in the MTS, a majority of the respondents agreed that WTO rules need to be improved and implemented well if they are to address the food security challenges of its membership. This section explores reasons for considering that the rules are inadequate, under the following areas of analysis:

- Views on the adequacy of the rules
- The four main reasons for perceiving the current rules to be inadequate
- Relationships and linkages between the four main reasons and different categories of respondents.

Views on the adequacy of rules

The mutually exclusive responses of delegates, researchers and officials to interview Question 3, “In your view can the WTO rules adequately address food security challenges?” are divided broadly into two views:

- Adequate – the current rules are adequate to address food security issues
- Inadequate – the current rules are inadequate to address food security issues

Frequency percentages are calculated and hypotheses are tested to analyse the views.

Responses on the inadequacy of current rules are grouped into four main reasons for their inadequacy: the need for more policy space; the need to discipline market distortions; the lack

of balance and transparency; and the lack of contemporary relevance. Frequency percentages are calculated, standard error bars are compared and hypotheses are tested for any relationship between the four reasons for inadequacy of the rules and the different categories of the respondents, including the development levels, as outlined in section 6.3: Analysis of the interview findings. Further, the responses received for the four main reasons are cross-tabulated with each other to understand which are the most significant reasons.

6.6.1 Delegates' views

The mutually exclusive responses of the 41 delegates for interview Question 3 are grouped as adequate and inadequate corresponding to their development levels.

Table 6.5 depicts percentages and p-values for the following hypothesis, which was tested for any statistical significance between overall views and development levels.

H₀: There is no statistically significant relationship between responses on the adequacy of rules and development levels.

H₁: There is a statistically significant relationship between responses on the adequacy of rules and development levels.

Table 6.5 Delegates' views on the adequacy of rules

Adequacy	Total % <i>n</i> = 41	Development levels		
		LDC <i>n</i> = 6	Dev <i>n</i> = 26	D <i>n</i> = 9
Adequate	20%	17%	15%	33%
Inadequate	80%	83%	85%	67%
Overall P-value Fisher's exact		0.457		

Source: Interview responses

As depicted in Table 6.5, 80% of delegates, mostly from developing countries and the LDCs, commented that the rules are inadequate. The p-value of 0.457 is $p > 0.05$ for the hypothesis testing suggests there is no relationship between the views on adequacy of the rules (adequate or inadequate) and the development levels of the countries represented. However, according to the frequency percentages, a majority of delegates consider that the current rules are

inadequate. The reasons for this view were further examined and the arguments are elaborated next.

The delegates gave varied reasons to justify claiming that the current rules are inadequate, based on their individual expectations of adequacy. In consideration of similarities among these views, these were broadly themed into four main reasons, the need for the rules to allow:

- more policy space
- disciplining of trade-distortive measures
- balance and transparency
- contemporary relevance.

The need for more policy space

Within the issue of pursuing and being granted more policy space, the delegates expressed two broad views: first, that more policy space is needed as a protectionist measure for developing countries and LDCs facing food insecurities; and second, that there are concerns associated with granting such policy space.

Some delegates considered policy space a requirement to maintain a level of protectionism. The main reason for such a view is the high significance placed on the agriculture sector by developing and least-developed countries. They considered agriculture to be the core sector in their economies: providing jobs, essentially sustaining the security of small farmers' livelihoods, and as a source of food production for domestic consumption. Hence, some delegates considered that rules are inadequate to address the challenges that countries face and more policy space would alleviate food insecurity to some extent. More policy space, also referred to as "waivers", "flexibilities" and "SDT", was suggested by members from developing and least-developed countries in view of the challenges and vulnerabilities associated with their different levels of development, and country-specific issues that are aggravated mostly by poverty and high populations. Policy space was also suggested for countries that are challenged by insufficient access to staple foods, struggling with price volatility resulting from market failures and confronted with emergencies and exceptional circumstances.

Nevertheless, some delegates expressed concerns about providing policy space, indicating that waivers and flexibilities should not be manipulated to an extent that would be detrimental to other developing countries. Extending this view, some mentioned the importance of time-

limited policy space for countries challenged with food security issues. A delegate from a developed country pointed out:

Developing countries need some policy space. However, the term policy space was a concept within reform. Now members are arguing for more policy space beyond the context of reforms. So we need more policy space over what we have now and that means we need less liberalisation and more protectionism.

The need for disciplining of trade-distortive measures

The respondents highlighted different aspects of the inadequacy of the current rules on disciplining trade-distortive measures, particularly export restrictions, export subsidies and domestic support. Some claimed that export restrictions and rising domestic subsidies are measures that cannot be disciplined, and distortive export subsidies have not been fully eliminated⁷¹, as agreed in the current rules. Most viewed these as market-distortive and trade-disruptive measures that only some members are able to impose. Among the group referring to them as protectionist measures, an LDC delegate suggested that the “Agriculture Agreement has preserved distortions and has protected distorting agriculture trade policies of developed members”.

Some delegates considered that export restrictions such as bans and taxes, which are allowed during food shortages, can cause price volatilities and high commodity prices in the international market, leaving the NFIs worse off. According to an NFI country delegate, “even when the tariff had been reduced to zero per cent during 2008 food crisis, exporters had rejected to export”. They maintained that the relevant provision, which does not specify a time frame or duration when applying this measure, leaves importers in speculation, resulting in a further escalation of commodity prices. Related to this thinking was the view that the inability of rules to discipline distortive measures would hinder competitive production and functional markets that can offer food at a reasonable price.

Yet another opinion was that rules are weak because of their inability to guarantee that “a member would not apply export restrictions when there is a shortage”. Further, some considered that rules are inadequate in disciplining market prices, by protecting the interest of

⁷¹ Export subsidies were not eliminated when the interviews were conducted in 2014.

countries and avoiding trade implications rather than causing damage to their agricultural sectors.

The need for balanced and transparent rules

The respondents considered that rules are inadequate as they lack balance, fairness, clarity, openness, predictability and transparency. Delegates said that “a lot of vested interests and so many imbalances are in the AoA”. They viewed the provisions in the AoA as the very causes of imbalance in the interests of different groups. One delegate claimed that these rules are “more skewed towards developed countries”. Similarly, many respondents considered that some provisions addressing the concerns of a few countries have the propensity to create trade implications for others. For this reason, they claimed that these unbalanced rules are generating inequalities and market distortions, and challenging a free and fair trading system.

Respondents also pointed out that the rules fall short of overcoming the unbalanced outcome of the Uruguay Round, which sought to eliminating the inequalities and trade distortions that are detrimental to members finding a level playing field in negotiations. Some have stressed the vagueness in provisions and raised the need for specificity and clarity.

The delegates agreed that there are provisions for transparency in the AoA, such as notification requirements, but there is evidence that they are not being fully implemented. Therefore, in their view, rules should hold well-defined parameters and be reinforced with more accountability and transparency mechanisms. However, the term “transparency” is noted as having different interpretations. One delegate said, “Transparency should not be perceived as exposing policies but as an important part of domestic reform that would help the process”.

On the whole, delegates emphasised that the current rules should have the properties of balancing the interests of different groups, and the ability to eliminate current inequalities and maintain a fair trading system.

The need for contemporary relevance

Delegates who raised this concern suggested that the rules, predominantly the AoA, should be changed, updated, amended, adjusted and reformed to address current issues, circumstances, and contemporary challenges. They pointed out that conditions such as low commodity prices, and the economic and political dynamics of countries that prevailed during the Uruguay Round negotiations when the AoA agreement was negotiated, have changed in the past 20 years. Another criticism was that the Uruguay Round had not contemplated the needs of developing

countries and it was suggested that rules “should incorporate concurrent issues and challenges that NFIDCs and other poor countries are facing”.

According to one delegate, rules need to be amended to address different circumstances and have contemporary relevance, as the AoA had not taken some of them into account. A widely quoted recent example is the calculation of the Aggregate Measurement of Support (AMS) of a country associated with the public stockholding proposal. In this calculation, the distortive effect of market-price support provided by a country is calculated by comparing a fixed external reference price with the applied administered price or buying price. The fixed external reference price refers to import prices of a distance-based period (1986–1988) when the international commodity prices were low. However, the applied administered price varies with current market conditions. Therefore, countries exceeding the *de minimis* calculation of AMS are at risk of breaching the rules (WTO n.d-k).⁷² As respondents mentioned, a permanent solution is being worked out by members as mandated by the Trade Ministers at the 9th and 10th WTO Ministerial Meetings, because the rules lack provisions to tackle such adjustments.

Several delegates mentioned that the current rules are seen as inadequate in addressing the predicaments of some member countries challenged with such unforeseen situations and issues. It is widely believed that reforms to the AoA are needed to incorporate new challenges, concurrent issues and unregulated areas such as food security and environmental issues. Although they are referred to as non-trade concerns, they are evolving trade concerns. Some respondents agreed that the rules should be able to change with circumstances; one delegate said that “they are not carved in stone”.

⁷² Calculation of AMS (WTO n.d-k):- Agriculture explanation: Domestic support - Under the WTO Agreement on Agriculture (AoA), the distortive effect of market-price support programs can be quantified as a product-specific Aggregate Measurement of Support or AMS. This is equal to the difference between a fixed external reference price and an applied administered price, multiplied by the quantity of the product that is eligible to receive the administered price. The resulting AMS figure must not exceed the *de minimis* for such product, which is a prescribed percentage of the value of annual production of the said product. Because the external reference prices were based on import prices during a distant base period (usually 1986–88), their variance from current administered or buying prices has increased significantly over time and now risks placing some countries in breach of their *de minimis*.

Relationship between responses and development levels

This section focuses on the four reasons for inadequacy in the current rules discussed in the previous section. These mutually nonexclusive responses were analysed in relation to the development levels of the countries represented by the delegates. The following hypotheses are tested to understand if significant relationships exist between these reasons and the development levels of the delegates' countries. (See Appendix F-3.1 for the elaborated version of the hypotheses.)

H₀: There is no statistically significant relationship between nominating the reasons in Table 6.6 and development levels.

H₁: There is a statistically significant relationship between nominating the reasons in Table 6.6 and development levels.

Table 6.6 presents frequency percentages and p-values to determine whether there is any relationship between reasons given and development levels. Frequency percentages and standard error bars are depicted in Figure 6.7.

Table 6.6: Delegates' views on reasons for inadequate rules

Reasons for inadequacy	% of total Delegates <i>n</i> = 41	Development levels			<i>P-values</i> <i>Fisher's exact</i>
		LDC <i>n</i> = 6	Dev <i>n</i> = 26	D <i>n</i> = 9	
Need for more policy space	68%	100%	81%	11%	0.000**
Need for disciplining of trade-distortive measures	66%	50%	73%	56%	0.394
Need for balanced and transparent rules	59%	83%	50%	67%	0.279
Need for contemporary, relevant rules	22%	67%	15%	11%	0.031*

Source: Interview responses

** indicates significance at the 1% levels. * indicates significance at the 5% levels.

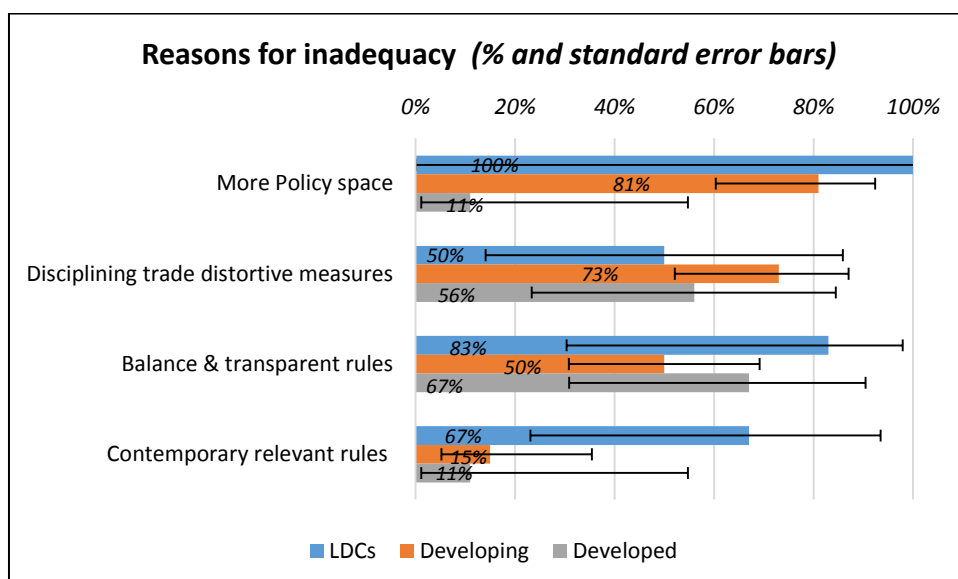


Figure 6.7: Delegates' reasons for inadequate rules

The following observations are derived from the analysis of the four reasons for inadequacy of the rules. As indicated by frequency percentages, 68% of delegates supported the need for more policy space, with 66% supporting the disciplining of trade-distortive measures⁷³, 59% supporting the need for more balanced and transparent rules and 22% arguing for greater contemporary relevance in rules.

Furthermore, among the 68% of delegates that acknowledged the need for more policy space, the least-developed and developing country delegates appeared to be more insistent than those from developed countries. The need for disciplining of trade-distortive measures and the need for balanced and transparent rules were reasons mentioned supported by all the three development levels in more than 50% of individual country responses. The former was supported mostly by the developing country delegates and the latter by delegates from the least-developed and developed countries.

The diversity of views among the development levels of the delegates is evaluated by comparing the standard error bars, based on frequency percentages. However, except for more policy space, all standard error bars overlap within the other three reasons among the three development levels, indicating that the delegates share similar views. Within more policy

⁷³ Disciplining trade-distortive measures includes views on disciplining export restrictions and subsidies, and broad comments on market distortions. Within these responses, an equal percentage (52%) of delegates identified export restrictions and subsidies separately and 33% of delegates mentioned both these aspects.

space, the standard error bar of LDC respondents' views encompass those of both developed and developing country respondents'. However, the standard error bars for the views of respondents from developing and developed countries are positioned apart and do not overlap, indicating that they have different views on granting policy space.

The hypotheses that tested for any statistically significant relationships between reference to the four reasons for inadequacy and development levels ascertained 0.000 and 0.031 as p-values for more policy space and contemporary relevance, respectively, in the rules. With the p-value being $p \leq 0.05$, H_0 is rejected and H_1 is favoured. These results indicate that there is a relationship between development levels and reference to these reasons. Further, the p-value of 0.000 is a reflection of the variation in views and the importance attached to more policy space by the responses of the least-developed and developing countries, compared to those of the developed countries. Similarly, the 0.031 p-value for the need for contemporary relevance in rules further confirms its importance to the LDCs compared to the other two groups.

The p-values recorded for the relationships between the need for disciplining trade-distortive measures and for balanced and transparent rules and development levels are $p > 0.05$. Therefore, there is no statistically significant relationship between the variables tested and H_0 is retained in this case.

6.6.2 Researchers' and officials' views

In this section, the responses of the 10 researchers and 13 officials to interview Question 3 are discussed and analysed, primarily to examine whether or not the current rules are adequate, if any relationship exists between the four main reasons for inadequacy of rules and, thereafter, to identify any linkages among the reasons. The same format and methodology discussed for the delegates in the previous section is adopted to analyse the views of researchers and officials.

The mutually exclusive responses of researchers and officials on the adequacy of rules are analysed in Table 6.9, which presents the percentages⁷⁴ and p-values tested for statistical significance between adequacy and the overall group view. (See Appendix F-3.2 for the elaborated hypotheses.)

⁷⁴ After removing non-responses; non-responses were recorded only for the officials. With non-responses column 2 would have been 31% non-responses, 15% adequate and 54% inadequate).

Table 6.7 Researchers' and officials' views on adequacy of rules

Adequacy	Total % <i>n</i> = 23	Researchers <i>n</i> = 10	Officials <i>n</i> = 13
Adequate <i>n</i> = 3	16%	10%	22%
Inadequate <i>n</i> = 16	84%	90%	78%
Overall P-value Fisher's exact	0.582		

Source: Interview responses

As depicted in Table 6.7, the overall group view (84%) and the majority view of both researchers (90%) and officials (78%) was that the rules are inadequate. As hypothesis testing produced the p-value 0.582, which is $p > 0.05$, there is no statistically significant relationship between the views on adequacy and the responder's category. However, the frequency percentages are very high both as a group and individually, indicating strong views on the inadequacy of the rules.

Because the majority (84%) considered that the rules are inadequate, this group's mutually nonexclusive comments on that inadequacy were categorised under the same four reasons explained in section 6.6.1. The results are presented in Table 6.8 and further elaborated in Figure 6.8 with standard error bars⁷⁵. The p-values for hypotheses listed in Appendix F-3.2 indicated that there is no significant relationship between reasons given and views of the researchers and officials group.

Table 6.8: Researchers' and officials' views on reasons the rules are inadequate

Reasons	Total <i>n</i> = 23	Researchers <i>n</i> = 10	Officials <i>n</i> = 13	<i>P</i> -values Fisher's exact
Need for disciplining of trade-distortive measures	78%	90%	69%	0.339
Need for more policy space	48%	30%	62%	0.214
Need for balanced and transparent rules	48%	50%	46%	1.000
Need for contemporary relevance	22%	30%	15%	0.618

Source: Interview responses

⁷⁵ Standard error bars drawn for researchers and officials overlap. Overlapping standard error bars indicate that the views of the two groups are not significantly different.

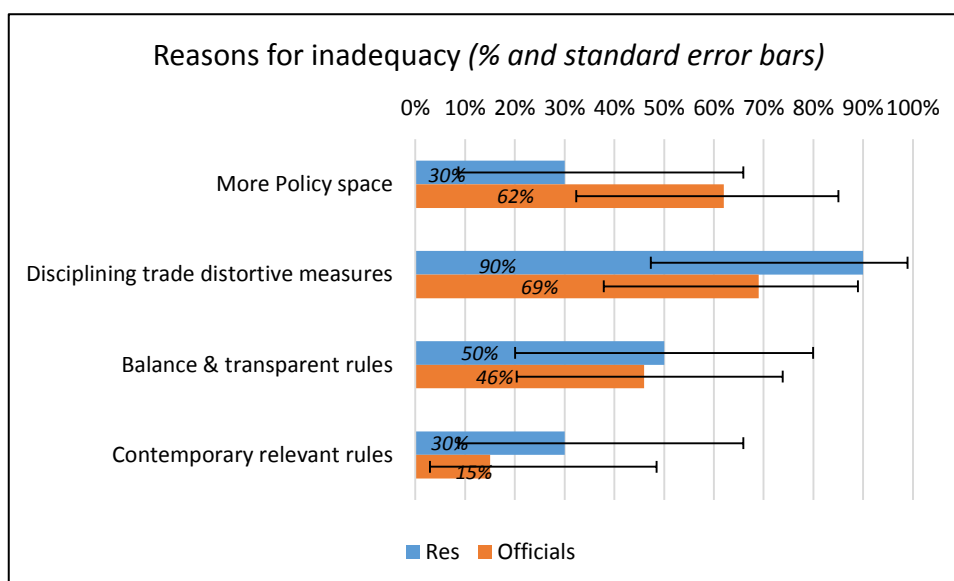


Figure 6.8: Researchers' and officials' views on reasons for inadequacy of rules

The need for disciplining trade-distortive measures stands out among the four reasons for improving and better implementing the rules that were agreed by both researchers and officials. The need for more policy space is the second most frequent reason given by officials (62%), followed by lack of balance and transparency in the rules (46%). Lack of balance and transparency in the rules (50%) is the second most frequent reason given by the researchers, followed by both more policy space and the need for contemporary rules (each 30%).

Of the respondents who acknowledged the need for disciplining trade-distortive measures, 67% mentioned export restrictions, 39% subsidies and 22% commented on both. As indicated in the results, the need for disciplining trade-distortive measures was the main concern for this group, especially the researchers, who were concerned that more policy space would lead to market distortion.

6.6.3 Summary

The delegates' reasons for the inadequacy of the rules were grouped into four main categories: the need for more policy space, for disciplining of trade-distortive measures, for balanced and transparent rules and for contemporary relevance in rules.

As to any relationship between the four reasons, delegates as a group considered the need for more policy space (68%) for deserving members and disciplining of trade distortions (66%), including export restrictions and subsidies, as main reasons for inadequacy of current rules. However, there are diverse views among the delegates. The views of developing country

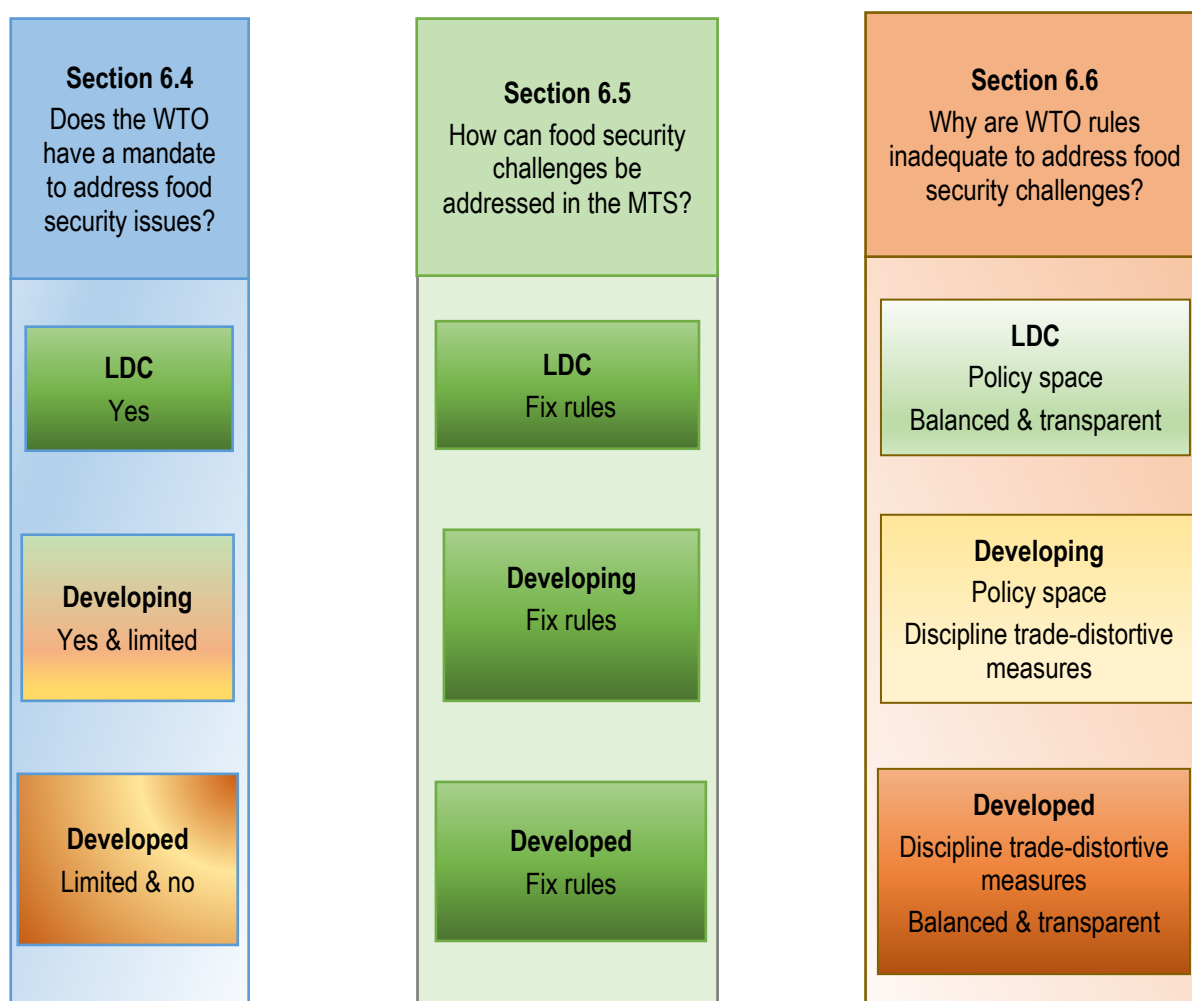
respondents are observed to be similar to the overall group view. The preference order of LDC representatives was for more policy space, followed by balanced and transparent rules, and finally, contemporary relevance in the rules. Responses from developed country representatives supported mainly balanced and transparent rules and disciplining of trade distortions. Statistically significant relationships are observed between (1) the need for more policy space and development levels and (2) the need for contemporary relevance in the rules and development levels.

Respondents from developing and developed countries have different views on granting more policy space. The arguments and comments expressed under the four main reasons discussed in this section can be interpreted as the reluctance of developed countries to extend more policy space to developing countries, which strongly favoured such an outcome. They have not, however, denied their support for the vulnerable and other poor developing countries challenged with food security issues. On the other hand, the researchers and officials expressed strong opinions that the current rules are inadequate in disciplining market distortions.

Overall, delegates, researchers and officials indicated clearly that the rules of the WTO provide inadequate policy space and ability to discipline existing and anticipated trade distortions in addressing relevant food security issues.

6.7 Conclusion

Figure 6.9 presents a brief summary of delegates' responses, which are explained in this section. A majority of delegates believed the WTO has only a limited mandate to address food security issues at the WTO, contradicting the view of the researchers/officials group who agreed that it has a mandate. However, two extreme views prevailed among the developing economy groups. Representatives of less developed countries considered that there is a mandate, whereas those from more developed economies with the group deny such a mandate (section 6.4). Developed economy responses were more likely to find a limited or no mandate.



Source: Interview responses

Note: The colours of the boxes denote the end results. Green depicts positive, yellow limited and orange negative views. A mixture of colours denote the combined reactions of these views.

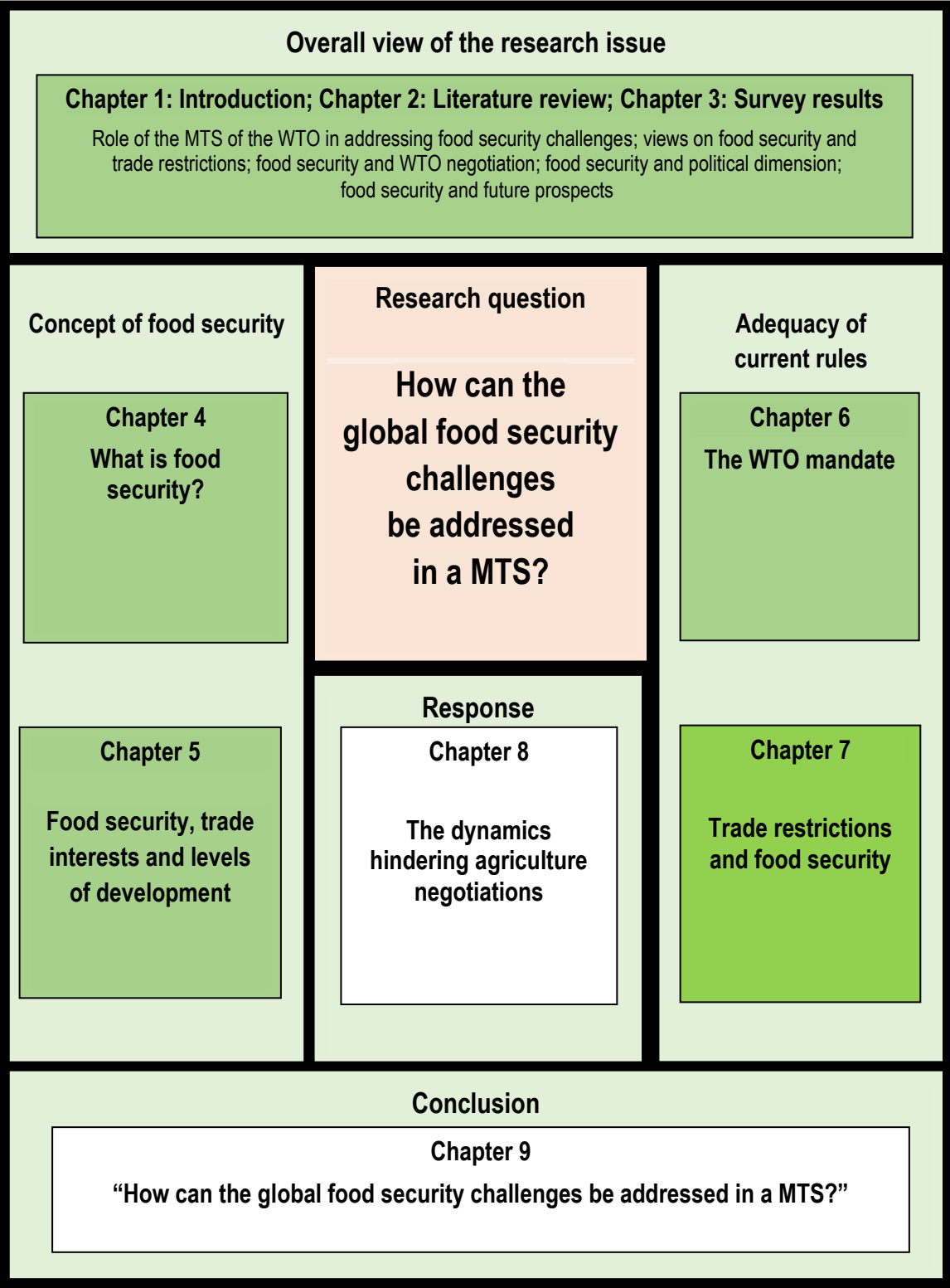
Figure 6.9: Summary of delegates' responses

As suggested by a majority of respondents across all categories, the need for improvement and better implementation of rules was the main reason for the lack of ability of the MTS to address food security challenges (section 6.5).

There were four main reasons for inadequacy of rules were identified: the lack of policy space, the lack of disciplining of trade-distortive measures, the lack of balance and transparency, and the inability to address contemporary challenges rules (section 6.6). Among these four, least-developed and developing country respondents mostly supported granting more policy space. Disciplining trade-distortive measures was considered to be a priority by the developing and developed country respondents, and imbalances and lack of transparency were a concern for those from the least-developed and the developed countries. Among both the researchers and

officials, disciplining trade-distortive measures was the main concern. In addition, researchers considered that the rules are unbalanced and lack transparency, whereas officials supported the proposition that the rules are inadequate in granting policy space.

These outcomes point to the next question: “What are the trade-distortive measures and the difficulties encountered in disciplining them under the MTS?” This is dealt within the next chapter.



Chapter 7 Trade restrictions and food security

7.1 Introduction

WTO members' views on trade-related food security issues are driven by differing country interests and development goals. Members respond by using policy instruments such as trade restrictions and subsidies, despite them being regarded by many to be protectionist and inadequately disciplined.

This chapter broadly examines the effectiveness of a number of these measures with respect to food security issues. They include import and export restrictions, export subsidies and domestic support (particularly green box support), as well as the rules disciplining these policies and the effectiveness of the dispute settlement system in the WTO over issues around their application. The purpose is to generate further insight into the debate about food security and how it might be resolved.

A significant development in the WTO history was the attempt of the Uruguay Round negotiators to discipline some of the members' contentious agriculture policies. For the first time, import and export restrictions were disciplined under Article XI of GATT in the AoA. However, exceptions are stipulated in Article XI 2(a) and 2(c) for export and import restrictions, respectively. As discussed in Chapter 2, provisions disciplining import restrictions, which were negotiated during the Uruguay Round when the commodity prices were low, are considered more effective than the provisions disciplining export restrictions. The inadequacy of the rules in disciplining export restrictions were exposed during the 2006–2008 food security crisis, where countries implemented combinations of export restrictions to protect their domestic consumers at the expense of global consumers relying on imports (Sharma 2011). These instruments fuelled market speculation and led to high prices for thinly traded staple commodities such as rice, resulting in additional 75 million (FAO 2008-b,c) chronically hungry people in 2007 (Abbott 2011; Anania 2013; Konandreas 2011; Martin & Anderson 2011; Mitra & Josling 2009; Slayton 2009; Sharma 2011).

The use of export subsidies and domestic support is also contentious. As noted in Chapter 2, GATT contracting parties that were using subsidies had to either eliminate them, convert them into tariffs, or bind and schedule them under reduction commitments (Hoekman and Kostecki 2009). The first deadline for the 25 countries that were under the reduction commitment was 2013, but it was prolonged until a firm decision was taken by the Trade Ministers at the 10th WTO Ministerial Conference held in Nairobi in 2015 to eliminate all export restrictions of

developed countries (WTO n.d-o & WTO n.d-s). In spite of their efforts to reduce the price of food in the international market, subsidies have a negative impact on exporters in least-developed and developing countries (Diaz-Bonilla & Hepburn (2016). In addition, there is rising scepticism among the developing countries about the increased spending in green box support, which is also known as “no or least trade distortive support”, following the decline of distortive support (Hepburn & Bellmann 2014). Banga (2014) has identified the shift in domestic support and also a link between green box spending and country production in developed countries. This is an area of concern among the respondents, as it can have an impact on exporters in least-developed and developing countries.as explained in more detail below, there is a concern that green box measures are being used to subsidise output.

Respondents expressed different views on all these measures. Some viewed them as trade-distortive and protectionist policies, whereas others believed they provide policy space. Both views were related to the respondents’ different country situations. These different views are discussed in more detail in this chapter.

7.2 Analysis of the survey data

First, an analysis was undertaken of survey questions that discuss trade restrictions, effectiveness of provisions, effectiveness of subsidies, policies of trading partners and obligations of the governments. (See section 3.4 which discusses survey Questions 8–18, 20 and 27.) The feedback of 49 respondents⁷⁶ – 27 delegates (18 developing, 7 developed, and 2 least-developed country representatives) and 14 researchers and 8 officials – are presented in two groups, namely, “delegates” and “researchers & officials”. This section focuses on the survey data findings in the following four areas and their analysis. (See Appendix B-1.1 and B-1.2 for the survey questionnaires.)

1. Whether the AoA is sufficient to fulfil country obligations on food security (Question 27)
2. Whether Article XI GATT and Article 12 of the AoA are sufficient in regulating export and import restrictions (Questions 8 and 9)
3. Trade policies such as export and import restrictions (Questions 10–13)

⁷⁶ One response had not identified its country development level and was not included in the analysis.

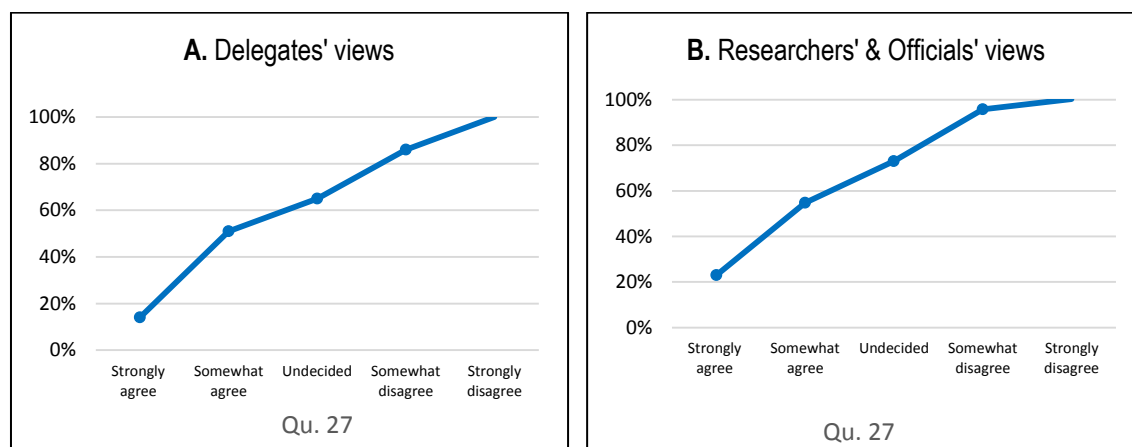
4. Views on export subsidies and domestic support (Questions 14–18 and 27)

The cumulative percentages for each group are set out in Appendix G-1. Percentages for overall group views and individual category views are included in Appendix C.

The following section provides an overview of the results.

7.2.1 Findings

Nearly 60% of both delegates and researchers and officials agree (combination of somewhat and strongly) that the AoA is equipped with necessary provisions for a country to address its food-related obligations (see Figure 7.1). However, another 21% of delegates and 23% of researchers and officials somewhat disagreed with this statement. Responses differed by country type, with 86% of developed country respondents agreeing with this statement. In contrast, 100% of LDCs somewhat disagreed that AoA is sufficient. Developing country views were scattered, with 39% agreeing (combination of somewhat and strongly) and another 44% disagreeing (combination of somewhat and strongly).



Source: survey data

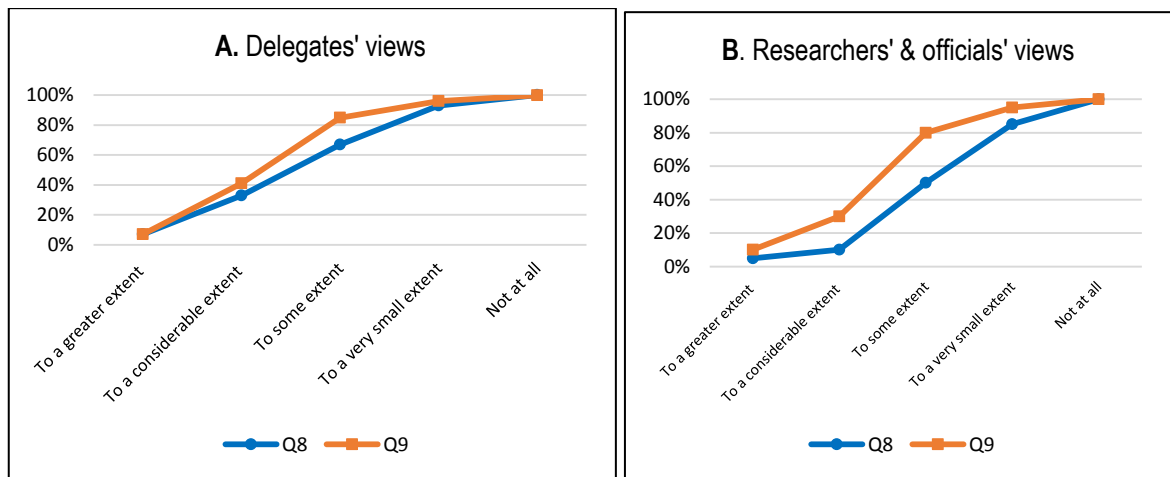
Figure 7.1 Delegates' (A) and researchers' and officials' (B) views on sufficiency of provisions to fulfil obligations on food security⁷⁷

⁷⁷ Survey Question 27: views on whether “AOA contains sufficient provisions and flexibilities for a State to fulfil its Right to Food obligations and responsibilities”.

Question 8 refers to the provisions' sufficiency to regulate export restrictions (results of Question 8, see Figure 7.2).

- Only 33% of delegates and 10% researchers and officials had a strong opinion that these provisions are sufficient.
- The majority of delegates (34%) believed the provisions are sufficient to some extent, while another 33% thought them insufficient.
- Researchers and officials held a more negative stance, with 40% considering the provisions sufficient to some extent and another 50% denying their effectiveness.

Responses differed, with developing and least-developed country representatives considering these provisions to be more adequate than the developed country respondents considered them.



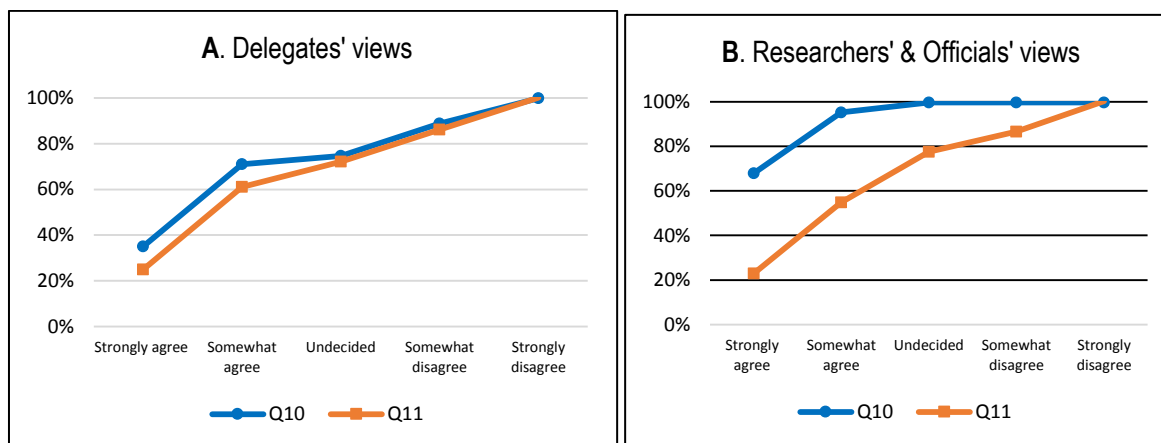
Source: survey data

Figure 7.2 Delegates' (A) and researchers' and officials' (B) views on sufficiency of the provisions to regulate export restrictions⁷⁸

Question 9 refers to the provisions' sufficiency to regulate import restrictions (results of Question 9, see Figure 7.2). Respondents generally regarded these provisions as more effective

⁷⁸ Survey Question 8: Are Article XI GATT and Article 12 of the AoA sufficient in regulating export restrictions?
Survey Question 9: Is Article XI GATT sufficient in regulating import restrictions?

than those applying to export restrictions, with only 15% of delegates and 20% of researchers and officials contradicting their efficiency.



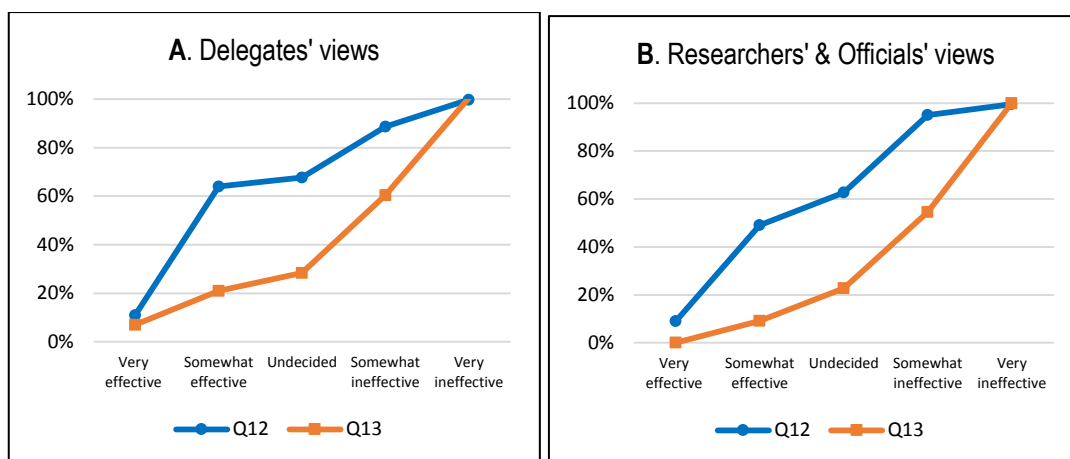
Source: survey data

Figure 7.3 Delegates' (A) and researchers' and officials' (B) views on import and export restrictions as trade-distortive and effective policy measures⁷⁹

Both groups were of the view that import and export restrictions are trade-distortive measures (results of Question 10, see Figure 7.3), with 68% of the researchers and officials group strongly believing it, while 71% of delegates (36% somewhat and 35% strongly) also supporting it. This position is observed clearly among all individual categories except for the developing countries, of whom 55% agreed and another 39% disagreed these measures are trade-distortive.

Around 60% of delegates and researchers and officials agreed that export and import and restrictions could be considered policy measures to ensure the food security needs of domestic consumers (Question 11, Figure 7.3). When examining the individual group views, developing countries (66%), LDCs (100%) and researchers (65%) supported this view. However, a mixed reaction was observed among developed country and officials' responses.

⁷⁹ Survey Question 10: Export and import restrictions are trade-distortive measures. Survey Question 11: Export and import restrictions can be considered as trade policies that a country could implement to ensure food security needs of domestic consumers.



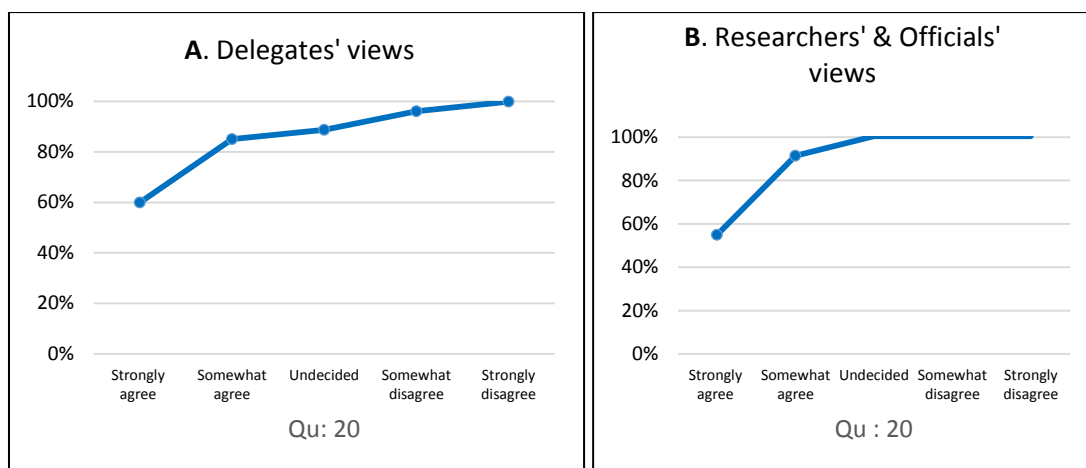
Source: survey data

Figure 7.4 Delegates' (A) and researchers' and officials' (B) views on effectiveness of import and export restrictions in addressing short- and long-term food security needs⁸⁰

Sixty-four per cent of delegates and 49% of researchers and officials supported the idea that import and export restrictions are effective in the short term (Question 12, Figure 7.4). Responses differ by country type. Respondents from developing (72%) and least-developed (100%) countries supported this idea, however, 57% of developed country respondents held a negative view. Furthermore, the views of researchers and officials were divided. When the undecided percentages are not considered, 50% of each category held a positive view and another 36% a negative view.

The most common view among both delegates and researchers and officials is that these policies are not effective from a long-term perspective (Question 13, Figure 7.4). Forty per cent of delegates and 45% of researchers and official groups considered them very ineffective. Further, this view was confirmed by 57% of developed country respondents, 33% of developing country respondents, 43% of researchers and 50% of officials. On the other hand, 50% of LDC respondents, 28% of developing country respondents and 13% of officials believed these policies can be used as long-term measures.

⁸⁰ Survey Question 12 and 13 inquired into effectiveness of the import and export restrictions in ensuring food security needs of the domestic consumers in the short-term and long-term respectively.



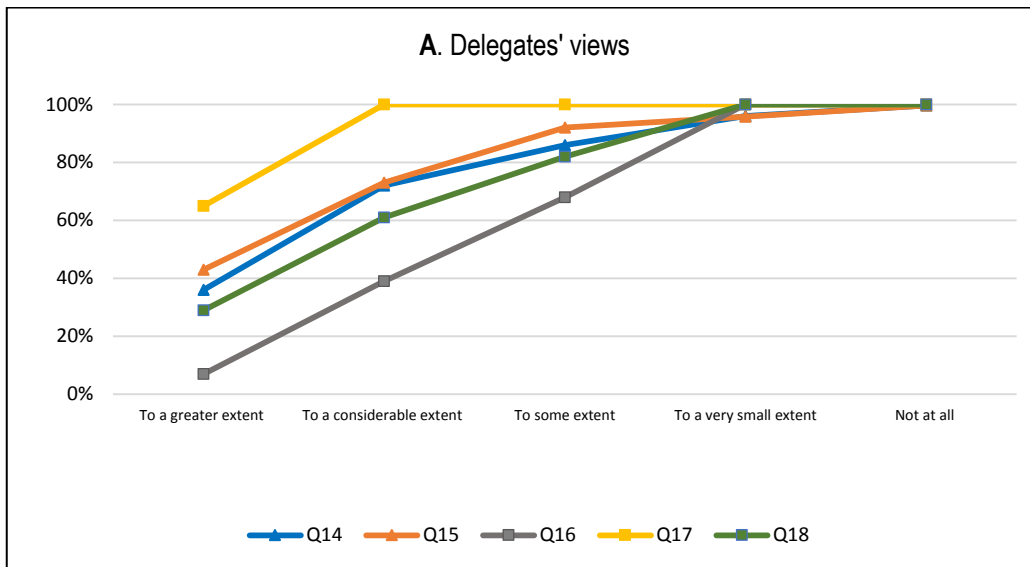
Source: survey data

Figure 7.5 Delegates' (A) and researchers' and officials' (B) views on export subsidies of the developed countries⁸¹

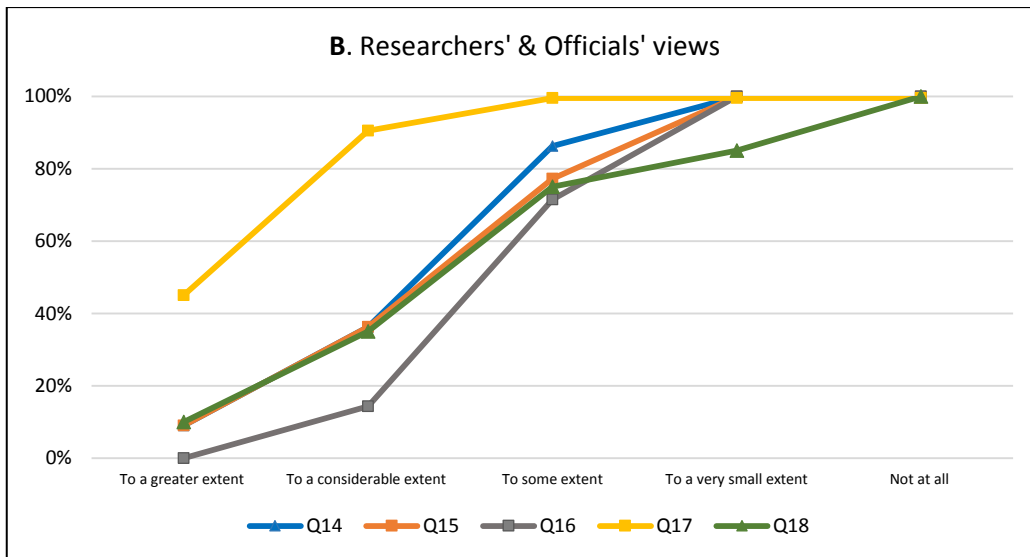
Around 60% of delegates and 55% of researchers and officials strongly confirmed that “trade policies of the developed countries (e.g. US Farm Bill and the EU CAP) have market distorting elements” (Question 20, see Figure 7.5). This view is strongly supported by the developing countries (72%), LDCs (50%), researchers (64%) and officials (37%). Developed country views vary, with 29% strongly agreeing, another 29% somewhat agreeing, and the rest having equally divided (14% each) views among the other three scales.

As depicted in Figure 7.6, Questions 14 and 15 examined the impact of export subsidies on importers and exporters in the developing and least-developed countries. Seventy-two per cent of delegates agreed that export subsidies have an impact on the food security of developing and least-developed countries that are importing food. Responses differed among the country levels, with 100% of LDC and another 89% of developing country respondents supporting this statement. However, 57% of the developed country respondents denied this impact. Among the researchers and officials group, only 36% supported the statement, with another 50% believing there to be only some effect.

⁸¹ Survey Question 20: Views on the trade policies of the developed countries (US Farm bill and EU CAP) have market distorting elements.



Source: survey data



Source: survey data

Figure 7.6 Delegates' (A) and researchers' and officials' (B) views on export subsidies and domestic support⁸²

⁸² Question 14: To what extent do developed country export subsidies have an impact on the food security of developing and LDCs countries which are importing food stuff? Question 15: to what extent do developed country export subsidies have an impact on the food security of developing and LDCs countries which are exporting food stuff? Question 16: In your view to what extent are the developing countries and LDCs making use of “Green box” measures? Question 17: In your view to what extent are the developed countries making use of “Green box”

Similarly, 73% of the delegates agreed that export subsidies have an impact on the food security of developing and least-developed countries that are exporting food. This view was supported by respondents from 100% of LDCs, 88% of developing countries and another 43% of developed countries. However, only 36% of the researchers and officials had identified that subsidies have an impact on the exporting countries, with 41% of this group considering the impact to be to some extent.

Questions 16 and 17 focused on the use of green box subsidies by developing and developed countries (Figure 7.6). The delegates' views were scattered: 39% agreed there is high usage, 29% to some extent, and 32% only very small. Responses differed by country type, with 71% of developed country respondents confirming that the use is high, in contrast to 50% of least-developed and 45% of developing country respondents saying that the usage is to a very small extent. A majority (57%) of researchers and officials considered the usage to be only to some extent, while 43% of the officials also confirmed that the use is low. All of the delegates and 90% of the researchers and officials strongly agreed that the developed economies are using green box support (Question 17).

In response to survey Question 18 on whether non-trade distortive subsidies are a necessary food security measure for resource-poor farmers, 61% of delegates considered the subsidies necessary, along with 100% of least-developed, 67% of developing and 43% of developed country delegates. Only 35% of researchers and officials considered these measures necessary for resource-poor farmers. However, most of the responses for this group lie in the "to some extent" category. Among the researchers and officials, 43% of officials believed these measures will help the farmers to a considerable level.

7.2.2 Conclusion: survey findings

A majority of respondents in both groups of economies believed that export and import restrictions distort trade, and the majority of all respondents also accepted that a country could implement these measures to reach its food security goals. However, a majority of respondents from the developed countries' did not agree with the latter proposition.

measures? Question 18: do you consider non-trade distortive subsidies as a necessary food security measure for resource poor farmers?

A majority of delegates (64%) as well as nearly half of researchers and officials agreed that import and export restrictions are effective short-term measures for achieving food security goals. This view was supported mostly by the developing and least-developed country respondents. However, the majority of all respondents also viewed them as less effective as long-term measures.

There was a common view that import restrictions are regulated more effectively than export restrictions by Article XI of GATT than export restrictions are under Article XI of GATT and Article 12 of the AoA. However, there were contrasting views on the effectiveness of export restriction provisions, with developing country delegates agreeing that they are effective and developed country delegates disagreeing.

Responses on subsidies were also mixed. There was a strong common view that the subsidy policies of developed countries have market-distorting effects. This was held by all categories of respondents except those from developed countries.

A majority of respondents accepted that the developed countries use of green box subsidies is at a significant level. However, there were mixed views on the level of use of green box subsidies among the developing countries.

Finally, non-trade distortive subsidies were accepted as a necessary food security measure for resource-poor farmers, mostly by delegates and officials.

The interview findings are examined next. The focus in this discussion is to understand the impacts of various trade policies applied to support food security goals, the capacity of the WTO rules to discipline their trade-distortive effects, and the effectiveness of the WTO DSS in facilitating members' complaints about their application.

7.3 Analysis of the interview findings

The analysis is based on the interview responses of Geneva-based agriculture delegates (41), researchers (10), and officials (12)⁸³. The views of delegates and researchers/officials are presented separately, for their differing roles. Further, delegates' responses were categorised

⁸³ The number of officials' responses differs depending on their preference and how competent they felt to answer more technical details on the WTO. The responses of one official, who did not feel competent to answer some of the technical areas on the WTO, were not considered in this section.

according to their countries' development levels, trade interests and income levels, as explained below.

- Development levels:⁸⁴ 41 respondents representing 26 developing (Dev), 9 developed (D) and 6 LDCs
- Trade interests in consideration of import and export interests⁸⁵: 22 NFIs and 19 net food exporters (NFEs)
- Income levels: The responses of the 41 delegates were further classified into five income levels based on the average GNI per capita income for the five-year period 2010–2014 (World Bank 2017). The same five income levels⁸⁶ explained in section 5.2 and used in section 5.4 are used in this chapter. The 26 developing countries were represented under income levels as 5 high-income, 7 upper middle-income and 14 lower middle-income countries.

The methodology included thematic analysis on interview transcripts, and thereafter, calculation of frequency percentages on the total number represented within each category (LDC = 6, Dev = 26, D = 9, researchers = 10 and officials 12). Further, when deemed necessary, hypothesis testing was conducted for any statistically significant relationships, using Stata software.

In testing hypotheses, p-values are derived using Fisher's exact test to find if any relationships exist between variables. The level of significance (α) of the test or the threshold for rejecting H_0 is set at 0.05 (5%) level. Therefore, when $p \leq \alpha$ (0.05) the H_0 (null hypothesis) is rejected and H_1 (alternative hypothesis) is favoured, and interpreted as there is a statistically significant

⁸⁴ Development levels are same as the WTO identification: developed as in the accession; LDCs as recognised by the UN; developing, a self-identified group.

⁸⁵ Countries were categorised as net importers and net exporters based on the FAOstat data and WTO categorisation of net food-importing developing countries (NFIDCs). 2014 data for food exports and imports in each FAO country profile were compared to determine the status. When the differences between imports and exports were very narrow, 2000 data were used to substantiate the decision (FAO 2017).

⁸⁶ Highest (HD: all developed countries), high-income developing (HDV: > \$12,746), upper middle-income developing (UMDV: \$4,125–\$12,746), lower middle-income developing (LMDV: \$1,045–\$4,125) and low-income (all LDCs) economies.

relationship that exists between the variables tested. In the case of $p > \alpha$ (0.05) the H_0 (null hypothesis) is not rejected and H_1 (alternative hypothesis) cannot be established.

This section focuses on the interview findings in the following four areas and their analysis. (See Appendix B-2 for the interview questionnaire)

1. Impact of import and export restrictions as a food security policy/measure (Interview Question 4(a) and (b))
2. Impact of export subsidies and domestic support as a food security policy/measure (Interview Question 4(c))
3. Effectiveness of WTO rules (Article XI of GATT and Article 12 AoA) in disciplining import and export restrictions (Interview Question 5)
4. The DSM in addressing food security issues (Interview Question 6)

Interview findings related to each of these questions are presented in the next four subsections and the results are summarised in 7.4 Conclusion. Appendix G-3 includes respondents' detailed reasoning of:

- positive and negative impacts of each policy
- discussion of Article XI of GATT and Article 12 of AoA, and the members' suggestions on export restrictions included in *Revised Draft Modalities for Agriculture* as a part of the DDA negotiation (WTO 2008)
- the dispute settlement procedures and a summary of its usage in reference to these provisions.

7.3.1 Impact of import and export restrictions as a food security policy/measure

The mutually exclusive responses⁸⁷ of delegates and researchers/officials on the impact of import restrictions to resolve food security issues are categorised as having a positive, negative and mixed impact. (See Appendix G-3.1).

⁸⁷ Interview Question: 4(a) What is the relationship between food security and import restrictions? (Appendix B-2)

Table 7.1: Delegates' views on import restrictions (%)

Views	%	Development level			Trade interest		Income level				
		LDC n= 6	Dev n = 26	D n = 9	NFI n = 22	NFE n = 19	HD n = 9	HDV n = 5	UMDV n = 7	LMDV n = 14	LDC n = 6
Positive (%)	29	66	23	22	46	11	22	20	29	21	66
Negative (%)	44	17	42	67	27	63	67	80	42	29	17
Mixed (%)	27	17	35	11	27	26	11	0	29	50	17
Total (%)	100	100	100	100	100	100	100	100	100	100	100
Overall P-values		0.185			0.031*		0.172				

Source: Interview responses. * indicates significance at the 5% levels.

The percentages depicted in Table 7.1 are calculated from the total responses of each group. Responses differ by country type with developed and least-developed at two extremes. Of the delegates, 44% believed that import restrictions have a negative impact on countries' food security needs. This view was shared mostly by respondents from the developed (67%) countries, NFEs (63%), and developing countries (42%), which represent the high-income (80%) and upper middle- (42%) income categories. Among the developing countries the response rate of the high-income developing countries is significant, where one member seems to be content while the other four have shared a negative view on the measure. However, delegates from LDCs (66%) and NFIs (46%) considered that import restrictions have a positive impact on their food security needs. A high level of mixed views was noted for 35% of developing countries, represented mostly by the lower middle-income developing income countries (50%). Table 7.1 shows that, among the p-values, 0.031 was $p \leq \alpha$ (0.05), indicating a significant relationship between respondents' views on restrictions and their corresponding trade interests. (See Appendix G-3.1.1 for hypotheses).

As presented in Table 7.2, only 46% of the group of researchers and officials responded to the question⁸⁸, and among them a higher response was recorded from the researchers (70%) with a mostly negative view on import restriction. This view is in line with the delegates' responses.

⁸⁸ They did not give much attention to import restrictions in their responses, because it is more disciplined.

Table 7.2: Researchers' and officials' views on import restrictions (%)

Views	% n = 22	Res n = 10	Off n = 12
Positive	14	20	8
Negative	27	50	8
Mixed	5	0	8
Total	46%	70%	24%

Source: Interview responses

Like the import restrictions, respondents' views⁸⁹ on export restrictions were categorised as positive, negative and mixed reactions and presented separately. (See Tables 7.3 & 7.4 and Appendix G-3.1.2).

Table 7.3: Delegates' views on export restrictions (%)

Views	Total % n = 41	Development level			Trade interest		Income level				
		LDC n = 6	Dev n = 26	D n = 9	NFI n = 22	NFE n = 19	HD n = 9	HDV n = 5	UMDV n = 7	LMDV n = 14	LDC n = 6
Positive	19	17	27	0	9	31	0	20	29	28	17
Negative	54	50	42	89	55	53	89	80	29	36	50
Mixed	27	33	31	11	36	16	11	0	42	36	33
Total (%)	100	100	100	100	100	100	100	100	100	100	100
Overall P-values		0.185			0.148		0.199				

Source: Interview responses

Diverse views were expressed by the delegates according to their country interests and situations. A majority of respondents viewed export restrictions as having a negative impact on food security. This view was shared by delegates from developed countries (89%), followed by those from LDCs (50%). However, even among the LDCs, another 33% considered that export restrictions have a mixed impact. Among the developing countries, although 42% considered that export restrictions have a negative impact, another 31% considered the impact to be mixed and another 27% positive. Within this group, response rate of the high-income developing countries is significant, where one member seems to be content while the other four

⁸⁹ Interview Question: 4(b) what is the relationship between food security and export restrictions? (Appendix B-2)

consider export restrictions negatively. A majority of both NFIs and NFEs viewed export restrictions as generating a negative impact, however, another 36% of NFI had a mixed reaction. The negative reaction of 53% of NFEs stands out among the delegates. The p-values, however, indicate there is no relationship between delegates' categories and views on export restrictions.

Table 7.4: Researchers' views on export restrictions (%)

Views	% n = 22	Res (%) n = 10	Off (%) n = 12
Positive (%)	9	0	16
Negative (%)	64	90	42
Mixed (%)	27	10	42
Total (%)	100	100	100

Source: Interview responses

Sixty-four per cent of the researchers and officials group (reflecting mainly the views of 90% of researchers) considered export restrictions to have a negative impact. Another 27% of the respondents (mostly officials (42%)) considered the impact mixed. (See Table 7.4).

Table 7.5 summarises the views on the impact of import and export restrictions, based on the comments received.

Table 7.5: Impact of import and export restrictions

	Import restrictions	Export restrictions
Domestic consumers	Negative impact	Positive impact
Global consumers /importers	Not discussed	Negative impact
Domestic exporters	Not applicable	Negative impact specially in the long run
Other exporters	Negative impact	Can be profitable
Domestic producers	Positive impact	Negative impact specially in the long run

Source: respondents' responses

Interview responses reveal the following points.

- There is an understanding that import restrictions protect domestic farmers and industries, while export restrictions shield the domestic consumers.
- Export restrictions have an impact on the food security of global consumers and, if prolonged, on the domestic farmers/exporters.

- Import restrictions have an effect on the domestic consumers and the farmers/exporters of exporting countries.
- Import and export restrictions can lead to a self-sufficiency policy.
- The food security concerns of global consumers were recognised, even though preference was given to addressing the food security needs of domestic consumers in a food shortage.

Despite acknowledging a range of negative aspects, some countries would like these measures to be available to use when the need arises, as most staple foods are weather-bound agricultural products. This view was noted particularly among the developing and least-developed countries compared to developed countries with necessary resources, unless and otherwise used for protecting their farming industry or for national security purposes.

Within the developing group, the high-income developing country responses are noted significant with majority identifying that both the measures as negative. This group's view is different to other developing countries and it is more inclined to the developed countries.

The analysis reveals that these domestic policies have an impact on the food security circumstances of trading partners. Therefore, the effectiveness of these policies in addressing the food security needs of all members is questionable.

7.3.2 Export subsidies and domestic support as a food security policy/measure

The diverse views⁹⁰ of delegates and researchers/officials on the positive and negative effects of export subsidies⁹¹ and domestic support are recorded separately:

- The three major negative effects are displacement of domestic products, displacement of export markets, and the unfair playing field among the members.
- The three major positive effects are enhancing domestic production, attracting investments into the agriculture sector, and providing food at a low or cheaper price.

⁹⁰ Interview Question: 4(c) What is the relationship between food security and subsidies (export subsidies and domestic support)? (Appendix B-2)

⁹¹ Only some WTO members could use these export subsidies (WTO n.d-o). They are countries that had schemes prior to the Uruguay Round and were permitted to use them, subject to reduction commitments with a view to eliminating them. The subsidies of the developed countries are now eliminated under the Nairobi Ministerial Decision 2015 on Export Competition - WT/MIN(15)/45 WT/L/980 of 21 December 2015 (WTO 2015-a).

(See Tables 7.6 – 7.9 and Appendix G-3.2)

As depicted in Table 7.6, product displacement and the impact on domestic producers (68%) was the main negative effect identified by the delegates in their non–mutually exclusive responses. The effect was acknowledged mostly by the least-developed (83%) and developing country (73%) respondents, and significantly less by the developed country respondents (44%), and this outcome is reflected in their income levels.

The challenge imposed on exporters and the displacement of export markets was raised by another 59% of the delegates, mostly from developed (56%) and developing (65%) countries also falling into the high (80%) and middle (71%) income developing levels and in the NFE category (79%).

Those identifying an unfair playing field as a negative effect of export subsidies and domestic support policies were mostly the LDCs (50%), NFEs (47%) and developing (46%) countries, representing high (60%) and lower middle (50%) income categories, rather than the developed respondents (22%).

A statistically significant relationship is ascertained between the view on displacement of export markets and overall trade interest, with a recorded p-value of 0.025 for the hypothesis and results (see Appendix G- 3.2.2, Table G-3.5). This outcome further confirms the negative impact that the exporters would experience from subsidies.

Table 7.6 shows that displacement of domestic industry and an unfair playing field are concerns for the LDCs and displacement of export markets is a concern for the developing country respondents.

Table 7.6: Delegates' identification of the negative impacts of subsidies (%)

Reasons for negative effects	%	Development level			Trade interest		Income level				
		LDC n = 6	Dev n = 26	D n = 9	NFI n = 22	NFE n = 19	HD n = 9	HDV n = 5	UMDV n = 7	LMDV n = 14	LDC n = 6
Displacement of domestic products (%)	68	83	73	44	73	63	44	40	86	79	83
Displacement of export markets (%)	59	33	65	56	41	79	56	80	71	57	33
Unfair playing field (%)	42	50	46	22	36	47	22	60	29	50	50

Source: Interview responses

Table 7.7: Delegates' identification of the positive impacts of subsidies (%)

Reasons for positive effects	%	Development level			Trade interest		Income level				
		LDC n = 6	Dev n = 26	D n = 9	NFI n = 22	NFE n = 19	HD n = 9	HDV n = 5	UMDV n = 7	LMDV n = 14	LDC n = 6
Enhancing domestic production (%)	61	50	58	78	55	68	78	60	57	57	50
Incentive (%)	32	33	27	44	36	26	44	20	43	21	33
Cheap food (%)	24	33	23	22	27	21	22	0	43	21	33

Source: Interview responses

The need for agriculture subsidies was recognised by 61% of the delegates in their non-mutually exclusive responses, mostly developed (78%) rather than developing (58%) and least-developed (50%) countries. This aspect is reflected in their higher income levels and being NFEs (68%). (See Table 7.7).

Another 32% viewed subsidies as an incentive attracting investment in the agriculture sector. This positive impact was supported mostly by respondents from developed (44%), followed by upper middle-income developing (43%) and NFI (36%) countries.

Twenty-four per cent viewed low food prices resulting from subsidies as positive, mostly the LDCs (33%), NFI (27%) and upper middle-income developing countries (43%).

Among the developing country income levels, the high-income developing countries agree that subsidies enhance production along with other two income levels. They display a forceful trade interest expressing concerns on displacement of export markets compared to other developing countries who are more interested in domestic displacement.

As can be seen in Table 7.7, among the three development levels, developed country respondents viewed domestic production and incentive for agriculture investments as very important impacts of subsidies.

Table 7.8 reveals that researchers and officials identified as equally negative effects (73%) the displacement of both domestic products and export markets, a view most prominent among the researchers (80%). Among the high-rated positive effects revealed in Table 7.9 are its ability to enhance domestic production and provide cheap food, identified mostly by the officials (Table 7.9), although researchers identified subsidies as a tool for attracting investments.

Table 7.8: Researchers' and officials' views of the negative impacts of subsidies (%)

Reasons for negative effects	% n = 22	Res n = 10	Off n = 12
Displacement of domestic products (%)	73	80	67
Displacement of export markets (%)	73	80	67
Uneven playing field (%)	23	20	25

Source: Interview responses

Table 7.9: Researchers' and officials' views of the positive impacts of subsidies (%)

Reasons for positive effects	% n = 22	Res n = 10	Off n = 12
Enhancing domestic production (%)	64	50	75
Cheap food (%)	64	40	83
Incentive (%)	59	60	58

Source: Interview responses)

Overall, subsidies (including both export and domestic) were seen as having negative and positive impacts on food security. Subsidies of other countries negatively affect the food security of domestic farmers by displacing domestic production and industry. It also affects the accessibility dimension by displacing the export markets and, as a result, can lead to trade deficits. Subsidies also create an unfair playing field in international markets.

Nevertheless, many delegates raised the importance of providing subsidies as they increase the availability, stability and accessibility dimensions of food security by enhancing production. This results in cheaper or more affordable, available food, which can alleviate poverty and address food security. Countries having difficulties in producing food or feeding their populations favour price competition and subsidised food.

There are many objectives in providing subsidies, as they can enhance production, act as an incentive to encourage and assure farmers, attract investors, and create jobs and retain rural livelihood. However, as pointed out by some delegates, subsidies are political decisions. If they are not properly administered they can produce production with inferior quality, which will be a waste of resources as mentioned by a delegate.

Increases in production or quantities were noted as the main issue around subsidies. Increased production can feed the poor and address other food security issues, but it also poses a threat to other countries if these stocks are exported. This was a strong concern among respondents. Subsidies provided by the least-developed and poor, developing countries were not a concern for the developed countries, but subsidies provided by developing countries that are major producers were seen as a threat by many respondents. Some delegates pointed to the inadequacy of rules to identify such linkages.

Among the developing and developed countries there were diverse interpretations and understandings of terms such as “farmer”, “farmland”, “what is given as subsidies” (e.g. seeds

or a bag of fertiliser given farmers in developing and least-developed countries compared to more funds for R & D, insurance and pension programs for farmers in developed countries)”, “volume of subsidies” and “purpose or objective of subsidies”. Purposes can be further clarified as being for consumption, domestic market (which could be varying from rural community, village or city), production for commerce or export, and subsidising “commodities” (for staple food or otherwise). The responses also highlighted that the domestic production of developed and developing countries are at different levels. Some developing country delegates pointed out that developed country farming is for commercial or business purposes, and farmlands are vast, whereas farmers in developing countries grow on 2–10 hectare plots of land. Most of them are subsistence farmers and do not own farmlands. These farmers lease these small plots or work as hired labour in others’ farms for a very small daily wage (less than a dollar a day). In some countries there are title issues, and these constraints make it difficult to obtain loans. Therefore, there are clear differences between developed and developing countries in meanings of the terms “domestic producer” and “domestic production”.

The use of subsidies is a complicated issue, as consumers may be at the same time producers or employees of farms whose desire is to obtain higher prices, and higher incomes from their produce. As many delegates pointed out, whether subsidies are good or bad depends on individual country capacities and situations.

7.3.3 Disciplining import and export restrictions

Views⁹² on the effectiveness of current provisions (Article XI of GATT and Article 12 of AoA) in disciplining export and import prohibition and restrictions are presented separately for the delegates and researcher/officials. (See Appendix G-3.3).

⁹² Question 5: In your view, do GATT Article XI and Article 12 of the Agreement on Agriculture sufficiently discipline the use of quantitative restrictions (import/export restrictions)? (Appendix B-2)

Table 7.10: Delegates' views on the effectiveness of provisions on export prohibition and restrictions (%)

Views	%	Development level			Trade interest		Income level				
		LDC n = 6	Dev n = 26	D n = 9	NFI n = 22	NFE n = 19	HD n = 9	HDV n = 5	UMDV n = 7	LMDV n = 14	LDC n = 6
AoA 12											
Yes (%)	29	50	35	0	23	37	0	20	43	36	50
No (%)	51	33	42	89	55	47	89	60	29	43	33
GATT XI											
Yes (%)	29	33	35	11	18	42	11	20	43	36	33
No (%)	37	17	38	44	36	37	44	40	29	43	17

Source: Interview responses)

More delegates commented on Article 12 of the AoA than on Article XI of GATT in relation to export prohibitions and restrictions (See Table 7.10). The majority view was that the provisions are not sufficient. However, within the development levels, extreme views were observed between least-developed and developed countries. Members of the developed (89%), NFI (55%) and high-income developing (60%) categories registered significant concern (51%) over the provisions, in contrast to those colleagues who believed them to be effective (29%). Those who considered the current provisions adequate were mostly respondents from LDCs (50%) and upper middle-income (43%) countries. The views of the developing countries were more evenly distributed among the response categories. Among the developing group high-income developing group consider both provisions are not sufficient. Their thinking is seen differently from the less income developing categories but more agreeable with the developed countries.

Table 7.11: Researchers' and officials' views on the effectiveness of provisions on export prohibition and restrictions (%)

	% (n = 21)	Res (n = 10)	Off (n = 11)
AoA 12			
Yes (%)	14	10	18
No (%)	86	90	82
GATT XI			
Yes (%)	14	10	18
No (%)	86	90	82

Source: Interview responses

Both the researchers and the officials were very critical about export restriction provisions. The overall negative view (86%) was given mostly by researchers (90%), closely followed by officials (82%), acknowledging the inadequacy of the AoA Article 12 and GATT Article XI provisions. (See Table 7.11)

Because the inadequacy of export restriction provisions was identified in many of the responses, the justifications were analysed. The three reasons that emerged were the need for more transparency, the need for more clearly defined terms and the need to strengthen disciplinary actions.

Tables 7.12 and 7.13 show that 54% of delegates and 57% of researchers and officials considered that notifications, monitoring and surveillance elements related to transparency must be enhanced, as the current transparency mechanism is not effective. Among the delegates, the developed (89%), lower middle-income developing (71%) and NFE (63%) countries strongly supported this view. High-income developing groups voted each way on the adequacy of transparency provisions (i.e. 20% adequate and 20% inadequate) and so did upper middle-income developing groups (14% adequate and 14% inadequate). A few respondents in developing (12%) and NFE (16%) categories also considered the current mechanism sufficient.

Table 7.12: Delegates' views on the adequacy of provisions on export prohibition and restrictions (%)

Views	%	Development level			Trade interest			Income level			
		LDC n = 6	Dev n = 26	D n = 9	NFI n = 22	NFE n = 19	H n = 9	HDV n = 5	UMDV n = 7	LMDV n = 14	LDC n = 6
Transparency											
Yes (%)	7	0	12	0	0	16	0	20	14	7	0
No (%)	54	33	46	89	45	63	89	20	14	71	33
Definitions											
Yes (%)	5	0	8	0	0	11	0	0	0	14	0
No (%)	32	33	27	44	41	21	44	40	29	21	33
Discipline											
No (%)	27	17	35	11	27	26	11	60	14	36	17

Source: Interview responses

Table 7.13: Researchers' and officials' views on adequacy of provisions on export prohibition and restrictions (%)

Views	% n = 21	Res n = 10	Off n = 11
Transparency			
No (%)	57	60	55
Definition			
No (%)	48	50	46
Discipline			
No (%)	38	70	9

Source: Interview responses

Thirty-two per cent of delegates and 48% of researchers and officials considered the terms used vague and needing to be redefined, as countries can have “different interpretations”. This feedback was noted across all categories, except for 8% of developing country responses representing the lower middle-income developing group. The terms specifically identified were “temporarily” and “critical shortages”, “foodstuff” and “net food exporters”.

The lack of rules for “disciplining or enforcement” of export restrictions was considered to be a source of ineffectiveness. Negative views were shared by 38% of researchers and officials and 27% of delegates. Among the delegates, it was mostly the developing countries (35%) and primarily the high (60%) and lower middle (36%) income categories that gave more prominence to this issue.

Some delegates interpret export restriction provision as “only a monitoring exercise”, whereas another set of delegates considered it a “voluntary” requirement rather than a mandatory rule, owing to the vagueness in the rules. Therefore, respondents considered that provisions should be strengthened around disciplining elements. This view is strongly identified by the high-income developing countries.

The respondents' views on the effectiveness of provisions related to import prohibition and restrictions are presented in Tables 7.14 and 7.15.

Table 7.14 Delegates' views on the effectiveness of provisions on import prohibition and restrictions (%)

Views	%	Development level			Trade interest		Income level				
		LDC n = 6	Dev n = 26	D n = 9	NFI n = 22	NFE n = 19	HD n = 9	HDV n = 5	UM n = 7	LM n = 14	LDC n = 6
GATT XI											
Yes (%)	32	33	35	22	27	37	22	0	43	43	33
No (%)	22	17	19	33	18	26	33	40	14	14	17

Source: Interview responses

Table 7.15: Researchers' and officials' views on the effectiveness of provisions on import prohibition and restrictions (%)

Views	% n = 21	Res n = 10	Off n = 11
GATT XI			
Yes	57	60	55
No	24	30	18
Non-respondents	19	10	27

Source: Interview responses

In contrast to export prohibition and restrictions, delegates in general viewed the Article XI of GATT provisions on import prohibition and restrictions as effective. Two groups were the exception – the developed (33%) and high-income developing (40%) countries. Researchers (60%) and officials (55%) also viewed those as effective. Researchers mentioned that Article XI of GATT is strongly reinforced by Article 4 of the AoA, Article XIII of GATT and the jurisprudence of famous disputes on import restrictions (WTO n.d-i, WTO n.d-j, WTO n.d-t, WTO n.d-u)^{93, 94}.

⁹³ DS207 Chile – Price Band System and Safeguard Measures relating to Certain Agricultural Products. The complainant is Argentina and the respondent is Chile. Consultation was requested on 5 October 2000 and the Appellate Body report was circulated on 7 May 2007. This case referred to Article 4 of AoA. (WTO n.d-t)

⁹⁴ DS27: European Communities – Regime of the Importation, Sale and Distribution of Bananas. The complainants were Ecuador, Guatemala, Honduras, Mexico and the US. The respondent was the European Communities. Consultation was requested on 5 February 1996 and the Appellate Body report after the second

In essence, the provisions on import prohibition and restriction were considered more effective than the provisions on exports. The LDCs and some developing countries were noted to be content with the current situations, whereas the developed countries had concerns. Developing economies considered ambiguity a necessary part of the provision, to be used when necessary. Many identified enhancing transparency as an important goal, and “temporary” and “critical shortages” were terms delegates would like to be more specific. Some of the respondents’ concerns are addressed in the DDA Revised Draft Modality (Rev 4) (WTO 2008). Some respondents have indicated there should be a balance between disciplining of import and export restrictions and, until that is addressed, the suggestion made in Rev 4 will not be agreed.

7.3.4 The DSM in addressing food security issues

The WTO has been commended as having “one of the most active international DSM in the world” (WTO n.d-v) and the respondents in this study agreed that it makes the trading system more secure and predictable. According to respondents, panel rulings on dispute settlements bring new laws, interpretations and clarity into the system, as well as trade negotiations and rules. (See Appendix G-3.4)

In order to understand the use of the DSM, the responses of the participating delegates’ countries were analysed and are depicted in Figure 7.7. Apart from four LDCs, the other 37 (90% of the sample, comprising developing, developed and even two LDCs) had used the DSS at least once as either a complainant, respondent or third party (identified as C, R, and T respectively in Figure 7.8) in a case⁹⁵. As depicted in Figure 7.8, developed countries are more active as complainants than other groups. Developing and developed countries were equally active as respondents. The LDCs have been complainants and third parties, but not respondents. Within the different income groups, developing countries, especially the high-income developing countries, were seen to be active as both respondents and complainants in disputes. Between net exporters and importers, net exporters were noted as being more active in using the DSM.

recourse was issued on 26 November 2008. Among other articles the case referred to was Article XI and XIII of GATT. (WTO n.d-u)

⁹⁵ All cases, not only those that were agriculture-related.

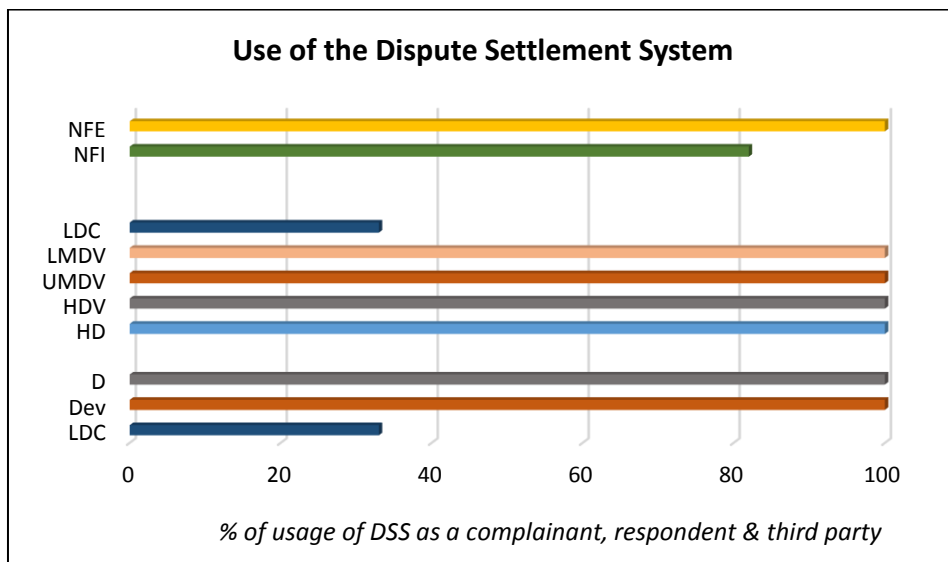


Figure 7.7: Members' use of the DSS

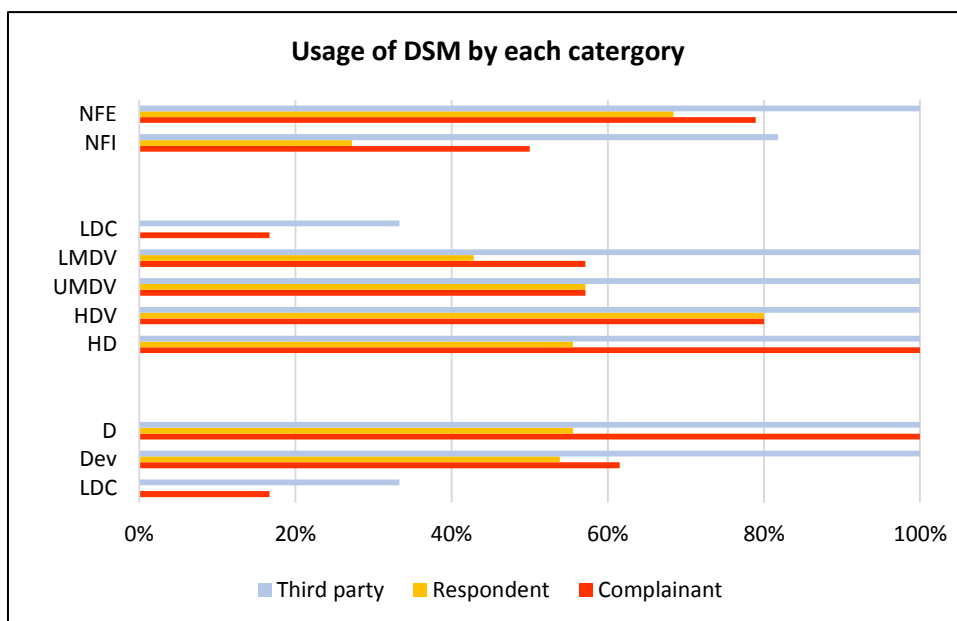


Figure 7.8 Members' use of the DSM by category

Despite their countries' active use of the DSS, no one delegate knew of any case directly relevant to food security that had been brought to the Dispute Settlement Body (DSB). Therefore, they considered food security a concept that has not yet been "tested" at the DSB. Many reasons were identified for "why food security will not be subjected to a dispute". Almost all respondents agreed that another member would not retaliate over food security issues for

four main reasons. Firstly, for political reasons; secondly, because no country would like such a sensitive issue to be contested; thirdly, more systemically, because of the difficulty in finding evidence or proof to build the economic and legal analysis; and fourthly, because no member is so clean with its own policies in these matters as to retaliate against another's action. Many respondents reiterated that food security issues are highly political so members do not come together and challenge at dispute settlement, but try to consult and solve it bilaterally. Also, it was mentioned that "countries perceive from the international relations aspects and will not bring [i.e. enter] into disputes". According to an official, "whenever there are highly political issues involved, the DSM may not be the best mechanism to solve."

In the list of provisions (GATT and AoA) that have been invoked in relation to quantitative restrictions and subsidies in agriculture, (see Appendix G-3.4.2), no cases have been referred to Article 12 of the AoA or Article XI: 2 (a) of GATT on export restrictions. As discussed also in section 7.3.3 on export restrictions, respondents' commonly viewed Article 12 of AoA and Article XI of GATT as insufficient. As a researcher said, "rules on export restrictions are extremely weak, for that reason, countries will not go to the WTO DSB because there is no law against which the challenge can be assessed."

Respondents' views⁹⁶ on the effective usage of DSS in disciplining trade-distortive measures relating to food security are depicted in Tables 7.16 and 7.17.

Table 7.16: Delegates' views on the effective use of the DSS in disciplining trade-distortive measures (%)

Effectiveness	%	Development level			Trade interest		Income level				
		LDC n = 6	Dev n = 26	D n = 9	NFI n = 22	NFE n = 19	HD n = 9	HDV n = 5	UMDV n = 7	LMDV n = 16	LDC n = 4
Yes (%)	20	0	4	78	9	32	78	0	0	7	0
No (%)	66	100	81	0	77	53	0	80	86	79	100
Total responded	86	100	85	78	86	85	78	80	86	86	100
P-values		0.000**			0.171		0.000**				

Source: Interview responses. ** indicates significance at the 1% levels.

⁹⁶ Question 6: Are you satisfied with the use and effectiveness of WTO DSM/DSS in relation to import and export restrictions and subsidies issues, particularly related to food security issues? (Appendix B-2)

Table 7.17: Researchers' and officials' views on the effective use of the DSS in disciplining trade-distortive measures (%)

Effectiveness	% n = 20	Res n = 10	Off n = 10
Yes (%)	45	30	60
No. (%)	55	70	40
Total responded	100	100	100

Source: Interview responses

Among the delegates who responded (86%) to the question on the effectiveness of the DSS in disciplining trade-distortive measures, statistically significant relationships ($p \leq 0.05$) are evident between views on effectiveness and development levels, and views on effectiveness and income levels (See Appendix G-3.4.3 for the hypotheses). Divided views were also noted between respondents from least-developed, developing and the developed countries. The less developed and low-income groups considered the system ineffective, whereas the more developed group considered it effective.

The responses of researchers and officials were also diverse. The overall view (55%), that the use of the DSS was not effective was supported mainly by researchers (70%), whereas officials (60%) considered it effective.

Two major reasons emerged in the responses for the system's ineffectiveness: firstly, constraints members encounter in managing a dispute at the WTO; and secondly, the disincentive associated with the noncompliance of a few members in implementing of panel rulings.

The constraints were further grouped by cost, time, expertise and evidence. Delegates' feedback by category is depicted in Figure 7.9, and researchers' and officials' feedback is reported in Table 7.18.

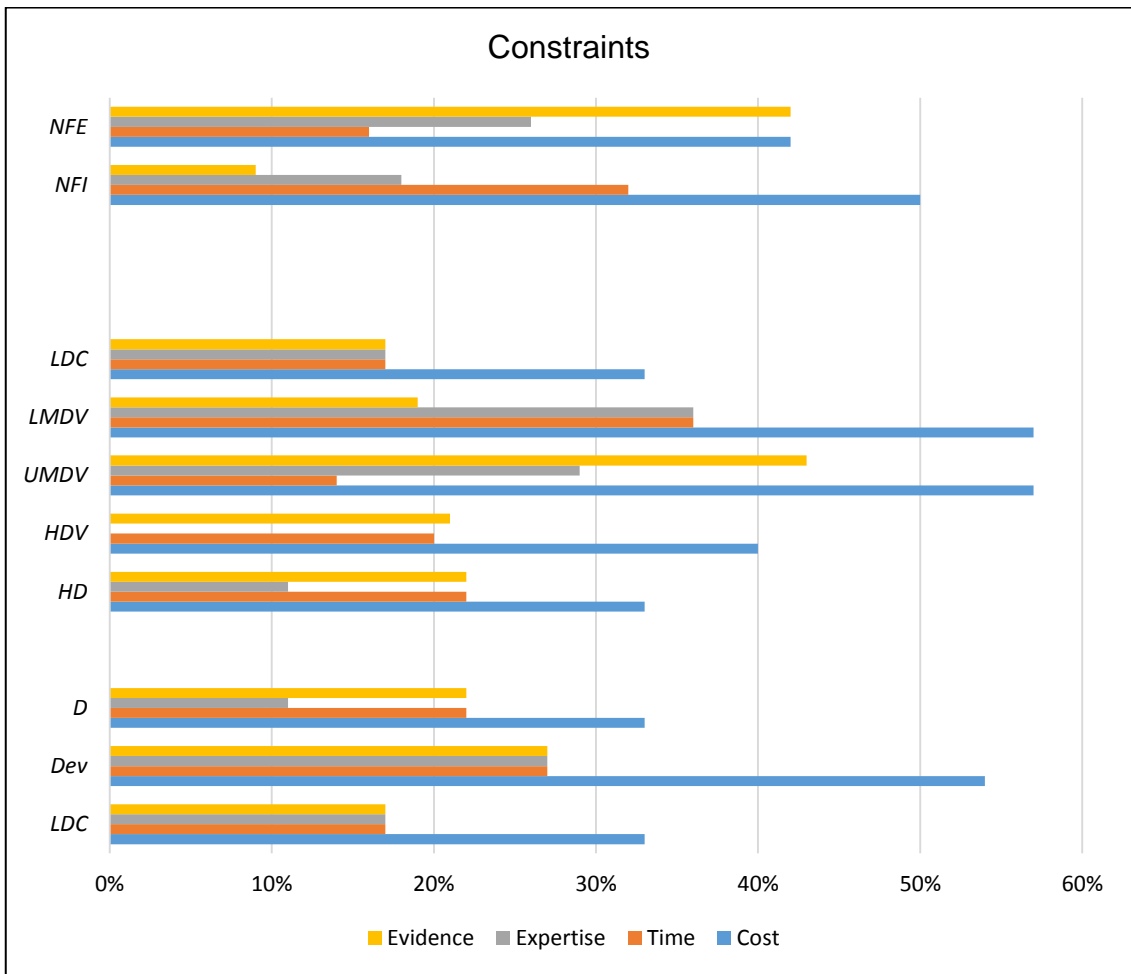


Figure 7.9: Delegates' views on constraints

Table 7.18: Researchers' and officials' views on constraints (%)

Constraints	% n = 20	Res n = 10	Off n = 10
Cost (%)	50	60	40
Evidence (%)	50	50	50
Time (%)	30	50	10
Expertise (%)	30	30	30

Source: Interview responses

Table G-3.12 in the Appendix reveals that constraints were mostly identified by the developing country members. (See Figure 7.9, Table 7.18 and Appendix G: Tables G-3.12 to G-3.14).

Cost: Forty-six per cent of the delegates identified this as the main constraint. Among them were developing countries (54%) from the upper middle-income (57%) and lower middle-income (57%) groups, and NFIs (50%). Fifty per cent of the researchers and officials group also identified cost as a constraint. A developed country respondent commented that “even as a developed country we cannot afford to bring all the cases we would like”. Some believe it is “costly, financially and politically” and identified this as a reason “why members hesitate to use it”. According to a researcher, “it can be very uneconomical, it is like shooting your foot in order to encourage another to change.”

Time: Time was noted as a constraint by 24% of the delegates, mainly from developing (27%), lower middle-income (36%) and NFI (32%) countries. Thirty per cent of the researchers and officials group, mostly researchers (50%), identified time as a constraint hindering the dispute process. Some respondents pointed to the DS267 United States – Subsidies on Upland Cotton⁹⁷, (WTO 2014-b) case, which lasted six years.

Evidence: Another 24% delegates considered evidence-gathering a challenge. This view was shared mostly by developing (27%), upper middle-income (43%) and NFE (42%) groups. The difficulties in obtaining evidence were accepted as a major hindrance and given a high ranking (50%) by the researchers and officials group. Delegates considered retaliating “food security”

⁹⁷ The complainant was Brazil and the respondent was US. Brazil requested consultation on 27 September 2002 and the Appellate Body reports were circulated on 2 June 2008 and 31 August 2009. However, both parties to the dispute announced the termination of the dispute on 16 October 2014 (WTO 2014b)

and “domestic support” measures complicated, because of the difficulty in demonstrating obvious injury.

Expertise: Lack of expertise to handle disputes was seen as an obstacle by 22% of delegates, with significant responses from developing countries (27%), both upper middle- (29%) and lower middle-income (35%) categories and NFEs (26%). Thirty per cent of the researchers and officials group identified expertise as a challenge faced by the WTO members. According to one delegate, “lack of expertise to bring up these issues” is a major constraint, coupled with cost and other difficulties faced by the least-developed and developing countries. Delegates also identified the need for “very specific knowledge” and “intense legal knowledge to convince the panel a measure is being violated”.

In conclusion, the DSM, also known as the “police” in the WTO, is commonly viewed as its most effective pillar. All of the respondents’ countries, except for four LDCs, had used the DSS as complainant, respondent and/or third party. Among them, developed, developing and exporter countries have used it more than low-income economies. However, food security as a concept has not been tested, and respondents doubt if it will be, owing to the political and sensitive nature of the related issues. According to the records, export restriction and domestic support are under-litigated. The respondents were of the view that although the dispute mechanism is effective, the system and the process is not very effective, mainly because of constraints and the discouraging precedent of some countries not complying with panel rulings. Constraints were identified as the high cost, long duration of proceedings, lack of evidence, and need for a high level of expertise to mount a case.

7.4 Conclusion

This chapter focused on the effectiveness of trade policies, provisions on import and export restrictions and the DSS. The analyses attempted to go beyond the widely held view that these are “protectionist policy measures” and inquired into respondents’ different views on import and export restrictions and subsidies (i.e., negative, positive and mixed) and the reasons for holding such positions. Table 7.19 captures the outcome of this chapter.

Table 7.19: Outcome at a glance

	LDC	Developing	Developed	Researchers	Officials
How effective are import restrictions as a policy?	Positive	Negative/mix	Negative	Negative	Diverse
Is Article XI of GATT effective in regulating Import restrictions?	Yes	Yes	No	Yes	Yes
How effective are export restrictions as a policy?	Negative/ mixed	Negative/ mixed	Negative	Negative	Negative/mix
Is Article 12 of AoA effective in regulating export restrictions?	Yes	Diverse view	No	No	No
Is Article XI of GATT effective in regulating export restrictions?	Yes	Diverse view	No	No	No
Is food security focused on consumers only / both consumers and farmers? (Appendix G: Table G-3.1 & G-3.3)	Both	Diverse view	Consumer	Consumer	Both
What is the highly rated negative impact of subsidies?	Displacement of domestic products	Displacement of domestic products	Displacement of exports	Displacement of domestic products and displacement of exports	Displacement of domestic products and displacement of exports
What is the highly rated positive impact of subsidies?	Enhancing domestic production	Enhancing domestic production	Enhancing domestic production	Incentive for investing in agriculture	Cheap food
How effective is the DSS in disciplining distortive trade policies?	No	No	Yes	No	Yes
What is the main constraint faced by a country in using DSS?	Cost	Cost	Cost	Cost	Evidence

Generally, the respondents from least-developed and developed countries were at two extremes, with the very diverse developing economy group, distributed between these extremes. This is the case with respect to both the effectiveness of the measures for food security and the ability of the WTO to discipline them.

Except for the least-developed and some developing country respondents, the overall view was that import restrictions have a negative impact because they protect domestic industry and displace exports. Moreover, some respondents mentioned the difficulties faced by domestic consumers, such as high prices and limited preferences, when these restrictions are imposed.

The common view was that Article XI of GATT on the elimination of quantitative restrictions is an effective discipline on import restrictions. Except for the developed group, which believes provisions can be improved, others were content with the current provisions on import restrictions.

Export restrictions have been used to protect the food security of a country's domestic consumers when experiencing food shortages, but this action was criticised for its negative impact on the importing countries and global consumers. Some respondents, mainly developed country respondents and researchers, considered the provisions available to discipline export restrictions very weak, and in need of amendment. The lack of transparency when countries do not submit notifications as required, vagueness of terms (e.g. "critical" or "temporary shortages") and lack of provisions to discipline the application of rules are examples of the weaknesses.

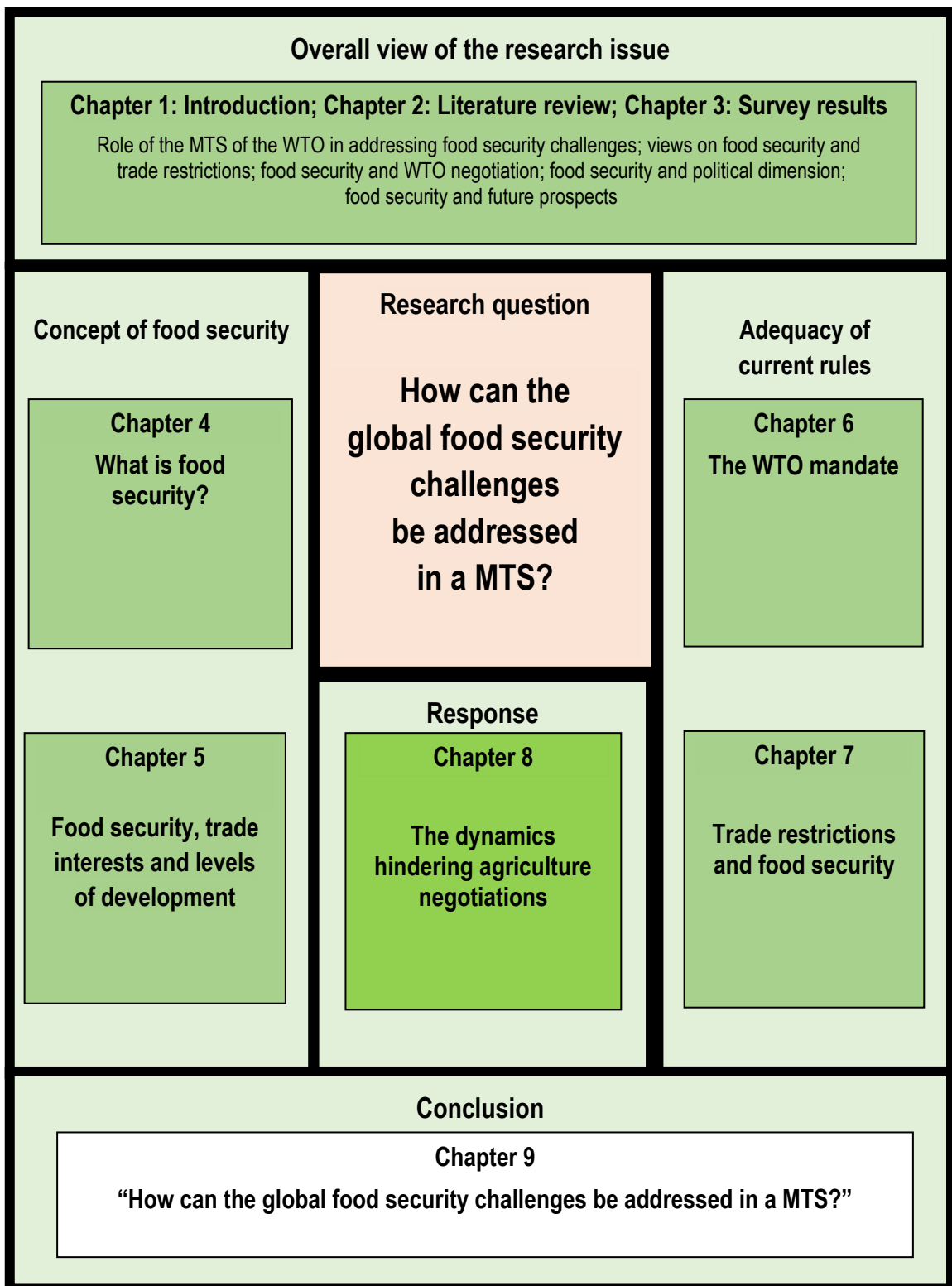
Least-developed and developing countries do not necessarily consider import and export restrictions to be bad policies that need to be eliminated. Even though they admitted the negative outcomes, these respondents considered the provisions valuable for the policy space they provide to fulfil the governments' political obligations to feed their people. Some delegates, mainly the developing country respondents, also wanted to retain ambiguity in the rules and provisions, but this position was not supported by the developed country respondents.

Respondents noted the negative impact on consumers, mainly the consumers in importing countries or global consumers, when exports are restricted by their trading partners. However, least-developed and some developing country respondents believed that this consumer perspective on food security needs to be balanced against the security of their rural farmers' livelihood.

Different concerns were also expressed over subsidies. Some members raised the issue of box shifting or increased spending on green box support by the developed and some emerging developing countries.

The comments of the high-income developing countries, differ from those of the upper and lower middle-income countries but are more in line with those of the developed economy members. Except for one respondent in this group with a defensive interest, others support the view that import and export restrictions and subsidies have negative implications and that the provisions are not effective. These respondents are concerned about the displacement effect in their export markets.

The DSS in the WTO was hailed as an effective way of disciplining the measures discussed in this chapter. Using the DSS can develop the case material that helps resolve problems, such as the lack of effectiveness of the rules which is to the vagueness of the text, especially in relation to export restrictions. However, respondents considered that the DSS does not function effectively because of the constraints encountered by their countries, such as cost, time, the difficulty of collecting evidence and finding sufficiently qualified expertise. In the context of the debate over the effectiveness of different policies, there cannot be progress in negotiations without confidence in the DSS. Options for resolving this issue are discussed in the conclusion chapter.



Chapter 8 The dynamics hindering agriculture negotiations

8.1 Introduction

The inadequate WTO rules and distortive trade measures and policies discussed in chapters 6 and 7 are understood to have a negative impact on achieving consensus in food security negotiations. Internal and external dynamics have also contributed negatively to such an outcome. Some of these dynamics surfaced in the previous chapters. The Uruguay Round negotiations and some differences within the developing group of countries were discussed in Chapter 2. Differences in trade interests within this group was further reiterated in Chapter 5. In Chapter 2 and in Chapter 7 the increased use of green box subsidies and high food prices resulting from policy measures such as export restrictions were noted. The objective of this chapter is to refine what the respondents perceive are the prevailing dynamics, and to examine the impact of these dynamics in reaching a consensus on negotiations relevant to food security.

8.2 Chapter methodology

This chapter contains two analyses. Firstly, the outcome of online survey Question 19 discussed in Chapter 3, section 3.4.2.4, identifies various factors hindering the agriculture negotiations. (Further, this feedback was used to draft interview Question 7.) The survey results of Chapter 3 are discussed further with the intention of laying the groundwork for discussion of why it is difficult to arrive at a consensus on agriculture issues and to broaden the discussion of interview responses.

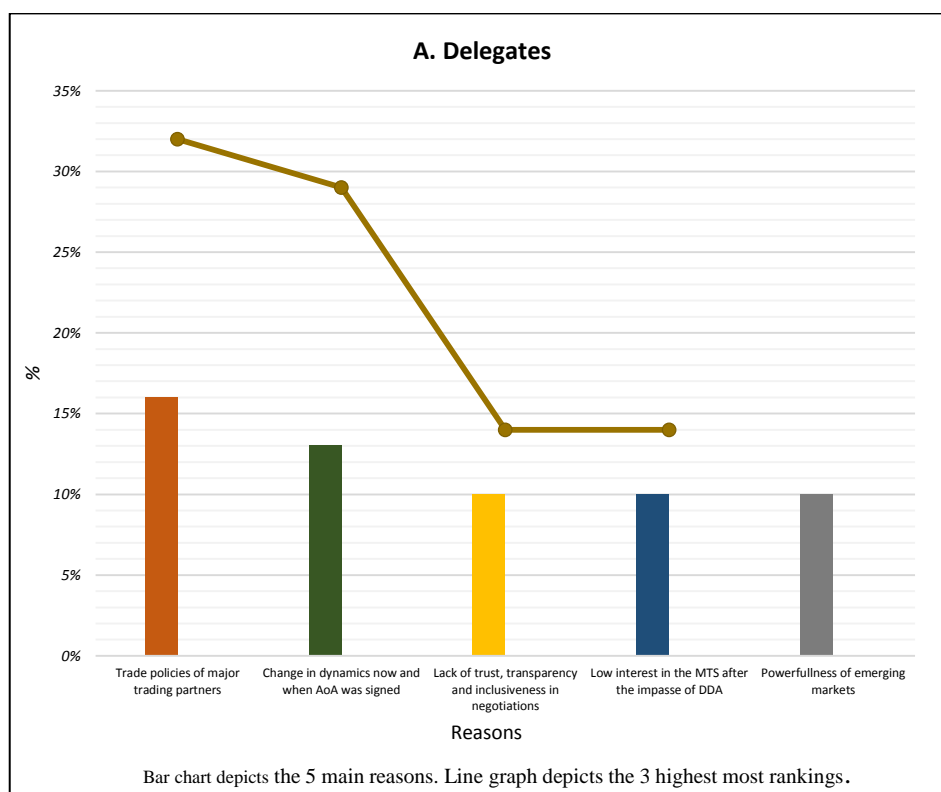
The second and major part of the chapter is an analysis of responses to interview Question 7; specifically, the change in dynamics since the AoA was signed in 1994 which are considered to hinder agriculture negotiations.

8.2.1 Analysis of the survey findings

This section considers the responses to the anonymous online survey Question 19, “In your view, what are the factors that have led to the inability of WTO members to arrive at a consensus on agriculture issues?” (Appendix B-1.1 & B-1.2). Discussed in Chapter 3, the results were presented in two groups; namely, delegates, and researchers and officials⁹⁸. The

⁹⁸ Feedback was obtained from 50 respondents: 28 delegates (a combination of 18 developing, 8 developed, and 2 LDC country representatives), 14 researchers and 8 officials.

respondents were asked to select five reasons⁹⁹ from 13 possibilities¹⁰⁰ and rank them in order the degree to which they hinder agriculture negotiations¹⁰¹. The outcome discussed in Chapter 3 is presented further in this chapter, using bar charts and line graphs in Figure 8.1 to lay the foundation for discussion. The bar charts depict the five most popular responses (of all 13) for this question, along with line graphs indicating the three highest most important rankings among the responses of the two groups. (See Appendix C: Tables C-57 & C-64 for the delegates and C-71 & C-77 for researchers’/officials’ responses or Appendix H-2.)



⁹⁹ “Reasons” is used interchangeably for “factors” (referred in survey question 19).

¹⁰⁰ See Appendix H-1 or Chapter 3, section 3.4.2.4

¹⁰¹ Order of importance: 5 = Most important; 4 = Second most important, 3= third most important, 2= fourth most important and 1= fifth most important

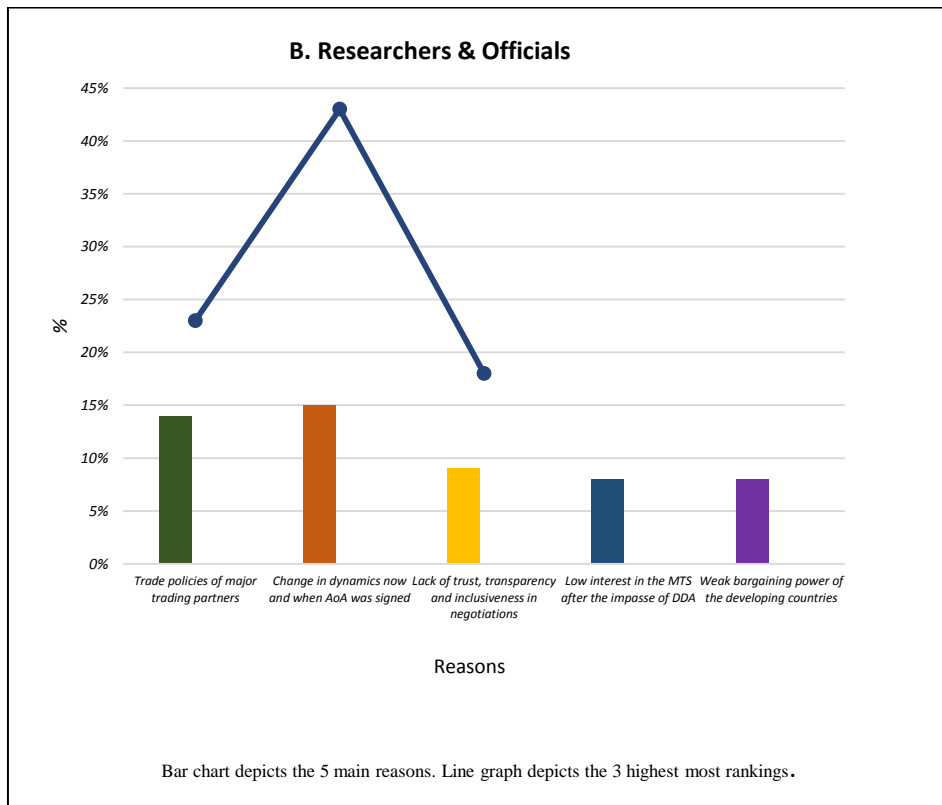


Figure 8.1: (A) Delegates' and (B) researchers' & officials' views on the five most important factors hindrances to negotiations

As the main challenge, the delegates identified the trade policies of the major trading countries/partners, whereas the researchers/officials group identified the change in the dynamic from when the AoA was first signed. These two were reversed as their second choice. The other main reasons identified by both groups were lack of trust, transparency and inclusiveness in negotiations, low interest in the MTS after the DDA impasse, and the power of emerging markets. As depicted in the line graphs, these views are reflected in the three most important rankings for both groups.

To gain a better understanding of the individual category/group preferences, the breakdown of views on the three most important rankings are presented in Table 8.1 (for detailed responses of each category see Appendix C: Tables C-66–68 for delegates and C-79 and C-80 for researchers/officials). The table lists the highest rated reasons listed within each most important rank. (When there was more than one reason with the same value, all are listed.)

Table 8.1: Individual category views of the three most important rankings

Categories	1 st Ranking	2 nd Ranking	3 rd Ranking
LDCs	<ul style="list-style-type: none"> Trade policies of the major trading partners (19.2) 	<ul style="list-style-type: none"> Bargaining power of lobbyists (19.3) 	<ul style="list-style-type: none"> Change in the dynamic now and when AoA was signed (19.5)
	<ul style="list-style-type: none"> Reluctance to revisit the Rev 4 texts (19.13) 	<ul style="list-style-type: none"> Change in the dynamic now and AoA was signed (19.5) 	<ul style="list-style-type: none"> Powerfulness of the emerging markets (19.8)
Developing	<ul style="list-style-type: none"> Trade policies of the major trading partners (19.2) 	<ul style="list-style-type: none"> Change in the dynamic now and when AoA was signed (19.5) 	<ul style="list-style-type: none"> Trade policies of the major trading partners (19.2)
Developed	<ul style="list-style-type: none"> Effectiveness of bilateral agreements (19.7) 	<ul style="list-style-type: none"> Trade policies of the major trading partners (19.2) 	<ul style="list-style-type: none"> Lack of trust, transparency and inclusiveness in negotiations (19.9)
		<ul style="list-style-type: none"> Single undertaking commitment (19.12) 	
Researchers	<ul style="list-style-type: none"> Trade policies of the major trading partners (19.2) 	<ul style="list-style-type: none"> Trade policies of the major trading partners (19.2) 	<ul style="list-style-type: none"> Lack of trust, transparency and inclusiveness in negotiations (19.9)
	<ul style="list-style-type: none"> Change in the dynamic now and when AoA was signed (19.5) 		
Officials	<ul style="list-style-type: none"> Change in the dynamic now and when AoA was signed (19.5) 	<ul style="list-style-type: none"> Trade policies of the major trading partners (19.2) 	<ul style="list-style-type: none"> Weak bargaining power of the developing countries (19.4)
		<ul style="list-style-type: none"> Bargaining power of lobbyists (19.3) 	
		<ul style="list-style-type: none"> Powerfulness of the emerging markets (19.8) 	

Source: responses to survey Question 19

The breakdown of individual category views (Table 8.1) reveal that the most frequently selected reasons are the same as the group views:

- Trade policies of the major trading partners (19.2)
- Change in the dynamic now and when AoA was signed (19.5)
- Lack of trust, transparency and inclusiveness in negotiations (19.9).

In order to examine if these responses could be further linked to the findings of the interview responses, the responses to survey Question 19 were subjected to principal component analysis (PCA)¹⁰². The technique was used to reduce the number of reasons discussed under survey

¹⁰² StataCorp (2015) presents the following definition of PCA:

Question 19 (see Appendix H-1 except for the reason 19.13) to a small set of factors or components that represent a few main aspects or orientations of the reasons in a consistent manner. The results are presented in Table 8.2 with further description of the reduction and validity of the results.

Using Stata and SPSS software, the PCA was conducted on 50 observations, which included delegates, researchers and officials' rankings on 12 factors¹⁰³ (19.1 (A) – 19.12 (L)). (See Appendix H-1 for a detailed list of the reasons/factors considered.) In view of the small sample size, the rule of 5, which can be applied to subjects-to-variables ratios not less than 5, was used to justify the analysis (Bryant & Yarnold 1995, Costello & Osborne 2005; MacCallum, Widaman, Preacher & Hong 2001).

Several tests were conducted to determine the suitability of the dataset for analysis. As presented in Table 8.2, all seven factors have strong loadings. The Kaiser-Meyer-Olkin Measure (KMO) of sampling adequacy is above 0.6, which indicates that there is some distinctiveness and reliability in the variables (Yong & Pearce 2013). Therefore, PCA analysis was conducted to simplify data, reduce dimensions and develop a rationale for the themes discussed in the interview responses. First, eigenvalues were obtained. Thereafter, promax oblique rotation to a power of 4 was used to obtain results for a greater correlation among the factors and to achieve a simple structure. In the first round, 19.1 (A), 19.2 (B), 19.3(C) and 19.4(D)¹⁰⁴ were eliminated for having negative values. In the second round, again based on the

Principal component analysis (PCA) is a statistical technique used for data reduction. The leading eigenvectors from the eigen decomposition of the correlation or covariance matrix of the variables describe a series of uncorrelated linear combinations of the variables that contain most of the variance. In addition to data reduction, the eigenvectors from a PCA are often inspected to learn more about the underlying structure of the data. (p. 126.)

¹⁰³ Factor /reason 9.13: Reluctance to revisit the texts (Rev 4) was removed as it was not acknowledged by the researchers and officials group.

¹⁰⁴ 19.1 (A) – Unprecedented global events that have affected economic stability of countries; 19.2 (B) – Trade policies of major trading partners; 19.3(C) – Bargaining power of the lobbyists; 9.4(D) – Weak bargaining power of the developing countries.

same factor rotation, 19.8 (H)¹⁰⁵ was eliminated. The remainder, with positive values, were rotated and the results are depicted in Table 8.2.

Table 8.2: Results of the PCA — three components

Variables	Component 1 loadings	Component 2 loadings	Component 3 loadings
F - Use of more protectionist measures to safeguard the interests of farmers (19.6)	0.68		
G - Effectiveness of bilateral agreements (19.7)	0.61		
K - “Development issues” at the centre of Doha Round and hindering the progress. (19.11)	0.78		
I - Lack of trust, transparency and inclusiveness in negotiations (19.9)		0.77	
J - Low interest in the MTS after the long haul of DDA (19.10)		0.86	
E - Change in the dynamic now and AoA was signed (19.5)			0.86
L -Single undertaking commitment (19.12)			0.64
Test results			
Determinant of the correlation matrix	<i>Det</i>	= 0.540	
Kaiser-Meyer-Olkin measure of sampling adequacy	<i>KMO</i>	= 0.626	

In the next section, the interview responses are used to elaborate on the variables in Table 8.2.

8.2.2 Analysis of the interview findings

Interview Question 7, “What kind of dynamics have changed now and when AoA was signed in 1994 that hinders WTO members from arriving at consensus on agriculture issues?”, stimulated more insights from the respondents. (See Appendix B-2 for the interview questionnaire). These views are presented in the following sections.

¹⁰⁵ 19.8 (H) – Powerfulness of the emerging markets.

The analysis is based on the interview responses of Geneva-based agriculture delegates (40)¹⁰⁶, researchers (10) and officials (13). The views of delegates and researchers/officials are presented separately for their differing roles.

The methodology includes a thematic analysis of the interview transcripts. Frequency percentages were calculated on the total number in each category. Further, delegates' responses were categorised according to their countries' development levels, trade interests and income levels, as explained below:

- Development levels:¹⁰⁷ 40 respondents representing 26 developing (Dev), 9 developed (D) and 5 LDCs
- Trade interests in consideration of import and export interests¹⁰⁸: 21 NFIs and 19 NFEs
- Income levels: The responses of the 40 delegates were further classified into five income levels based on the average GNI per capita income for the five-year period 2010–2014 (World Bank 2017). The same five income levels¹⁰⁹ explained in section 5.2 and used in section 5.4 in the Chapter 5 are used in this chapter. The 26 developing countries were represented under income levels as 5 high-income, 7 upper middle-income and 14 lower middle-income countries.

The frequency percentages for researchers and officials were calculated from their individual group responses (group = 23, researchers = 10 & officials = 13). The explanations in these sections are based purely on the respondents' views.

¹⁰⁶ Only 40 responses were considered in this section as one response of an LDC respondent was completely irrelevant.

¹⁰⁷ Development levels are same as the WTO identification: developed as in the accession; LDCs as recognised by the UN; developing, a self-identified group.

¹⁰⁸ Countries were categorised as net importers and net exporters based on the FAOstat data and WTO categorisation of net food-importing developing countries (NFIDCs). Year 2014 data for food exports and imports in each FAO country profile were compared to determine the status. When the differences between imports and exports were very narrow, 2000 data were used to substantiate the decision (FAO 2017).

¹⁰⁹ Highest (HD: all developed countries), high-income developing (HDV: > \$12,746), upper middle-income developing (UMDV: \$4,125–\$12,746), lower middle-income developing (LMDV: \$1,045–\$4,125) and low-income (all LDC) economies.

8.3 Changed dynamics hindering consensus

The results of the interview questions are summarised in Appendix H: Tables H-3.1 and H-3.2. These are further grouped into five dynamics in line with the variables discussed in Table 8.2.

8.3.1 Development issues¹¹⁰

More engagement of developing countries, different development levels within the developing group and negotiating positions of emerging developing countries have hindered the effort to reach a consensus. These aspects are covered in this section.

Firstly, as described in the literature review (Chapter 2) in this thesis and reiterated by many respondents, the Uruguay Round negotiations were conducted between two to four developed economies (the Quad), mainly the EU and USA, with the intervention of Japan and Canada and other forceful Cairns Group members. Accordingly, a delegate claimed, “the sensitivities of non-developed countries, food importers with weak structures and non-competitive importers had been taken care of by these major parties”. Further, respondents disclosed that once the EU and USA were able to sort out their differences and agree, they had felt other countries would accept the deal. Developing country delegates referred to their negotiating stance in 1994 as “naïve, very disorganised, not united and unaware of what they wanted to agree in this kind of an agriculture agreement”. In their view, “at that time, developing countries had not understood the power in their numbers”. One of the delegates said that “these newly independent nations, [were] becoming decolonised, and did not apprehend the politics of trade but purely the economic aspect”. Delegates observed that since then the more economically and politically powerful emerging countries within this group are challenging the developed country members and also trying to be the voice for the developing group. In their view, “this is a new element and it is needed to put these countries into the equation because they are big players that cannot be ignored”. However, they also understand that the situation is now more complicated than when the AoA was drafted.

Moreover, many delegates said that developing countries, comprising a majority of the WTO membership, are now more aware of the issues and how their interests are taken on board in these negotiations. Developing countries are being “more cautious not to repeat what happened with the AoA in the Uruguay Round”; therefore, “they push hard for their positions and

¹¹⁰ Relates to variable K in Table 8.2.

interests”. Some believed that “even least-developed along with developing countries are fighting to reduce the imbalances and ensure a better balance in the system”. The influence of these developing groups in the negotiations is becoming stronger. According to a researcher, “every member is able to negotiate, vote and have veto rights, therefore, the vast majority of them may seem small members, yet they are avid voters, can influence as blocks and scuttle negotiations”. External factors were also seen to contribute to an effective but more complex engagement. A delegate pointed out that “the private sector and lobbyists interested are now surfacing as in developed countries and influencing the respective developing country governments to assert more political pressure on negotiations”.

Respondents also mentioned the developing countries’ increased use of the dispute settlement system as a symbol of engagement with the system. A developing country delegate said that “developing countries have strengthened the Geneva Missions, and have put more intellectual effort. Now they are proactive, well-articulated and have improved analytical capacity”. Strengthened coalitions have extended technical assistance and shared background papers, contributing towards the capacity enhancement of this group. Some claimed that emerging developing countries in particular, more than some developed countries, are now prepared to discuss most of the issues.

Secondly, the different development layers within the developing group have an impact on the negotiations. Referring to the Uruguay Round era, some respondents observed developing countries to be on somewhat the same level of development, but since then, the diversity among the developing cohort has changed drastically. With the changing economic landscape and geopolitics, the developing country membership of the WTO are no longer a “homogenous group” in terms of trade, economy and social development. Many respondents acknowledged that some so-called developing countries are even more developed than some developed countries. Moreover, some NFIs of the 1990s are now NFEs.

The different development needs and diverse positions and interests are a challenge in arriving at consensus even within the group. Many respondents agreed that “developing country interests are clashing with the interests of other developing countries”. A respondent indicated that “they have become a complex set of countries, Bali is a good example that displayed the conflicting interests within South–South”. According to another developing country respondent, “it is difficult to compare the poor people in India, Pakistan with the poor people in Brazil, Argentina etc. Similarly, it is difficult to compare Peru or Paraguay food producers

with Brazil”. Many pointed out, unlike the IMF definition of developing and developed countries, in the internal economic governance of the WTO, “developing” is a self-defined group. Therefore, in their view the differences between the different development levels within the developing group at WTO are not fully taken into account.

Thirdly, respondents viewed the country positions of China, India and Brazil as a hindrance in arriving at consensus. These economies¹¹¹ (also referred to as ‘emerging’) were described as “big players in terms of producers, consumers, suppliers, exporters and importers with the change in the geopolitics and economic landscape”. Many accepted that the rapid economic growth and political strength of these developing countries have created tension “among the developing group” and with the group of developed countries. It was also identified that “the difference between developed and developing is becoming less distinct”. A developing country delegate noted that the “big exporters of several products are not just EU and US anymore now, it is composed of developing countries. Agriculture exports of Brazil, Thailand, Malaysia and Indonesia etc., have increased in manifolds compared to 1995”. In this context, another delegate maintained that “the developed consider these so-called emerging countries as having stronger economies than them. They are concerned of the growth as exporters and the negative impact that can have on their export interests.” This view is reflected in a comment of a developed country respondent, who acknowledged that “developed country market share is now going down while the developing country market share is going up”. Against this backdrop, some respondents questioned, “how to make a clear distinction between the developing when some developing countries are in the top five and certainly top 10 producers in the world”. Therefore, “a different level of expectations is sought from these more developed developing countries in terms of responsibilities and contribution to the system”.

¹¹¹ A majority of the respondents acknowledged a few more powerful developing countries among the developing group as the main dynamic and reason for not arriving at consensus. Respondents identified these countries as emerging developing countries, G-3, and BRICS. However, a majority specified China, India and Brazil as the most developed countries within the developing group. A few respondents added Argentina, Indonesia Malaysia, and Singapore to this list of more developed developing countries. Further, the term “emerging developing countries” is used to describe the more developed countries within the developing group. Some respondents specifically identified such countries, while others used “emerging countries” quite vaguely referring to more developed countries within the developing group. See World Trade Report (2013, p. 58).

Implications of these emerging economies for the negotiating positions of the key groups are of interest. Within the self-defined developing economy group in the WTO, these emerging countries categorise themselves as still “developing” and insist on being accorded similar SDT and flexibilities to other developing countries, even though they may be considered more developed than other developing country members. The developed countries have rejected the requests of these emerging developing countries to be considered still developing and insisted on them committing more in the negotiations. Some delegates, including those from developed countries, acknowledged the value of distinguishing these emerging countries from other deserving or poor developing countries. According to many respondents, developed countries would like to extend flexibilities and SDT to LDCs and more deserving developing countries, but not to these emerging developing countries. The reason was that these major exporters compete with the developed countries for their market share. This tension has created reluctance among the developed countries to extend the same SDT to all developing countries.

Respondents from LDCs and some developing countries considered this debate between these emerging and developed countries to be detrimental to negotiations. Delegates repeated their dissatisfaction at the delays in reaching a consensus and a tangible outcome. According to an LDC delegate, LDCs have been “sandwiched” between the fights and struggles of these emerging countries with the developed economies. However, discounting these claims, one of the emerging country delegates indicated their intention is to “negotiate with the EU and US, to lower the barriers for liberalisation, but not to take what could be given to LDCs”. These differences have caused complexities in negotiations, and therefore prolonged them.

8.3.2 Protectionist measures¹¹²

Respondents stressed the move or shift of domestic support from distortive to the green box category. It was widely agreed that both developed and developing (including emerging) countries with the ability to subsidise have increased their use of the green box, which imposes no limits on spending. A developed country delegate observed that “emerging countries are using domestic support more than the developed countries”.

This move has affected negotiations in many ways. Other developing countries and LDCs experiencing resource constraints have raised concerns, as they are unable to match the extent

¹¹² Relates to variable F in Table 8.2.

to which rich countries provide green box support. In addition, there was concern that history would repeat itself, so that these subsidies would actually distort markets, as did EU and USA subsidies prior to 1994.

Some respondents maintained that negotiations are not moving because developed countries are challenging the developing countries that are providing domestic support via the green box. They suggested that some countries are not fully transparent and are reluctant to discuss their policies openly. Therefore, negotiations rallying around disciplining, evaluating and monitoring such green box support have become a difficult point at the WTO.

8.3.3 Bilateral trade agreements¹¹³

Another dynamic is the number of trade agreements that have been increasing since 1994. These were noted as having a relationship with the DDA impasse and the low interest in the MTS.

Mixed views were expressed about this dynamic. According to a developed country delegate, “some issues can be addressed well bilaterally rather than multilaterally as countries are not gaining anything”. On the flipside, developing country respondents reiterated that

... developed has no interest in the MTS and prefer more market-access negotiations in a ‘WTO-plus’ setting such as the Trans-Pacific Partnership Agreement (TPP)¹¹⁴ and other trade and partnership agreements with the trading partners where they are hardly requested to give more, unlike at the WTO.

The counter argument is that these trade agreements are “addressing the interest of developed [countries], ... [striking] a deal among countries that are equivalent to their level of development and leav[ing] behind the interest of the LDCs and developing countries”. Respondents identified many reasons why these agreements could have an impact on negotiations. According to a researcher:

... in some ways they are helpful in providing guidance on how to move forward on areas that have been difficult to negotiate with the whole group, however, these are

¹¹³ Relates to variable G in Table 8.2.

¹¹⁴ This comment was made in 2014 before the USA president, Donald Trump withdrew from the Agreement.

causing additional problems such as dragging distortions and adding an extra layer to dispute settlement, and making negotiations more complicated.

Some perceive the proliferation of trade agreements as substitutes for the Doha Round, distracting members from the MTS. As a result, some delegates mentioned that only a very few players are genuinely interested in the WTO negotiations. Another view was that these outside deals are complicating decisions to provide most-favoured-nation (MFN) treatment.

8.3.4 Issues in negotiations¹¹⁵

The increase in membership, the formation of negotiating groups among the members and the impasse in DDA negotiations are covered in this section.

Firstly, respondents pointed out that WTO membership has grown over the past 22 years from 128 member countries in 1995 to 164¹¹⁶, including two powerful recently acceded members (RAMs¹¹⁷ – China in 2001 and Russia in 2012. Many considered the accession of more members and the formation of groups with diverse interests to be a post-1994 dynamic that challenges the negotiation process for a number of reasons. “Satisfying all parties” and reaching a consensus is a challenge when there are many positions, concerns, interests and views. This further prolongs the negotiation process, as the institution is built on the concept of arriving at a consensus where each member, irrespective of its size, has equal power of veto.

In addition to the growing membership, respondents pointed out that many negotiating groups have formed to reflect offensive and defensive interests, or have coalesced around particular issues on agriculture using different approaches. This has created “more complications” in arriving at consensus. A researcher observed that “countries especially developing, can be split into a number of subgroups with their own agendas and that makes it difficult to reach an agreement”. Similarly, countries have membership in different groupings with conflicting interests, and support various positions, depending on the topic and interests, “mostly on market access for agriculture exports”. Therefore, diversity has created not only difficulty, complexity and confusion in reaching a consensus, but it also has led to a stalemate.

¹¹⁵ Relates to variables I, J and L in Table 8.2.

¹¹⁶ 164 members since 29 July 2016.

¹¹⁷ These are also Article XII Members or RAMs

Secondly, respondents viewed commencement of the DDA in 2001 as a new development and the current impasse. The various reasons for the impasse, and frustration and lack of interest in the Doha Round of talks, were seen to be hindering current negotiations.

Delegates expressed different views on the impasse. Respondents acknowledged that the DDA was the “most ambitious round” and, dedicated to development and the development issues at its centre, the design of the Round itself creates a stumbling block to negotiations. As stated by a developing country delegate, “Developed countries were never really interested in development issues, but DDA was called the development round to get the developing countries on board.” Reinforcing this statement, another delegate said that the developing countries had not been prepared for another round of negotiations when the DDA commenced. A developing country representative mentioned that the developed countries are now claiming that Doha Round was a “mistake”, and the development agenda was the reason the negotiations failed.

Another reason given for the impasse was the text and modalities. As a developed country delegate noted, “the footnotes for ‘SDT’ and trying to balance the special demands of developed and developing at that particular time, will not be consistent anymore.”

Some respondents identified the events that have taken place after Doha’s commencement, such as the accession of China to the WTO (December 2001) and other changes occurring in the global landscape (e.g. economic recessions, and financial crises affecting developed countries), as threatening progress and pushing the negotiations to a stalemate. A developed country respondent observed, “It is very pessimistic if an agreement could be reached now, as USA has moved to a situation where it cannot accept what it could have accepted then.”

Respondents expressed frustration at the impasse over the DDA, which they believe is difficult to revive. Even though a few developing country respondents had stressed the need for the “development mandate to be reflected in the DDA”, it was considered that most developed and developing countries now lack the interest for the reform suggested in the DDA. They are of the view that the impasse has not only made it difficult to reach an agreement, but DDA is a “stumbling block for the countries to move forward with certain commitments”.

8.3.5 Dynamics since the AoA¹¹⁸

The respondents identified a new paradigm in high and volatile staple food prices compared to 1994 prices. They noted that staple food prices had been low, with an oversupply in the international market during the years when the Uruguay Round was negotiated. An official commented that “at that time the price was quite predictable and the expectation was that it would get lower and lower”. According to a researcher, the current trend of sharply rising prices was experienced especially after 2006. The 2008 food shortage was considered as an extreme situation, fuelled by high and volatile commodity prices that badly affected the NFIs and consumers. The responses projected that these prices would soar over the next 10 years.

The connection between agriculture, energy markets and speculative activities were also seen as fuelling the market prices. Respondents from NFEs viewed high prices positively; NFIs disagreed.

From a negotiations point of view, the low reference price of 1986–1988 prices (the base period in AoA Annex 2) was viewed with concern as a stumbling block to public stockholding negotiations. High and volatile commodity prices were named as reasons for instituting more protectionist measures, such as imposing export restrictions and self-sufficiency policies that challenge the WTO’s market access and trade liberalisation objectives.

8.4 Conclusion

This chapter discussed the views of delegates, and researchers and officials on why it is difficult to arrive at a consensus on agriculture issues.

The most important of these was the emergence of economically and politically powerful developing countries, so-called “emerging developing countries”. This issue was evident in both the survey results and the interview responses. Emerging developing countries do not have a clear definition (*World Trade Report 2013*, p. 58) but most respondents identified China, India and Brazil (some respondents also consider emerging countries to be those which are major exporters or importers). Even though a few delegates from other developing countries were sympathetic towards the poverty reduction and social needs in these emerging developing countries, a majority of the developing group considered the emerging developing country

¹¹⁸ Relates to variable E in Table 8.2.

positions a hindrance to the negotiations. The debate between emerging developing countries and the developed countries on taking up more commitments and relinquishing flexibilities already extended to the developing countries was noted as another tension among the members. Both aspects have become a stumbling block in the negotiations.

A couple of other factors are also important. One is the shift from distortive amber and blue boxes to the “no or least trade-distortive” green box and its intensified use by the developed and some developing countries, which was also a concern to the respondents. Another is the dynamics that have emerged since 1994, such as the proliferation of trade agreements, which is considered by some as substitutes for the MTS and the DDA impasse. Collectively, these interrelated issues create further difficulties in reaching consensus in negotiations.

This and the preceding chapters have identified issues in resolving matters related to food security in the WTO. One theme has been the relevance of rules in the WTO to measures that might be used for that purpose, and another was the use of trade-distortive policies. This chapter focused on the dynamic context of the negotiations. The next chapter concludes the thesis by asking, “How can the global food security challenges be addressed in a MTS?”

Overall view of the research issue

Chapter 1: Introduction; Chapter 2: Literature review; Chapter 3: Survey results

Role of the MTS of the WTO in addressing food security challenges; views on food security and trade restrictions; food security and WTO negotiation; food security and political dimension; food security and future prospects

Concept of food security

Chapter 4
What is food security?

Chapter 5
Food security, trade interests and levels of development

Research question

How can the global food security challenges be addressed in a MTS?

Response

Chapter 8
The dynamics hindering agriculture negotiations

Adequacy of current rules

Chapter 6
The WTO mandate

Chapter 7
Trade restrictions and food security

Conclusion

Chapter 9
“How can the global food security challenges be addressed in a MTS?”

Chapter 9: Conclusion

9.1 The thesis

There is a continuing concern with the issue of food security all around the world, including among the members of the WTO, where there has been extensive discussion of the issue. The question of how the WTO might contribute to its resolution has been raised many times, but the progress is slow. This thesis was designed to increase our understanding of that lack of progress in order to address the question, “How can the global food security challenges be addressed in a multilateral trading system?”

The views of delegates, researchers and officials were gathered through an anonymous online survey, followed by individual interviews to understand the core issues, highlight relationships between and among issues, and generate new thinking to craft a solution.

The data chapter (Chapter 3), presenting the survey findings, set the tone for the research and identified areas for investigation in subsequent chapters.

The other chapters cover four areas, namely, (1) understanding the food security concept and the diverse views within the MTS, (2) the mandate to address food security and the capability of the WTO, (3) trade-distortive policies and their role in food security and (4) difficulties in arriving at consensus on agriculture issues with reference to food security due to the changes in the context of the debate.

A brief recount of chapters is provided below.

Chapter 4 closely examined the concept of food security in the 1996 FAO definition according to four dimensions (availability, accessibility, stability and utilisation) and three orientations (people, trade and resources). The common understanding of “food security” according to the survey and interview results was that it is a people-oriented concept with a humanitarian cause. More than 70% of respondents agreed that food security is about providing basic food needs for the poor. However, even within that broad common understanding, diverse perceptions remain. In Chapter 4 these were grouped as the 7Cs: concept, commodity, contextual constraints, core objectives, commercialisation, challenges and classification.

Food security, therefore, is a complex, multidisciplinary concept with many interpretations. This chapter further examined the 7Cs (i.e. reasons for the diversity of perceptions) as a basis

for understanding the different country situations and the members' concerns, as these have a connection in formulating countries' positions in WTO negotiations.

More intense analysis was then conducted in Chapter 5 to identify how a people-oriented concept could be dealt with in a trade-oriented context. The areas examined were:

- The general relationship between the people orientation and the four dimensions in reference to country development levels
- The importance placed on a trade orientation to food security by the developing country group
- The impact of the diverse interests of countries and negotiating groups on food security–related trade negotiations.

Hypotheses of relationships between references in responses to either the dimensions or the orientations of food security and countries' development levels were tested. A statistically significant relationship could not be identified between the dimensions of food security and the development levels of respondents' countries. It was concluded that the people orientation is an important concept for all delegates irrespective of their development levels.

Next was an attempt to identify to which category of developing country respondents the trade is more important in addressing food security challenges. A relationship could not be identified with respect to levels of development. However, a finer classification of countries according to different income levels was also considered. The results proved that there is a relationship between the adoption of a trade orientation to food security and the three dimensions of food security (availability, accessibility and stability) with reference to income levels. In particular, the trade orientation responses of high-income developing country respondents were significantly different compared to other income levels, and to the developing economy group as a whole.

The next step was to discuss the implications of these results for agricultural negotiations in the WTO. The agriculture negotiating groups (Cairns, G-20, G-33, G-10, ACP and African Group) were viewed from their trade interests, and the responses of representatives from the developing and least developed countries among them were illustrated in a Venn diagram according to “offensive” and defensive” interests. Of the developing countries, the high-income countries were more likely than upper and lower-income countries to take a trade orientation, but their positions differ: three were members of the G-20 and Cairns Group, which

hold offensive interests, whereas another was a member of the G-10 and G-33, which hold only defensive interests. The majority of the other developing and least developed countries were members of negotiating groups with overlapping interests.

In summary, the basic understanding of the concept of food security had much in common across economies (there was generally a people orientation). The exception is a small group of high-income developing economies that do take a trade orientation to food security. Even within this group, the approaches to the application of that orientation differ. Different stances on trade will add unpredictability and complexity into the negotiations on food security.

Chapter 6 focused on the relevance of the WTO (the body that regulates 95% of world trade) in addressing food security challenges. The main areas investigated were whether the WTO does have a mandate to address food security issues and the adequacy of its rules to do so. The majority held the view that the mandate is limited. Respondents from less developed economies perceived there is a mandate, whereas those from more developed economies denied the existence of such a mandate. Some respondents thought the WTO had a mandate because food security is mentioned in the preamble of the AoA and is further referred to in the Bali and Nairobi Ministerial Decisions. Others, who replied to the contrary, believed that food security was fundamentally a domestic policy matter of more relevance to the FAO. A number of respondents were open to the proposition that the WTO had a mandate, but were concerned that it did not have the capability to implement it.

The capability of the WTO depends on its rules. The current rules are an outcome of the arduous negotiations in the Uruguay Round that attempted to discipline trade-distortive practices. However, 80% of respondents believed that the WTO rules are inadequate in addressing food security challenges, but for different reasons. Respondents from least developed and developing countries said the rules do not provide enough policy space, whereas those from developing and developed economies had the opposite concern, that the rules are inadequate to discipline trade-distortive measures. Respondents from least developed and developed countries also considered that the rules lack balance and transparency. These different views are significant constraints on reaching consensus on the application of particular policy measures for the purpose of food security.

The next step was to consider more carefully the different policies that have an impact on food security, such as import and export restrictions, export subsidies and domestic support. This was the topic of Chapter 7. These policies also distort trade, so a further interest was the rules

that govern their use. Some respondents favoured maintaining these policies for different reasons, such as for food, national and livelihood security purposes. The provisions disciplining imports were considered more effective than the provisions regulating export restrictions. The vagueness in terms of transparency (notifications), definition of terms and discipline, supported by a dearth of case law, were some areas of export restrictions that were reviewed.

The views on subsidies were mixed. The displacement of domestic products and industry and an uneven playing field were concerns for the least developed and developing countries, whereas displacement of exports was a concern for the developed countries. Among the positive elements of subsidies were their ability to enhance domestic production, attract investments and provide cheap food. There was growing concern at the high use of green box support and its possible trade-distortive elements. A difference in opinion among the developing country delegates was observed. The views of the high-income developing countries differed from upper and lower-middle income developing country representatives and were more similar to the developed country respondents' views.

Having identified in Chapter 6 the inadequacy of rules in disciplining trade-distortive measures, the effectiveness of the DSS was assessed. Constraints encountered by least developed and developing countries when using dispute procedures were revealed. In addition, respondents indicated that food security complaints may not be prosecuted due to their politically sensitive nature.

Finally, as the WTO operates in an evolving environment, Chapter 8 on the shifts in the context of the negotiations sheds more light on the difficulties in reaching consensus in agriculture negotiations. Changes in the developing group of countries are seen as the main hindrance in reaching consensus. The diversity within the group is the main issue, including the different development levels, such as high-income developing countries compared to the rest (discussed in Chapter 5), and the different negotiating positions of the emerging developing countries.

In summary, there are many combinations of orientations and dimensions of food security. It may have been thought that a reason for the lack of progress on the issue in the WTO could be the different positioning of various categories of members in relation to these combinations of orientations and dimensions of the concept. The research results presented here suggest otherwise, and the source of any disagreement is not so much the difference in the understanding or appreciation of the concept. Lack of progress is related more to fundamental questions including, for some, whether the WTO does actually have a mandate to address food

security, and for others, even those who believe food security is within the WTO's mandate, whether it actually has the 'tools' to deal with it. The latter concern is particularly about the adequacy of the WTO rules, the importance of which is highlighted by all the potentially trade-distortive effects that are associated with the portfolio of policies that might be applied to food security goals. This issue is exacerbated by the evolving global circumstances in which the issue is being debated. Responding to the research question, "How can the global food security challenges be addressed in a MTS?", the answer is that there are ways that it can be done, but not without some effort to resolve issues concerning them.

The final step was therefore to focus on actions that might be taken. These include initiatives within and beyond the WTO as well as via the interaction of the WTO with other organisations.

9.2 Actions that might be taken within the WTO

9.2.1 Better understanding of diverse concerns on the mandate

The delegates accepted food security as a people-oriented concept, with trade having a part to play. They also agreed it is more relevant to the least developed and developing countries, which comprise two-thirds of the WTO membership. Even though this position is reflected in the majority view that the mandate is limited, respondents did not agree where food security would fit within the WTO and whether or not there is a proper mandate. These concerns have hindered negotiations and resulted in sidelining or avoiding this highly politically sensitive topic. Therefore, it is necessary to understand the validity of these concerns.

9.2.2 Amendments to the rules

Inadequate rules are a commonly viewed challenge in addressing food security issues in the WTO. The current rules can be defined and amended through the DSM as well as through ministerial decisions (which are the outcomes of negotiated proposals), adding clarity and predictability into the system. Examples are:

- Refining definitions: having a clear timeline for terms such as "shortage of food"; defining terms such as "farmer" and "farmland" in developing and developed countries will prevent misconceptions and vagueness.
- Seriously reviewing suggestions on export restriction provisions (see section v under "other issues", (part c) of the *Revised Draft Modalities for Agriculture* or the *Report by the Chair to the Trade Negotiations Committee*, WTO document TN/AG/W/4/Rev.4, of 6 December 2008 or TN/AG/26 of 21 April 2011).

- Redesign the agriculture notification procedure, which acts as the transparency mechanism, in a less complicated and more user-friendly manner to encourage more members to adhere to the principle of transparency.

9.2.3 Concerns about policy space

Another dilemma was the request for more policy space. The least developed and developing members looked to more policy space or flexibility for a solution. However, some members were concerned that developing countries, which are also top commodity producers and exporters, may misuse these flexibilities, resulting in trade distortions and a threat to the food and livelihood security of other members. On the other hand, it is an objective of the Marrakesh Agreement Establishing the WTO (WTO 1994) to address economic development in developing countries, especially those that are the least developed. A suitable solution is needed to address food security issues of the least developed and developing countries within the current rules, as there is reluctance for major change. Therefore, it is pertinent to understand if policy space is the solution, and if it is possible to address such needs within SDT.

9.2.4 Structural change: reclassification of the developing group

The three recognised negotiating groups within the WTO are the least developed, developing and developed countries, depending on their economic and social development levels. The self-defined developing country members constitute two-thirds of the WTO membership and SDT was extended to them (including LDCs) in the Uruguay Round. This research identified the impact that diverse development levels and trade interests within the developing group can have on food security-related negotiations. Respondents in this study considered that WTO internal economic governance does not reflect the IMF definitions of developing and developed countries. Diaz-Bonilla (2013), and Hoekman and Kostecki (2009) have also emphasised that different development levels within the WTO have not been effectively identified.

Although it is a highly political decision, some respondents raised the need to change or include restrictions in the definition of so-called developing countries to address this issue, because the developing group is no longer a homogenous group. Therefore, more appropriate classification of the developing group is recommended to overcome this hindrance to addressing food security issues in the WTO.

9.3 Actions that might be taken among other international organisations

Defeating hunger is a global challenge that requires a partnership among the domestic governments, other countries and different international bodies.

The FAO is the main organisation dealing with food security within the UN system, with the World Food Programme also attending to food emergencies. The objective and the scope of the FAO is different from those of the WTO and UNCTAD. However, there is common ground. The WTO rules and DSS disciplines the agriculture trade as well as subsidies and domestic support that have a direct impact on production. As there is some relationship between food security and trade, the WTO¹¹⁹ engages with UN organisations in many ways; for example, the FAO attends as an observer at the WTO Agriculture meetings and contributes when requested. However, the most respondents¹²⁰ considered that more interaction between these two organisations would definitely benefit WTO members in their attempt to understand food security issues at the WTO.

Another suggestion was that there should be more interaction between the country representative of the WTO and the FAO. It was noted that there is very little communication between the country representatives in Geneva and in Rome. Exchange of information between the relevant departments or the delegates in the respective countries would help to build better understanding on this issue and facilitate consensus-building.

In addition to more interaction with the FAO, it was suggested that strengthening further engagement between WTO and other international and nongovernment bodies (e.g. the IMF, the Asian Development Bank, research think-tanks, the World Bank, the OECD, and organisations such as APEC) would also facilitate coherence in food security–related programs conducted by these organisations.

9.4 Beyond the WTO

Bilateral and Regional Agreements (RTAs), although a deviation from the most-favoured-nation (MFN) clause, are disciplined under GATT Article XXIV and Enabling Clause. Such

¹¹⁹The Marrakesh Agreement that Established the WTO (WTO 1994) contains provisions (Article V & para 5 of the Article iii) to work in cooperation with the Breton Wood Institutions, Inter-Governmental Organizations (IGO) and with Non-Governmental Organizations concerning trade matters.

¹²⁰ Online survey Question 30 and Interview Question 12

agreements proliferated in the midst of slow progress in the MTS, encompassing trade and other needs between countries and within the region. For example, the Agreement on SAARC Preferential Trading Arrangement (SAPTA) and ASEAN Free Trade Area (AFTA) have signed additional agreements among their members to tackle food security challenges collaboratively, and the ASEAN Food Security Reserves, proposed SAARC Food Bank and APEC Food Emergency Response Mechanisms were initiatives to address food shortages and related issues in a region or in a familiar setting. These examples of extended cooperation could be resources for understanding food security needs that are beyond emergency situations (e.g. drought and flood relief) among the members.

9.5 Future research

Because the information gathered on the broad concept of food security is vast and diverse, only the significant areas were selected for research. Around 75% of the questions asked in the interview questionnaire (Appendix B-2) were covered due to the time constraints. It is expected that these topics and the issues discussed will create room for further research in the following areas.

9.5.1 What WTO rules should be amended to address food security issues effectively?

The findings of this thesis indicate that rules are inadequate in disciplining trade-distortive measures and the terms used in them are ambiguous. Consequently, there is a low response to notifications, which further exacerbates the inadequacy. These aspects are seen as having a bearing on members' scepticism that the WTO has a mandate to address these issues. Further research is needed to identify:

- the specific trade-related food security issues that can and cannot be addressed in the MTS
- the relevant provisions and terms that require amendment to address these issues of the membership; past proposals could be a starting point in such an exercise.

When identifying amendments to the rules it is important to take note of the different country situations and post-Uruguay Round changes that have an impact on the rules.

9.5.2 How effective are the different policies in addressing food security issues?

This thesis identified some policies members can adopt to address food security and views on their effectiveness, but it did not analyse the responses in detail. Therefore, it is suggested that future research:

- analyse the impact of a policy or combination of policies with due consideration to the external and internal dynamics, e.g. political influence
- assess the impact of these policies on different groups, emerging developing countries, NFIDCs, LDCs and other developing countries.

9.5.3 Can there be a quicker, more cost-effective consultation process to facilitate food security issues under the purview of the Dispute Settlement Board (DSB)?

Considering the constraints faced by the members in taking a case to the DSS, it is proposed that a suitable structure or consultation process be developed that is less costly and time-consuming but can aid the DSS in addressing members' concerns.

9.5.4 Can a collaborative effort among other organisations address trade-related food security issues more effectively than through the WTO?

Global food security is a worldwide problem that has to be tackled by every related organisation. Each organisation has its own mandate, objectives and limits. However, the final objective is the welfare of the people. Lack of coherence among organisations and fragmentation of institutions with overlapping responsibilities hardly helps solve this type of global problem. Alternatively, it wastes resources, as it is the same countries that are funding and representing in these organisations.

In this context, it is important to know the scope, objective and mandate of different organisations that deal with food security, especially those that are relevant to trade-related food security, and thereafter to identify common areas of collaboration and support.

9.5.5 How should the developing group be re-classified?


The developing group of countries is a diverse group and this aspect is seen as hindering food security negotiations. Therefore, it is suggested that further research be conducted to construct a model classifying these countries, to facilitate resolution of food security-related issues.

Appendix A: Preliminary materials

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A-1: Ethics approval

	 <p>RESEARCH BRANCH OFFICE OF RESEARCH ETHICS, COMPLIANCE AND INTEGRITY</p> <p>LEVEL 2, 110 GREENFILL STREET THE UNIVERSITY OF ADELAIDE SA, 5005 AUSTRALIA</p> <p>TELEPHONE: +61 8 8043 5137 FACSIMILE: +61 8 8013 3700 EMAIL: trae@adelaide.edu.au</p> <p>CRICOS Provider Number 00120M</p>
5 May 2014	
Professor C Findlay School: Professions	
Dear Professor Findlay	
ETHICS APPROVAL No: H-2014-078	
PROJECT TITLE: Addressing global food security challenges in the context of a multilateral trading system	
The ethics application for the above project has been reviewed by the Low Risk Human Research Ethics Review Group (Faculty of Humanities and Social Sciences and Faculty of the Professions) and is deemed to meet the requirements of the <i>National Statement on Ethical Conduct in Human Research (2007)</i> involving no more than low risk for research participants. You are authorised to commence your research on 01 May 2014 .	
Ethics approval is granted for three years and is subject to satisfactory annual reporting. The form titled <i>Project Status Report</i> is to be used when reporting annual progress and project completion and can be downloaded at http://www.adelaide.edu.au/ethics/human/guidelines/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:	
<ul style="list-style-type: none">• serious or unexpected adverse effects on participants,• previously unforeseen events which might affect continued ethical acceptability of the project,• proposed changes to the protocol, and• the project is discontinued before the expected date of completion.	
Please refer to the following ethics approval document for any additional conditions that may apply to this project.	
Yours sincerely	
PROFESSOR RACHEL A. ANKENY Co-Convenor <u>Low Risk Human Research Ethics Review Group</u> <u>(Faculty of Humanities and Social Sciences and Faculty of the Professions)</u>	ASSOCIATE PROFESSOR PAUL BABIE Co-Convenor <u>Low Risk Human Research Ethics Review Group</u> <u>(Faculty of Humanities and Social Sciences and Faculty of the Professions)</u>



RESEARCH BRANCH
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CRICOS Provider Number 00123M

Applicant: Professor C Findlay
School: Professions
Project Title: Addressing global food security challenges in the context of a multilateral trading system

The University of Adelaide Human Research Ethics Committee
Low Risk Human Research Ethics Review Group (Faculty of Humanities and Social Sciences and Faculty of the Professions)

ETHICS APPROVAL No: H-2014-078 **App. No.:** 18376

APPROVED for the period: 01 May 2014 to 31 May 2017

This study is to be conducted by Lakmini Priyanga, PhD Candidate

PROFESSOR RACHEL A. ANKENY
Co-Convenor
Low Risk Human Research Ethics Review Group
(Faculty of Humanities and Social Sciences and Faculty of the Professions)

ASSOCIATE PROFESSOR PAUL BABIE
Co-Convenor
Low Risk Human Research Ethics Review Group
(Faculty of Humanities and Social Sciences and Faculty of the Professions)

A-2: Letter inviting participation



15 October 2014

PROFESSOR CHRISTOPHER FINDLAY
EXECUTIVE DEAN
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10 PULTENEY STREET
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CRICOS Provider Number 00123M

TO WHOM IT MAY CONCERN

Letter of Introduction

This is to introduce Ms. Lakmini Peiris Mendis who is a PhD Candidate in the Institute for International Trade, Faculty of the Professions at the University of Adelaide. She is undertaking a research under my supervision on "How Global Food Security challenges could be addressed in a Multilateral Trading System".

Lakmini invites you to assist her in this project as Agriculture Delegates, officials and researchers views will address a certain aspect of her research.

She intends to conduct an online preliminary survey followed by an interview. The online survey will consist of 30 multiple choice questions and will take approximately 15 minutes to complete. The link will be provided by her. The interviews will be conducted in Geneva in November 2014 coinciding with WTO Agriculture Committee meeting at a convenient venue for the participants, will be no more than one hour in duration and the questions will be sent in advance.

Participants are assured that any information provided will be treated in the strictest confidence and none of the participants will be individually identifiable in the resulting thesis, report or other publications. Participation is voluntary and participants are free to discontinue at any time or to decline to answer any questions. Lakmini intends to record the interview for greater accuracy. In accordance with the University regulations, she will seek participants consent on the attached form to use the recorded information.

Please inform Lakmini as soon as possible via email – lakmini.peirismendis@adelaide.edu.au if you or the Agriculture Delegate in your Mission is willing to participate in this research. Any enquiries concerning this project should be directed to me at the above address or by telephone on 8313 3986 or email christopher.findlay@adelaide.edu.au.

Thank you for your assistance and cooperation.

Yours sincerely,

PROFESSOR CHRISTOPHER FINDLAY AM
Executive Dean

This research project has been approved by the Human Research Ethics Committee at the University of Adelaide (Approval Number H-2014-078).

A-3: Participant information sheet



PARTICIPANT INFORMATION SHEET

Project title	: Addressing Global Food Security Challenges in the context of a Multilateral Trading System
Principal investigator	: Prof Christopher Findlay, Executive Dean, Faculty of the Professions
Student researcher	: Ms. Lakmini P Peiris Mendis
Students degree	: Doctor of Philosophy
Ethics approval number	: H-2014-078

Purpose and aim of the study

The purpose of the study is to understand how the global food security challenges be addressed in a Multilateral Trading System. It is aimed at examining the effectiveness of WTO rules in disciplining trade distortive measures and in addressing food security needs of its membership and reviewing other factors that hinders trade negotiations, with a view to providing recommendations that could be adopted by the members as solutions to food security challenges.

The project intends to gather views of the Delegates, academic, researchers who are conversant with food security issues being negotiated in the Multilateral Trading System.

Procedure involving the participants

Details of the process and procedure are explained below:

- *Who are the selected participants for interviews?*

Initially, an invitation letter, Consent Form and Participant Information Sheet will be sent to the potential participants via email at least 2 months prior to the conduct of interviews. Selected participants are the respondents who agree and confirm their participation by returning the signed consent form.

- *What is the process?*

Three weeks prior to the interviews, a list of questions, a copy of the interview schedule with slots and venues will be sent to the selected participant.

Participants are requested to respond via email within 2-3 days of their 3 most preferred time slots, the preferred venue and request for translation if any.

- *Confirmation*

The researcher will then confirm the date, time and venue at least 7-10 days prior to the interview.

- *Where and how interviews be conducted?*

The face to face interviews scheduled in Geneva, will be conducted either at the WTO Secretariat (tbc) or at the participant's respective office or a venue convenient to the participant. The estimated time for an interview is approximately 60 minutes and follow-up interviews may be conducted to gather more information or for any further clarifications if deemed necessary. In order to provide greater accuracy interviews will be recorded. If there are any reservations participants may inform the researcher before the interview. The interviews will be conducted in English. However, translation facilities could be arranged upon request.

In case the recording is transcribed by a service provider, be assured that such person will be requested to sign a confidentiality agreement which outlines the requirement that the participants name or identity will not be revealed and that the confidentiality of the material is respected and maintained.

- *Will the identity be revealed?*

Participants anonymity is assured. Each participant will have a code. Further, participants are only requested to share their views on food security related issues that have been discussed at the WTO. Delegates' responses will be collated broadly under different WTO Groupings. Similarly the comments of other participants will be categorized as views of academic & researchers who had participated in the research. The interview material will be reported so that often used terms of phrase or specific statements made elsewhere cannot be used to identify respondents.

- *Any other important information*

Participation in this project is completely voluntary. Hence, participants are free to withdraw from the project at any time.

Data storage

The information and project records will be confidentially stored at the facility of the Institute for International Trade where access be restricted to the supervisor and the researcher.

Outcome of the study

The results from the survey and interviews form an important part of the researcher's thesis to be submitted for the degree of Doctor of Philosophy.

Publication of results

It is anticipated that the research will be presented at an academic conference and published in academic journals and websites.

Independent complaints procedure

Attached to this information sheet are the contacts for information on independent complaints procedure and information in regard to the role of the Human Research Ethics Committee for your information.

Contact for this study

Should you require any further information or have any concerns please do not hesitate to contact either of the researchers on the number given below.

Prof Christopher Findlay
Executive Dean
Faculty of the Professions
University of Adelaide
Adelaide SA 5005, Australia

Ms. Lakmini Peiris Mendis
PhD Candidate
Institute for International Trade
Faculty of the Professions
University of Adelaide
Adelaide SA5005 Australia

Ph: 61-8-83133986
E mail: christopher.findlay@adelaide.edu.au

Ph:61-416451682
Email: lakmini.peirismendis@adelaide.edu.au

A-4: Informed consent form



Human Research Ethics Committee (HREC)

CONSENT FORM

1. I have read the attached Information Sheet and agree to take part in the following research project:

Title:	Addressing Global Food Security Challenges in the Context of a Multilateral Trading System
Ethics Approval Number:	H-2014-078

2. I have had the project, so far as it affects me, fully explained to my satisfaction by the research worker. My consent is given freely.
3. Although I understand the purpose of the research project it has also been explained that involvement may not be of any benefit to me.
4. I have been informed that, while information gained during the study may be published, I will not be identified and my personal results will not be divulged.
5. I understand that I am free to withdraw from the project at any time.
6. I agree to the interview being audio/video recorded. Yes No
7. 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: _____

Appendix B: Questionnaires and surveys

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B-1: Online questionnaires

B-1.1 Survey questionnaire for delegates

7/8/2014 "How global food security challenges could be addressed in a Multilateral Trading System"

"How global food security challenges could be addressed in a Multilateral Trading System"

Preliminary Survey

The purpose of this questionnaire is to better understand *"How global food security challenges could be addressed in a Multilateral Trading System"*

Guidelines for participants:

- This is an anonymous survey.
- It will take approximately 15 minutes to complete.
- Participants are requested to answer all questions listed under 6 broad sections.
- There are no "right" or "wrong" answers in this survey. Your candid views will be particularly useful.
- When answering the questions, please select only one (1) answer per question, (unless it is specifically stated to select more than one, or to rank your selections).

Please remember to click the "Submit" button when you have completed the survey.

Section 1: Your views on "Food Security and related challenges"

1. In your view what are the most important elements related to food security?
Please select **5 elements you consider important** among the following. Of the 5 rank them in a diminishing order.
If you selected 'Any other', please specify briefly.

	Most important	Second most important	Third most important	Fourth most important	Fifth most important
A fundamental right of the people and a precondition for Right to Food.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People having nutritious food to meet their dietary needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers having economic resources to buy staple food.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A balance among production, supply and demand for food.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of sufficient staple foods at all times without any shortages.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consistent supply of food through domestic production or imports at all time without any shortages.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of staple foods at a price that the poor can afford.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Predictable prices in the international market with minimum price fluctuations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers having a choice of their preferred food.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Any other.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you selected 'Any other', please specify here:

2. In your view what are the most significant challenges to food security?
Please select **5 challenges you consider important** among the following. Of the 5 rank them in a diminishing order.
If you selected 'Any other', please specify briefly.

	Most important	Second most important	Third most important	Fourth most important	Fifth most important
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<https://adobeformscentral.com/?f=Nqqs4qE-Iggh3IOIKg> 1/8

7/8/2014

"How global food security challenges could be addressed in a Multilateral Trading System"

High or volatile staple food prices as experienced by consumers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unavailability or shortage of staple foods due to import or export restrictions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Food shortages due to unexpected natural disasters.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inefficiencies in the distribution system.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Low demand due to lack of purchasing power.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Too much dependence on imported food stocks.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More production of feed stocks (bio fuel crops) at the expense of food stocks.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Low supply due to low investment, low productivity and lack of research in the agriculture sector.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not consuming nutritious food due to poverty or ignorance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Balancing the demands of farmers and consumers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Food wastages in the production and consumption cycle.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Any other.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you selected 'Any other', please specify here:

Section 2: Your views on the role of the Multilateral Trading System of the WTO in addressing food security challenges

In the following, your views and opinions are important.

Please rate to which extent you disagree or agree with the following statements.

	Not at all	To a very small extent	To some extent	To a considerable extent	To a greater extent
3. In your view does the Multilateral Trading System have a significant role to play in addressing global food security challenges?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. In your view how effective has the Multilateral Trading System been in addressing global food security challenges?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Are you satisfied with the role played by the WTO in addressing these challenges?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. To what extent do you think WTO members can find solutions for global food security challenges within the WTO system?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Is trade liberalization a necessary mechanism to address food security challenges?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section 3: Your views on Food Security & Trade Restrictions

In the following, your views and opinions are important.

Please rate to which extent the agreements are sufficient.

	Not at all	To a very small extent	To some extent	To a considerable extent	To a greater extent
8. Are GATT Article XI and Article 12 of the Agriculture Agreement <u>sufficient</u> to regulate <u>export</u> restrictions?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Is GATT Article XI <u>sufficient</u> to regulate <u>import</u> restrictions?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please rate to which extent you disagree or agree with the following statements.

	Strongly disagree	Somewhat disagree	Undecided	Somewhat agree	Strongly agree
10. Export and import restrictions are trade distorting measures.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Export and import restrictions can be considered as trade policies that a country could implement to ensure food security needs of domestic consumers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please rate the ineffectiveness or effectiveness of import export restrictions in connection to the following statements.

	Very ineffective	Somewhat ineffective	Undecided	Somewhat effective	Very effective
12. In your view <u>how effective</u> are import and export restrictions in ensuring food security needs of the domestic consumers in the short term?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. In your view <u>how effective</u> are import and export restrictions in ensuring food security needs of the domestic consumers in the long term?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please rate to which extent you disagree or agree with the following statements.

	Not at all	To a very small extent	To some extent	To a considerable extent	To a greater extent
14. To what extent do developed country export subsidies have an impact on the food security of developing & LDC countries which are <u>importing</u> food stuffs?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. To what extent do developed country export subsidies have an impact on the food security of developing & LDC countries which are <u>exporting</u> food stuffs?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. In your view to what extent are the <u>developing countries and LDCs</u> making use of "Green box" measures?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. In your view to what extent are the <u>developed countries</u> making use of "Green box" measures?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Do you consider non trade distortive subsidies as a <u>necessary</u> food security measure for resource poor farmers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section 4: Your views on Food Security & WTO negotiations

19. In your view, what are the factors that have led to the inability of WTO Members to arrive at a consensus on Agriculture issues?

Please select 5 factors you consider important among the following. Of the 5 rank them in a diminishing order. If you selected 'Any other', please specify briefly.

	Most important	Second most important	Third most important	Fourth most important	Fifth most important
Unprecedented global events that have affected economic stability of countries.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trade policies of major trading partners.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bargaining power of the lobbyists.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weak bargaining power of the developing countries.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Changes in the dynamics now and when AoA was signed in 1994.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of more protectionist measures to safeguard the interests of farmers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Effectiveness of bilateral agreements which are increasing among members.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Powerfulness of emerging markets such as BRICS.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of trust, transparency and inclusiveness in negotiations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Low interest in the multilateral system after the long haul of DDA.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
"Development issues" being at the centre of Doha round and hindering the progress.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Single undertaking commitment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reluctance to revisit the texts (Rev 4).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Any other.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you selected 'Any other', please elaborate here:

Please rate to which extent you disagree or agree with the following statements.

	Strongly disagree	Somewhat disagree	Undecided	Somewhat agree	Strongly agree
20. Trade policies of the developed countries (eg : US Farm Bill and the EU-CAP) have market distorting elements.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. Previous food security related proposals that were submitted or discussed but not agreed at the WTO can be considered as still relevant that they should be negotiated again.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please indicate to which extent you are dissatisfied or satisfied with the following statements on negotiations.

	Very unsatisfied	Somewhat unsatisfied	Neutral	Somewhat satisfied	Very satisfied
22. Are you satisfied with the Bali outcome at the 9th WTO Ministerial Meeting held in 2013 on export subsidies decision?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. Are you satisfied with the Bali outcome at the 9th WTO Ministerial Meeting held in 2013 on public stockholding decisions?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

24. Are you satisfied with the progress of post Bali negotiation achieved so far on food security issues (public stockholding, export subsidies and work plans that needs to be agreed by the end of 2014)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Section 5: Your Views on Food Security & Political Dimensions

Please rate to which extent you disagree or agree with the following statements.

	Strongly disagree	Somewhat disagree	Undecided	Somewhat agree	Strongly agree
25. Reaching a consensus on food security issues would involve highly political decisions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. Bio fuel incentives are a decisive factor for food security.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. Agreement on Agriculture contains sufficient provisions and flexibilities for a State to fulfil its Right to Food obligations and responsibilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please rate the below statement:

	Fully self-sufficiency	Mostly self-sufficiency	Mixture of both	Mostly self-reliance	Fully self-reliance
28. In regards to policies in meeting staple food needs of your country, how do you consider the relative importance of self-sufficiency (purely rely on local production) and self-reliance (purely rely on import & export trade)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section 6: Your Views on Food Security & Future Prospects

Please indicate to which extent you disagree or agree with the following statements.

	Not at all	To a very small extent	To some extent	To a considerable extent	To a greater extent
29. Can the cooperation extended under bilateral/ regional free trade agreements be an effective solution in addressing food security issues?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30. In your view does the WTO engage adequately and maintain effective cooperation with other related organizations (FAO, UN etc) in addressing food security related challenges?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other comments

Do you wish to include any comments to explain any of your responses or provide any further detail on any of the issues

7/9/2014

"How global food security challenges could be addressed in a Multilateral Trading System"

covered?

Demographics

How long have you been involved in multilateral trade related work?

- 1-2 year(s) 3-4 years 5-7 years
 8-10 years more than 10 years

Please indicate whether you are representing a ...

- Developed Country
 Developing Country
 Least Developed Country

Do you belong to any (one or more) of the following groupings:

- G-20 G-10 G-33 LDC
 NFDC SVE Cairns Group ACP
 African Group OECD OECS

You may enter your contact details if you wish to be contacted by the researcher:

Name:

Email address:

Thank you very much for your time in participating in this survey.

Please submit this form by clicking 'Submit' below.

Submit

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B-1.2: Survey questionnaire for researchers

07/04/2015 "How global food security challenges could be addressed in a Multilateral Trading System"

"How global food security challenges could be addressed in a Multilateral Trading System"

Preliminary Survey

The purpose of this questionnaire is to better understand *"How global food security challenges could be addressed in a Multilateral Trading System"*

Guidelines for participants:

- This is an anonymous survey.
- It will take approximately 15 minutes to complete.
- Participants are requested to answer all questions listed under 6 broad sections.
- There are no "right" or "wrong" answers in this survey. Your candid views will be particularly useful.
- When answering the questions, please select only one (1) answer per question, (unless it is specifically stated to select more than one, or to rank your selections).

Please remember to click the "Submit" button when you have completed the survey.

Section 1: Your views on "Food Security and related challenges"

1. In your view what are the most important elements related to food security?
Please select 5 elements you consider important among the following. Of the 5 rank them in a diminishing order.
If you selected 'Any other', please specify briefly.

	Most important	Second most important	Third most important	Fourth most important	Fifth most important
A fundamental right of the people and a precondition for Right to Food.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People having nutritious food to meet their dietary needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers having economic resources to buy staple food.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A balance among production, supply and demand for food.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of sufficient staple foods at all times without any shortages.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consistent supply of food through domestic production or imports at all time without any shortages.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of staple foods at a price that the poor can afford.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Predictable prices in the international market with minimum price fluctuations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers having a choice of their preferred food.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Any other.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you selected 'Any other', please specify here:

2. In your view what are the most significant challenges to food security?
Please select 5 challenges you consider important among the following. Of the 5 rank them in a diminishing order.
If you selected 'Any other', please specify briefly.

	Most important	Second most important	Third most important	Fourth most important	Fifth most important
High or volatile staple food prices as	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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experienced by consumers.					
Unavailability or shortage of staple foods due to import or export restrictions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Food shortages due to unexpected natural disasters.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inefficiencies in the distribution system.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Low demand due to lack of purchasing power.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Too much dependence on imported food stocks.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More production of feed stocks (bio fuel crops) at the expense of food stocks.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Low supply due to low investment, low productivity and lack of research in the agriculture sector.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not consuming nutritious food due to poverty or ignorance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Balancing the demands of farmers and consumers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Food wastages in the production and consumption cycle.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Any other.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you selected 'Any other', please specify here:

Section 2: Your views on the role of the Multilateral Trading System of the WTO in addressing food security challenges

In the following, your views and opinions are important.

Please rate to which extent you disagree or agree with the following statements.

	Not at all	To a very small extent	To some extent	To a considerable extent	To a greater extent
3. In your view does the Multilateral Trading System have a significant role to play in addressing global food security challenges?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. In your view how effective has the Multilateral Trading System been in addressing global food security challenges?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Are you satisfied with the role played by the WTO in addressing these challenges?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. To what extent do you think WTO members can find solutions for global food security challenges within the WTO system?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Is trade liberalization a necessary mechanism to address food security challenges?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section 3: Your views on Food Security & Trade Restrictions

In the following, your views and opinions are important.

Please rate to which extent the agreements are sufficient.

	Not at all	To a very small extent	To some extent	To a considerable extent	To a greater extent
8. Are GATT Article XI and Article 12 of the Agriculture Agreement <u>sufficient</u> to regulate <u>export</u> restrictions?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Is GATT Article XI <u>sufficient</u> to regulate <u>import</u> restrictions?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please rate to which extent you disagree or agree with the following statements.

	Strongly disagree	Somewhat disagree	Undecided	Somewhat agree	Strongly agree
10. Export and import restrictions are trade-distorting measures.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Export and import restrictions can be considered as trade policies that a country could implement to ensure food security needs of domestic consumers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please rate the ineffectiveness or effectiveness of import export restrictions in connection to the following statements.

	Very ineffective	Somewhat ineffective	Undecided	Somewhat effective	Very effective
12. In your view <u>how effective</u> are import and export restrictions in ensuring food security needs of the domestic consumers in the short term?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. In your view <u>how effective</u> are import and export restrictions in ensuring food security needs of the domestic consumers in the long term?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please rate to which extent you disagree or agree with the following statements.

	Not at all	To a very small extent	To some extent	To a considerable extent	To a greater extent
14. To what extent do developed country export subsidies have an impact on the food security of developing & LDC countries which are <u>importing</u> food stuffs?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. To what extent do developed country export subsidies have an impact on the food security of developing & LDC countries which are <u>exporting</u> food stuffs?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. In your view to what extent are the <u>developing countries and LDCs</u> making use of "Green box" measures?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. In your view to what extent are the <u>developed countries</u> making use of "Green box" measures?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Do you consider non trade distortive subsidies as a <u>necessary</u> food security measure for resource poor farmers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section 4: Your views on Food Security & WTO negotiations

19. In your view, what are the factors that have led to the inability of WTO Members to arrive at a consensus on Agriculture issues?

Please select 5 factors you consider important among the following. Of the 5 rank them in a diminishing order. If you selected 'Any other', please specify briefly.

	Most important	Second most important	Third most important	Fourth most important	Fifth most important
Unprecedented global events that have affected economic stability of countries.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trade policies of major trading partners.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bargaining power of the lobbyists.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weak bargaining power of the developing countries.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Changes in the dynamics now and when AoA was signed in 1994.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of more protectionist measures to safeguard the interests of farmers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Effectiveness of bilateral agreements which are increasing among members.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Powerfulness of emerging markets such as BRICS.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of trust, transparency and inclusiveness in negotiations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Low interest in the multilateral system after the long haul of DDA.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
"Development issues" being at the centre of Doha round and hindering the progress.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Single undertaking commitment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reluctance to revisit the texts (Rev 4).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Any other.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you selected 'Any other', please elaborate here:

Please rate to which extent you disagree or agree with the following statements.

	Strongly disagree	Somewhat disagree	Undecided	Somewhat agree	Strongly agree
20. Trade policies of the developed countries (eg : US Farm Bill and the EU-CAP) have market distorting elements.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. Previous food security related proposals that were submitted or discussed but not agreed at the WTO can be considered as still relevant that they should be negotiated again.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please indicate to which extent you are dissatisfied or satisfied with the following statements on negotiations.

	Very unsatisfied	Somewhat unsatisfied	Neutral	Somewhat satisfied	Very satisfied
22. Are you satisfied with the Bali outcome at the 9th WTO Ministerial Meeting held in 2001 on export subsidies decision?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. Are you satisfied with the Bali outcome at the 9th WTO Ministerial Meeting held in 2001 on public stockholding decisions?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. Are you satisfied with the progress of post	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Has negotiation addressed so far on food security issues (public stockholding, export subsidies and work plans that needs to be agreed by the end of 2014)?

Section 5: Your Views on Food Security & Political Dimensions

Please rate to which extent you disagree or agree with the following statements.

	Strongly disagree	Somewhat disagree	Undecided	Somewhat agree	Strongly agree
25. Reaching a consensus on food security issues would involve highly political decisions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. Bio fuel incentives are a decisive factor for food security.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. Agreement on Agriculture contains sufficient provisions and flexibilities for a State to fulfil its Right to Food obligations and responsibilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please rate the below statement:

	Fully self-sufficiency	Mostly self-sufficiency	Mixture of both	Mostly self-reliance	Fully self-reliance
28. In regard to policies in meeting staple food needs how do you consider the relative importance of self-sufficiency (purely rely on local production) and self-reliance (purely rely on import & export trade)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section 6: Your Views on Food Security & Future Prospects

Please indicate to which extent you disagree or agree with the following statements.

	Not at all	To a very small extent	To some extent	To a considerable extent	To a greater extent
29. Can the cooperation extended under bilateral/ regional free trade agreements be an effective solution in addressing food security issues?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30. In your view does the WTO engage adequately and maintain effective cooperation with other related organizations (FAO, UN etc.) in addressing food security related challenges?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other comments

Do you wish to include any comments to explain any of your responses or provide any further detail on any of the issues covered?

Demographics

Like the survey questions, this section will also be kept anonymous.
Please provide a few details about yourself for analysis purposes:

How long have you been involved in multilateral trade related work?

- 1-2 year(s) 3-4 years 5-7 years
 8-10 years more than 10 years

Are you an Official attached to the WTO/FAO/UNCTAD?

- Yes
 No

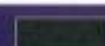
You may enter your contact details if you wish to be contacted by the researcher:

Name:

Email address:

Thank you very much for your time in participating in this survey.

Please submit this form by clicking 'Submit' below.



B-2: Interview questionnaire

"How global food security challenges could be addressed in a Multilateral Trading System"

Interview Questionnaire

Introduction & guidelines:

This interview is conducted to gather data for my PhD research on "How Global Food Security challenges could be addressed in a Multilateral Trading System". Participants are assured that any information provided will be treated in the strictest confidence and will not be individually identifiable in the resulting publications.

The interview will last for about an hour. It will be recorded for greater accuracy. Participation is voluntary. Appreciate if all the questions could be answered. However, if you have any reservations you may inform.

In accordance with the University regulations, participants are kindly requested to sign the Consent form agreeing to participate and use recorded information for study purposes.

Participants Code No: started & ended

Personal Details

1. Are you a

Delegate Researcher Official

2. How long have you been involved in multilateral trade related work

1-2 Yrs 3 - 4 Yrs 5 -7 Yrs 8-10 Yrs More than 10 Yrs

3. If a Delegate are you representing a

Developed Country Developing country LDC

4. If a Delegate which Grouping/s do your country belong to :

G20 G10 G33 NFIDCS SVE Cairns Group
ACP African Group OECD OECS

Questions

Section 1: Your views on Food Security and related challenges

- (a) What is food security?
(b) The concept "Food Security has many diverse interpretations. In your view what are the reasons for such diversity?

Section 2: Your views on the role of the Multilateral Trading System in addressing food security challenges:

- (a) Does the WTO have a mandate to address food security issue?
(b) How can the Multilateral Trading System be improved to address food security challenges?
- In your view can the WTO Rules adequately address food security challenges?

“How global food security challenges could be addressed in a Multilateral Trading System”

Section 3: Your views on Food Security & Trade Restrictions & Subsidies

4. What is the relationship between food security and the use of trade restrictions ie, import /export restrictions and subsidies?
 - (a) What is the relationship between food security and import restrictions?
 - (b) What is the relationship between food security and export restrictions?
 - (c) What is the relationship between food security and subsidies (export subsidies and domestic support)?
5. In your view, do GATT Article XI and Article 12 of the Agreement on Agriculture sufficiently discipline the use of quantitative restrictions (import / export restrictions)?
6. Are you satisfied with the use and effectiveness of WTO dispute settlement mechanism in related to import/ export restrictions and subsidies issues more particularly related to food security issues?

Section 4: Your views on Food Security & WTO negotiations

7. What kind of dynamics have changed now and when AoA was signed in 1994 that hinders WTO members from arriving at consensus on Agriculture issues?
8. Are you satisfied with the progress of post Bali negotiations on food security issues (public stockholding, export subsidies and work plans that needs to be agreed by end of 2014 etc)?
 - 8.a In your view does Bali decision on public stockholding have any implications on other countries?
 - 8.b In your view what are the reasons for not reaching a consensus to eliminate export subsidies at the WTO?
9. Are the previous proposals on food security submitted or discussed but not agreed at the WTO considered as still relevant? Should these proposals be negotiated again?

Section 5 : Your views on Food Security & Political dimensions

10. What kind of impact does international politics have on the food security decisions made in particularly at the WTO?
11. In your view what is the best policy for a country – self-sufficiency, trade reliance or a mixture of both. Please explain.

Section 6: Your views on Food Security & Future prospects

12. How can the food security related issues be more effectively addressed through cooperation between the WTO and UN organizations such as FAO, UNCTAD etc?
13. Can the cooperation extended under bilateral/regional free trade agreements be an effective solution in addressing food security issues?

Thank You for your participation!

Check List

- Interview Recorded
 Completed & signed Participants consent sheet

REMARKS

Appendix C: Survey data for Chapter 3

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C-1: Question 1: Calculations and response rates

Note: Because of rounding, totals do not necessarily add up to 100 (%).

Questions 1, 2 & 19

Abbreviations

D	Developed
Dev	Developing
LDCs / L	LDC
<i>UN</i>	<i>Unclassified</i>
Res	Researchers
Off	Officials

C-1.1 Delegates

Table C-1: Total responses

	No of responses
Developed	35
Developing	67
LDC	10
Unclassified	5
Total responses	117
Considered for analysis (117-5)	112

Table C-2: Breakdown of overall responses (nos)

	1st MI	2nd MI	3rd MI	4th MI	5th MI	Total
1.1	10	0	1	1	2	14
1.2	2	4	2	5	1	14
1.3	3	0	3	6	2	14
1.4	1	0	4	1	3	9
1.5	3	7	5	3	0	18
1.6	1	3	3	3	6	16
1.7	2	8	5	0	0	15
1.8	0	1	1	5	5	12
1.9	0	0	0	1	2	3
1.10	1	0	0	0	1	2
	23	23	24	25	22	117

Table C-3: Breakdown of overall responses (%)

	1st MI	2nd MI	3rd MI	4th MI	5th MI	Total %
1.1	8.5%	0.0%	0.9%	0.9%	1.7%	12.0%
1.2	1.7%	3.4%	1.7%	4.3%	0.9%	12.0%
1.3	2.6%	0%	2.6%	5.1%	1.7%	12.0%
1.4	0.9%	0%	3.4%	0.9%	2.6%	7.7%
1.5	2.6%	6.0%	4.3%	2.6%	0.0%	15.4%
1.6	0.9%	2.6%	2.6%	2.6%	5.1%	13.7%
1.7	1.7%	6.8%	4.3%	0.0%	0.0%	12.8%
1.8	0.0%	0.9%	0.9%	4.3%	4.3%	10.3%
1.9	0.0%	0.0%	0.0%	0.9%	1.7%	2.6%
1.10	0.9%	0.0%	0.0%	0.0%	0.9%	1.7%
Total	19.7%	19.7%	20.5%	21.4%	18.8%	100%

Table C-4: Importance given for the three main elements by development level

	D	Dev	LDC	Total
1.5	4	11	2	17
1.6	4	9	2	15
1.7	4	8	2	14
	12	28	6	46

	D	Dev	LDC
1.5+1.6+1.7	12	28	6
% of total response (46)	34%	42%	60%

Table C-5: Breakdown including unclassified among Developed, Developing and LDCs

	1st MI				2nd MI				3rd MI				4th MI				5th MI				Total
	D	Dev	L	Un	D	Dev	L	Un	D	Dev	L	Un	D	Dev	L	Un	D	Dev	L	Un	
1.1	0	8	2	0	0	0	0	0	0	1	0	0	0	1	0	0	1	1	0	0	14
1.2	2	0	0	0	2	2	0	0	0	1	1	0	2	3	0	0	0	1	0	0	14
1.3	2	0	0	1	0	0	0	0	1	2	0	0	1	5	0	0	1	1	0	0	14
1.4	0	1	0	0	0	0	0	0	2	2	0	0	1	0	0	0	1	2	0	0	9
1.5	2	1	0	0	1	6	0	0	1	3	1	0	0	1	1	1	0	0	0	0	18
1.6	0	1	0	0	2	1	0	0	0	2	0	1	1	2	0	0	1	3	2	0	16
1.7	0	2	0	0	2	3	2	1	2	3	0	0	0	0	0	0	0	0	0	0	15
1.8	0	0	0	0	0	1	0	0	1	0	0	0	2	2	1	0	3	1	0	1	12
1.9	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
1.10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2
	7	13	2	1	7	13	2	1	7	14	2	1	7	15	2	1	7	12	2	1	117
1.4/1.9/1.10	1	1	0	0	0	0	0	0	2	2	0	0	1	1	0	0	1	5	0	0	

Table C-6: Breakdown excluding unclassified

	1st MI			2nd MI			3rd MI			4th MI			5th MI			Total
	D	Dev	L	D	Dev	L	D	Dev	L	D	Dev	L	D	Dev	L	
1.1	0	8	2	0	0	0	0	1	0	0	1	0	1	1	0	14
1.2	2	0	0	2	2	0	0	1	1	2	3	0	0	1	0	14
1.3	2	0	0	0	0	0	1	2	0	1	5	0	1	1	0	13
1.4	0	1	0	0	0	0	2	2	0	1	0	0	1	2	0	9
1.5	2	1	0	1	6	0	1	3	1	0	1	1	0	0	0	17
1.6	0	1	0	2	1	0	0	2	0	1	2	0	1	3	2	15
1.7	0	2	0	2	3	2	2	3	0	0	0	0	0	0	0	14
1.8	0	0	0	0	1	0	1	0	0	2	2	1	3	1	0	11
1.9	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	3
1.10	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
	7	13	2	7	13	2	7	14	2	7	15	2	7	12	2	112

Table C-7: Total responses of all five Most important rankings (nos)

	1-5 MI		
	D	Dev	LDC
1.1	1	11	2
1.2	6	7	1
1.3	5	8	0
1.4	4	5	0
1.5	4	11	2
1.6	4	9	2
1.7	4	8	2
1.8	6	4	1
1.9	0	3	0
1.10	1	1	0
	35	67	10

Table C-8: All five Most Important as a % of each group totals

	1-5 MI		
	D	Dev	LDC
1.1	2.9%	16.4%	20.0%
1.2	17.1%	10.4%	10.0%
1.3	14.3%	11.9%	0.0%
1.4	11.4%	7.5%	0.0%
1.5	11.4%	16.4%	20.0%
1.6	11.4%	13.4%	20.0%
1.7	11.4%	11.9%	20.0%
1.8	17.1%	6.0%	10.0%
1.9	0.0%	4.5%	0.0%
1.10	2.9%	1.5%	0.0%
	100%	100%	100%

Table C-9: Three Most Important Rankings (nos)

	D	Dev	LDC	Total
Rank 1	7	13	2	22
Rank 2	7	13	2	22
Rank 3	7	14	2	23
	21	40	6	67

Table C-10: Three Most Important Rankings for each dimension (nos)

Dimension	1st MI	2nd MI	3rd MI	Total
Accessibility				
1.3	2	0	3	5
1.7	2	7	5	14
1.8	0	1	1	2
Availability				
1.5	3	7	5	15
Stability				
1.6	1	3	2	6
Utilisation				
1.2	2	4	2	8
Other				
1.1	10	0	1	11
1.4	1	0	4	5
1.9	0	0	0	0
1.10	1	0	0	1
	22	22	23	67

1.4/1.9/1.10 2 0 4 6

Table C-11: Three Most Important Rankings for each dimension (%)

Dimension	1st MI	2nd MI	3rd MI
Accessibility 1.3	9.1%	0.0%	13.0%
Accessibility 1.7	9.1%	31.8%	21.7%
Accessibility 1.8	0.0%	4.5%	4.3%
Availability 1.5	13.6%	31.8%	21.7%
Stability 1.6	4.5%	13.6%	8.7%
Utilisation 1.2	9.1%	18.2%	8.7%
Other 1.1	45.5%	0.0%	4.3%
Other 1.4/1.9/1.10	9.1%	0.0%	17.4%
	100%	100%	100%

Table C-12: Three Most Important rankings breakdown among the Delegates

Dimension	1st MI			2nd MI			3rd MI			Total
	D	Dev	L	D	Dev	L	D	Dev	L	
Accessibility										
1.3	2	0	0	0	0	0	1	2	0	5
1.7	0	2	0	2	3	2	2	3	0	14
1.8	0	0	0	0	1	0	1	0	0	2
Availability										
1.5	2	1	0	1	6	0	1	3	1	15
Stability										
1.6	0	1	0	2	1	0	0	2	0	6
Utilisation										0
1.2	2	0	0	2	2	0	0	1	1	8
Other										
1.1	0	8	2	0	0	0	0	1	0	11
1.4	0	1	0	0	0	0	2	2	0	5
1.9	0	0	0	0	0	0	0	0	0	0
1.10	1	0	0	0	0	0	0	0	0	1
Total	7	13	2	7	13	2	7	14	2	67
	22			22			23			

Table C-13: Three Most Important Rankings for Developed delegates

Dimension	1st MI	2ndMI	3rdMI
	D	D	D
Accessibility 1.3	28.6%	0.0%	14.3%
Accessibility 1.7	0.0%	28.6%	28.6%
Accessibility 1.8	0.0%	0.0%	14.3%
Availability 1.5	28.6%	14.3%	14.3%
Stability 1.6	0.0%	28.6%	0.0%
Utilisation 1.2	28.6%	28.6%	0.0%
Other 1.1	0.0%	0.0%	0.0%
Other 1.4/1.9/1.10	14.3%	0.0%	28.6%
	100%	100%	100%

Table C-14: Three Most Important Rankings for Developing

Dimension	1st MI	2ndMI	3rdMI
	Dev	Dev	Dev
Accessibility 1.3	0.0%	0.0%	14.3%
Accessibility 1.7	15.4%	23.1%	21.4%
Accessibility 1.8	0.0%	7.7%	0.0%
Availability 1.5	7.7%	46.2%	21.4%
Stability 1.6	7.7%	7.7%	14.3%
Utilisation 1.2	0.0%	15.4%	7.1%
Other 1.1	61.5%	0.0%	7.1%
Other 1.4/1.9/1.10	7.7%	0.0%	14.3%
	100%	100%	100%

Table C-15: Three Most Important Rankings for LDCs

Dimension	1st MI	2ndMI	3rdMI
	LDC	LDC	LDC
Accessibility 1.3	0%	0%	0%
Accessibility 1.7	0%	100%	0%
Accessibility 1.8	0%	0%	0%
Availability 1.5	0%	0%	50%
Stability 1.6	0%	0%	0%
Utilisation 1.2	0%	0%	50%
Other 1.1	100%	0%	0%
Other 1.4/1.9/1.10	0%	0%	0%
	100%	100%	100%

C-1.2 Researchers & officials

Table C-16: Total responses

	No of responses
Researchers	74
Officials	40
Total	114

Table C-17: Breakdown of overall responses (nos)

	1st MI	2nd MI	3rd MI	4th MI	5th MI	Total
1.1	5	0	0	0	3	8
1.2	4	3	7	3	1	18
1.3	5	6	3	1	1	16
1.4	3	0	5	3	0	11
1.5	5	3	2	5	1	16
1.6	4	1	1	1	3	10
1.7	4	5	1	3	4	17
1.8	1	1	1	3	3	9
1.9	2	0	0	0	5	7
1.10	1	1	0	0	0	2
	34	20	20	19	21	114

Table C-18: Breakdown of overall responses (%)

	1st MI	2nd MI	3rd MI	4th MI	5th MI	Total %
1.1	4.4%	0.0%	0.0%	0.0%	2.6%	7.0%
1.2	3.5%	2.6%	6.1%	2.6%	0.9%	15.8%
1.3	4.4%	5.3%	2.6%	0.9%	0.9%	14.0%
1.4	2.6%	0.0%	4.4%	2.6%	0.0%	9.6%
1.5	4.4%	2.6%	1.8%	4.4%	0.9%	14.0%
1.6	3.5%	0.9%	0.9%	0.9%	2.6%	8.8%
1.7	3.5%	4.4%	0.9%	2.6%	3.5%	14.9%
1.8	0.9%	0.9%	0.9%	2.6%	2.6%	7.9%
1.9	1.8%	0.0%	0.0%	0.0%	4.4%	6.1%
1.10	0.9%	0.9%	0.0%	0.0%	0.0%	1.8%
	29.8%	17.5%	17.5%	16.7%	18.4%	100%

Table C-19: Breakdown of all five Most Important rankings among Researchers & Officials (nos)

	1st MI		2nd MI		3rd MI		4th MI		5th MI		Total
	Res	Off	Res	Off	Res	Off	Res	Off	Res	Off	
1.1	4	1	0	0	0	0	0	0	1	2	8
1.2	3	1	3	0	6	1	1	2	0	1	18
1.3	5	0	3	3	2	1	0	1	0	1	16
1.4	2	1	0	0	1	4	1	2	0	0	11
1.5	4	1	1	2	1	1	4	1	1	0	16
1.6	1	3	1	0	1	0	1	0	2	1	10
1.7	3	1	2	3	1	0	3	0	2	2	17
1.8	1	0	1	0	0	1	1	2	3	0	9
1.9	2	0	0	0	0	0	0	0	4	1	7
1.10	1	0	1	0	0	0	0	0	0	0	2
	26	8	12	8	12	8	11	8	13	8	114

Table C-20: Breakdown of all five Most Important rankings among Researchers & Officials (%)

	1st MI		2nd MI		3rd MI		4th MI		5th MI		Total
	Res	Off	Res	Off	Res	Off	Res	Off	Res	Off	
1.1	4%	1%	0%	0%	0%	0%	0%	0%	1%	2%	7%
1.2	3%	1%	3%	0%	5%	1%	1%	2%	0%	1%	16%
1.3	4%	0%	3%	3%	2%	1%	0%	1%	0%	1%	14%
1.4	2%	1%	0%	0%	1%	4%	1%	2%	0%	0%	10%
1.5	4%	1%	1%	2%	1%	1%	4%	1%	1%	0%	14%
1.6	1%	3%	1%	0%	1%	0%	1%	0%	2%	1%	9%
1.7	3%	1%	2%	3%	1%	0%	3%	0%	2%	2%	15%
1.8	1%	0%	1%	0%	0%	1%	1%	2%	3%	0%	8%
1.9	2%	0%	0%	0%	0%	0%	0%	0%	4%	1%	6%
1.10	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	2%
	23%	7%	11%	7%	11%	7%	10%	7%	11%	7%	100%

Table C-21: All five Most Important rankings (nos)

	1-5 MI	
	Res	Off
1.1	5	3
1.2	13	5
1.3	10	6
1.4	4	7
1.5	11	5
1.6	6	4
1.7	11	6
1.8	6	3
1.9	6	1
1.10	2	0
	74	40

Table C-22: All five Most Important as a % of each group totals

	1-5 MI	
	Res	Off
1.1	7%	8%
1.2	18%	13%
1.3	14%	15%
1.4	5%	18%
1.5	15%	13%
1.6	8%	10%
1.7	15%	15%
1.8	8%	8%
1.9	8%	3%
1.10	3%	0%
	100%	100%

Table C-23 Most Important Rankings (nos)

	Researchers	Officials	Total
Rank 1	26	8	34
Rank 2	12	8	20
Rank 3	12	8	20
	50	24	74

Table C-24: Three Most Important Rankings for each dimension (nos)

Dimensions	1st MI	2nd MI	3rd MI
Accessibility			
1.3	5	6	3
1.7	4	5	1
1.8	1	1	1
Availability			
1.5	5	3	2
Stability			
1.6	4	1	1
Utilisation			
1.2	4	3	7
Other			
1.1	5	0	0
1.4	3	0	5
1.9	2	0	0
1.10	1	1	0
1.4/1.9/1.10	6	1	5
	34	20	20

Table C-25: Three Most Important Rankings for each dimension (%)

Dimensions	1st MI	2nd MI	3rd MI
Accessibility 1.3	14.7%	30.0%	15.0%
Accessibility 1.7	11.8%	25.0%	5.0%
Accessibility 1.8	2.9%	5.0%	5.0%
Availability 1.5	14.7%	15.0%	10.0%
Stability 1.6	11.8%	5.0%	5.0%
Utilisation 1.2	11.8%	15.0%	35.0%
Other 1.1	14.7%	0.0%	0.0%
Other 1.4/1.9/1.10	17.6%	5.0%	25.0%
	100%	100%	100%

Table C-26: Three Most Important rankings breakdown among researchers and officials

Dimensions	1st MI		2nd MI		3rd MI		Total
	Res	Off	Res	Off	Res	Off	
Accessibility							
1.3	5	0	3	3	2	1	14
1.7	3	1	2	3	1	0	10
1.8	1	0	1	0	0	1	3
Availability							
1.5	4	1	1	2	1	1	10
Stability							0
1.6	1	3	1	0	1	0	6
Utilisation							
1.2	3	1	3	0	6	1	14
Other							
1.1	4	1	0	0	0	0	5
1.4	2	1	0	0	1	4	8
1.9	2	0	0	0	0	0	2
1.10	1	0	1	0	0	0	2
	26	8	12	8	12	8	74
	34		20		20		

Table C-27: Three Most Important Rankings for researchers

Dimensions	1st MI	2ndMI	3rdMI
	Res	Res	Res
Accessibility 1.3	19.2%	25%	16.7%
Accessibility 1.7	11.5%	16.7%	8.3%
Accessibility 1.8	3.9%	8.3%	0%
Availability 1.5	15.4%	8.3%	8.3%
Stability 1.6	3.9%	8.3%	8.3%
Utilisation 1.2	11.5%	25%	50%
Other 1.1	15.4%	0%	0%
Other 1.4/1.9/1.10	19.2%	8.3%	8.3%
	100%	100%	100%

Table C-28: Three Most Important Rankings for officials

Dimensions	1st MI	2ndMI	3rdMI
	Off	Off	Off
Accessibility 1.3	0.0%	37.5%	12.5%
Accessibility 1.7	12.5%	37.5%	0.0%
Accessibility 1.8	0.0%	0.0%	12.5%
Availability 1.5	12.5%	25%	12.5%
Stability 1.6	37.5%	0.0%	0.0%
Utilisation 1.2	12.5%	0.0%	12.5%
Other 1.1	12.5%	0.0%	0.0%
Other 1.4/1.9/1.10	12.5%	0.0%	50%
	100%	100%	100%

C-2 Question 2: Calculations and response rates

C-2.1 Delegates

Table C-29: Total responses

	No of responses
Developed	36
Developing	67
LDC	9
Unclassified	3
Total responses	115
Considered for analysis (115-3)	112

Table C-30: Breakdown of overall responses (nos)

	1st MI	2nd MI	3rd MI	4th MI	5th MI	Total
2.1	7	7	1	4	1	20
2.2	2	4	2	1	3	12
2.3	4	2	4	2	0	12
2.4	0	1	4	4	3	12
2.5	2	2	0	0	0	4
2.6	3	2	1	1	1	8
2.7	1	0	3	0	4	8
2.8	2	5	1	5	2	15
2.9	0	1	3	1	1	6
2.10	1	0	2	2	3	8
2.11	0	0	1	3	4	8
2.12	2	0	0	0	0	2
	24	24	22	23	22	115

Table C-31: Breakdown of overall responses (%)

	1st MI	2nd MI	3rd MI	4th MI	5th MI	Total %
2.1	6.1%	6.1%	0.9%	3.5%	0.9%	17.4%
2.2	1.7%	3.5%	1.7%	0.9%	2.6%	10.4%
2.3	3.5%	1.7%	3.5%	1.7%	0.0%	10.4%
2.4	0.0%	0.9%	3.5%	3.5%	2.6%	10.4%
2.5	1.7%	1.7%	0.0%	0.0%	0.0%	3.5%
2.6	2.6%	1.7%	0.9%	0.9%	0.9%	7.0%
2.7	0.9%	0.0%	2.6%	0%	3.5%	7.0%
2.8	1.7%	4.3%	0.9%	4.3%	1.7%	13.0%
2.9	0.0%	0.9%	2.6%	0.9%	0.9%	5.2%
2.10	0.9%	0.0%	1.7%	1.7%	2.6%	7.0%
2.11	0.0%	0.0%	0.9%	2.6%	3.5%	7.0%
2.12	1.7%	0.0%	0.0%	0.0%	0.0%	1.7%
						100.0%

Table C-32: Breakdown including unclassified among Developed, Developing and LDCs

	1st MI				2nd MI				3rd MI				4th MI				5th MI				
	D	Dev	L	UC	D	Dev	L	UC	D	Dev	L	UC	D	Dev	L	UC	D	Dev	L	UC	
2.1	0	6	1	0	4	2	1	0	0	1	0	0	1	3	0	0	0	1	0	0	
2.2	2	0	0	0	0	4	0	0	1	1	0	0	1	0	0	0	2	0	1	0	
2.3	0	3	1	0	0	2	0	0	2	1	0	1	2	0	0	0	0	0	0	0	
2.4	0	0	0	0	0	1	0	0	2	1	1	0	1	2	1	0	2	1	0	0	
2.5	1	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2.6	1	2	0	0	1	0	1	0	0	1	0	0	0	1	0	0	0	1	0	0	
2.7	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	1	3	0	0	
2.8	1	1	0	0	2	3	0	0	1	0	0	0	0	4	1	0	1	1	0	0	
2.9	0	0	0	0	0	0	0	1	0	3	0	0	1	0	0	0	0	1	0	0	
2.10	0	1	0	0	0	0	0	0	0	2	0	0	1	1	0	0	0	3	0	0	
2.11	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	1	2	1	0	
2.12	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7	14	2	1	7	14	2	1	7	13	1	1	8	13	2	0	7	13	2	0	115

Table C-33: Breakdown excluding unclassified

	1st MI			2nd MI			3rd MI			4th MI			5th MI			Total
	D	Dev	L	D	Dev	L	D	Dev	L	D	Dev	L	D	Dev	L	
2.1	0	6	1	4	2	1	0	1	0	1	3	0	0	1	0	20
2.2	2	0	0	0	4	0	1	1	0	1	0	0	2	0	1	12
2.3	0	3	1	0	2	0	2	1	0	2	0	0	0	0	0	11
2.4	0	0	0	0	1	0	2	1	1	1	2	1	2	1	0	12
2.5	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
2.6	1	2	0	1	0	1	0	1	0	0	1	0	0	1	0	8
2.7	0	1	0	0	0	0	0	3	0	0	0	0	1	3	0	8
2.8	1	1	0	2	3	0	1	0	0	0	4	1	1	1	0	15
2.9	0	0	0	0	0	0	0	3	0	1	0	0	0	1	0	5
2.10	0	1	0	0	0	0	0	2	0	1	1	0	0	3	0	8
2.11	0	0	0	0	0	0	1	0	0	1	2	0	1	2	1	8
2.12	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	7	14	2	7	14	2	7	13	1	8	13	2	7	13	2	112

Table C-34: Total responses of all five Most important rankings (nos)

	1-5 MI			Total
	D	Dev	L	
2.1	5	13	2	20
2.2	6	5	1	12
2.3	4	6	1	11
2.4	5	5	2	12
2.5	1	2	0	3
2.6	2	5	1	8
2.7	1	7	0	8
2.8	5	9	1	15
2.9	1	4	0	5
2.10	1	7	0	8
2.11	3	4	1	8
2.12	2	0	0	2
	36	67	9	112

Table C-35: All five Most Important as a % of each group totals

	1-5 MI		
	D	Dev	L
2.1	14%	19%	22%
2.2	17%	7%	11%
2.3	11%	9%	11%
2.4	14%	7%	22%
2.5	3%	3%	0%
2.6	6%	7%	11%
2.7	3%	10%	0%
2.8	14%	13%	11%
2.9	3%	6%	0%
2.10	3%	10%	0%
2.11	8%	6%	11%
2.12	6%	0%	0%
	100%	100%	100%

Table C-36: Three Most Important Rankings distributed among the delegates groups (nos)

	Developed	Developing	LDCs	Total
Rank 1	7	14	2	23
Rank 2	7	14	2	23
Rank 3	7	13	1	21
	21	41	5	67

Table C-37: Breakdown of the three Most Important Rankings (nos)

	1st MI	2nd MI	3rd MI
2.1	7	7	1
2.2	2	4	2
2.3	4	2	3
2.4	0	1	4
2.5	1	2	0
2.6	3	2	1
2.7	1	0	3
2.8	2	5	1
2.9	0	0	3
2.10	1	0	2
2.11	0	0	1
2.12	2	0	0
	23	23	21

Table C-38: Breakdown of the three Most Important Rankings (%)

	1st MI	2nd MI	3rd MI
2.1	30.4%	30.4%	4.8%
2.2	8.7%	17.4%	9.5%
2.3	17.4%	8.7%	14.3%
2.4	0.0%	4.3%	19.0%
2.5	4.3%	8.7%	0.0%
2.6	13.0%	8.7%	4.8%
2.7	4.3%	0.0%	14.3%
2.8	8.7%	21.7%	4.8%
2.9	0.0%	0.0%	14.3%
2.1	4.3%	0.0%	9.5%
2.11	0.0%	0.0%	4.8%
2.12	8.7%	0.0%	0.0%
	100%	100.0%	100.0%

Table C-39: Breakdown of the three Most Important Rankings among the Delegates

	1st MI			2nd MI			3rd MI			Total
	D	Dev	L	D	Dev	L	D	Dev	L	
2.1	0	6	1	4	2	1	0	1	0	15
2.2	2	0	0	0	4	0	1	1	0	8
2.3	0	3	1	0	2	0	2	1	0	9
2.4	0	0	0	0	1	0	2	1	1	5
2.5	1	0	0	0	2	0	0	0	0	3
2.6	1	2	0	1	0	1	0	1	0	6
2.7	0	1	0	0	0	0	0	3	0	4
2.8	1	1	0	2	3	0	1	0	0	8
2.9	0	0	0	0	0	0	0	3	0	3
2.10	0	1	0	0	0	0	0	2	0	3
2.11	0	0	0	0	0	0	1	0	0	1
2.12	2	0	0	0	0	0	0	0	0	2
	7	14	2	7	14	2	7	13	1	67
	23			23			21			

Table C-40: Three Most Important Rankings for Developed delegates

	1st MI	2ndMI	3rdMI
	D	D	D
2.1	0%	57%	0%
2.2	29%	0%	14%
2.3	0%	0%	29%
2.4	0%	0%	29%
2.5	14%	0%	0%
2.6	14%	14%	0%
2.7	0%	0%	0%
2.8	14%	29%	14%
2.9	0%	0%	0%
2.10	0%	0%	0%
2.11	0%	0%	14%
2.12	29%	0%	0%
	100%	100%	100%

Table C-41: Three Most Important Rankings for Developing

	1st MI	2ndMI	3rdMI
	Dev	Dev	Dev
2.1	42.9%	14.3%	7.7%
2.2	0.0%	28.6%	7.7%
2.3	21.4%	14.3%	7.7%
2.4	0.0%	7.1%	7.7%
2.5	0.0%	14.3%	0.0%
2.6	14.3%	0.0%	7.7%
2.7	7.1%	0.0%	23.1%
2.8	7.1%	21.4%	0.0%
2.9	0.0%	0.0%	23.1%
2.10	7.1%	0.0%	15.4%
2.11	0.0%	0.0%	0.0%
2.12	0.0%	0.0%	0.0%
	100%	100%	100%

Table C-42: Three Most Important Rankings for LDCs

	1st MI	2ndMI	3rdMI
	LDC	LDC	LDC
2.1	50%	50%	0%
2.2	0%	0%	0%
2.3	50%	0%	0%
2.4	0%	0%	100%
2.5	0%	0%	0%
2.6	0%	50%	0%
2.7	0%	0%	0%
2.8	0%	0%	0%
2.9	0%	0%	0%
2.10	0%	0%	0%
2.11	0%	0%	0%
2.12	0%	0%	0%
	100%	100%	100%

C-2.2 Researchers and officials

Table C-43: Total responses

	No of responses
Researchers	68
Officials	41
Total	109

Table C-44: Breakdown of overall responses (nos)

	1st MI	2nd MI	3rd MI	4th MI	5th MI	Total
2.1	4	4	1	3	3	15
2.2	3	1	5	3	1	13
2.3	2	0	4	0	5	11
2.4	2	6	3	0	2	13
2.5	2	2	3	1	0	8
2.6	0	2	1	3	1	7
2.7	0	0	0	0	4	4
2.8	5	3	1	1	1	11
2.9	0	2	3	2	2	9
2.10	1	0	1	2	2	6
2.11	0	0	1	6	2	9
2.12	2	1	0	0	0	3
	21	21	23	21	23	109

Table C-45: Breakdown of overall responses (%)

	1st MI	2nd MI	3rd MI	4th MI	5th MI	Total %
2.1	3.7%	3.7%	0.9%	2.8%	2.8%	13.8%
2.2	2.8%	0.9%	4.6%	2.8%	0.9%	11.9%
2.3	1.8%	0.0%	3.7%	0.0%	4.6%	10.1%
2.4	1.8%	5.5%	2.8%	0.0%	1.8%	11.9%
2.5	1.8%	1.8%	2.8%	0.9%	0.0%	7.3%
2.6	0.0%	1.8%	0.9%	2.8%	0.9%	6.4%
2.7	0.0%	0.0%	0.0%	0.0%	3.7%	3.7%
2.8	4.6%	2.8%	0.9%	0.9%	0.9%	10.1%
2.9	0.0%	1.8%	2.8%	1.8%	1.8%	8.3%
2.10	0.9%	0.0%	0.9%	1.8%	1.8%	5.5%
2.11	0.0%	0.0%	0.9%	5.5%	1.8%	8.3%
2.12	1.8%	0.9%	0.0%	0.0%	0%	2.8%
	19.3%	19.3%	21.1%	19.3%	21.1%	100%

Table C-46: Breakdown among Researchers & Officials

	1st MI		2nd MI		3rd MI		4th MI		5th MI		Total
	Res	Off	Res	Off	Res	Off	Res	Off	Res	Off	
2.1	1	3	4	0	0	1	2	1	2	1	15
2.2	2	1	0	1	5	0	2	1	1	0	13
2.3	2	0	0	0	3	1	0	0	2	3	11
2.4	2	0	2	4	2	1	0	0	1	1	13
2.5	2	0	1	1	1	2	0	1	0	0	8
2.6	0	0	1	1	0	1	1	2	1	0	7
2.7	0	0	0	0	0	0	0	0	3	1	4
2.8	2	3	3	0	0	1	1	0	1	0	11
2.9	0	0	2	0	3	0	2	0	1	1	9
2.10	0	1	0	0	1	0	1	1	2	0	6
2.11	0	0	0	0	0	1	4	2	0	2	9
2.12	2	0	0	1	0	0	0	0	0	0	3
	13	8	13	8	15	8	13	8	14	9	109

Table C-47: Total responses of all five Most important rankings (nos)

	1-5 MI	
	Res	Off
2.1	9	6
2.2	10	3
2.3	7	4
2.4	7	6
2.5	4	4
2.6	3	4
2.7	3	1
2.8	7	4
2.9	8	1
2.10	4	2
2.11	4	5
2.12	2	1
	68	41

Table C-48: All five Most Important as a % of each group totals

	1-5 MI	
	Res	Off
2.1	13%	15%
2.2	15%	7%
2.3	10%	10%
2.4	10%	15%
2.5	6%	10%
2.6	4%	10%
2.7	4%	2%
2.8	10%	10%
2.9	12%	2%
2.10	6%	5%
2.11	6%	12%
2.12	3%	2%
	100%	100%

Table C-49: Three Most Important Rankings distributed among researchers and officials (nos)

	Researchers	Officials	Total
Rank 1	13	8	21
Rank 2	13	8	21
Rank 3	15	8	23
	41	24	65

Table C-50: Breakdown of the three Most Important Rankings (nos)

	1st MI	2nd MI	3rd MI
2.1	4	4	1
2.2	3	1	5
2.3	2	0	4
2.4	2	6	3
2.5	2	2	3
2.6	0	2	1
2.7	0	0	0
2.8	5	3	1
2.9	0	2	3
2.10	1	0	1
2.11	0	0	1
2.12	2	1	0
	21	21	23

Table C-51: Breakdown of the three Most Important Rankings (%)

	1st MI	2nd MI	3rd MI
2.1	19.0%	19.0%	4.3%
2.2	14.3%	4.8%	21.7%
2.3	9.5%	0.0%	17.4%
2.4	9.5%	28.6%	13.0%
2.5	9.5%	9.5%	13.0%
2.6	0.0%	9.5%	4.3%
2.7	0.0%	0.0%	0.0%
2.8	23.8%	14.3%	4.3%
2.9	0.0%	9.5%	13.0%
2.10	4.8%	0.0%	4.3%
2.11	0.0%	0.0%	4.3%
2.1	9.5%	4.8%	0.0%
	100%	100%	100%

Table C-52: Breakdown of the three Most Important Rankings among researchers and officials

	1st MI		2nd MI		3rd MI		Total
	Res	Off	Res	Off	Res	Off	
2.1	1	3	4	0	0	1	9
2.2	2	1	0	1	5	0	9
2.3	2	0	0	0	3	1	6
2.4	2	0	2	4	2	1	11
2.5	2	0	1	1	1	2	7
2.6	0	0	1	1	0	1	3
2.7	0	0	0	0	0	0	0
2.8	2	3	3	0	0	1	9
2.9	0	0	2	0	3	0	5
2.10	0	1	0	0	1	0	2
2.11	0	0	0	0	0	1	1
2.12	2	0	0	1	0	0	3
	13	8	13	8	15	8	
	21		21		23		65

Table C-53: Three Most Important Rankings for researchers

	1st MI	2ndMI	3rdMI
	Res	Res	Res
2.1	7.7%	30.8%	0.0%
2.2	15.4%	0.0%	33.3%
2.3	15.4%	0.0%	20.0%
2.4	15.4%	15.4%	13.3%
2.5	15.4%	7.7%	6.7%
2.6	0.0%	7.7%	0.0%
2.7	0.0%	0.0%	0.0%
2.8	15.4%	23.1%	0.0%
2.9	0.0%	15.4%	20.0%
2.10	0.0%	0.0%	6.7%
2.11	0.0%	0.0%	0.0%
2.12	15.4%	0.0%	0.0%
	100%	100%	100%

Table C-54: Three Most Important Rankings for officials

	1st MI	2ndMI	3rdMI
	Off	Off	Off
2.1	37.5%	0.0%	12.5%
2.2	12.5%	12.5%	0.0%
2.3	0.0%	0.0%	12.5%
2.4	0.0%	50.0%	12.5%
2.5	0.0%	12.5%	25.0%
2.6	0.0%	12.5%	12.5%
2.7	0.0%	0.0%	0.0%
2.8	37.5%	0.0%	12.5%
2.9	0.0%	0.0%	0.0%
2.10	12.5%	0.0%	0.0%
2.11	0.0%	0.0%	12.5%
2.12	0.0%	12.5%	0.0%
	100%	100%	100%

C-3 Question 19

C-3.1 Delegates

Table C-55: Total responses

	No of responses
Developed	35
Developing	67
LDC	10
Unclassified	2
Total responses	114
Considered for analysis (114-2)	112

Table C-56: Breakdown of overall responses (nos)

	1st MI	2nd MI	3rd MI	4th MI	5th MI	Total
19.1	1	1	2	0	3	7
19.2	8	4	3	3	0	18
19.3	1	1	0	0	0	2
19.4	1	2	1	0	1	5
19.5	1	6	3	2	3	15
19.6	0	0	2	4	2	8
19.7	2	1	2	1	1	7
19.8	3	2	2	2	2	11
19.9	1	2	3	5	0	11
19.10	2	0	3	3	3	11
19.11	0	0	1	0	2	3
19.12	0	2	0	1	4	7
19.13	2	1	0	3	2	8
19.14	1	0	0	0	0	1
	23	22	22	24	23	114

Table C-57: Breakdown of overall responses (%)

	1st MI	2nd MI	3rd MI	4th MI	5th MI	Total %
19.1	0.9%	0.9%	1.8%	0.0%	2.6%	6.1%
19.2	7.0%	3.5%	2.6%	2.6%	0.0%	15.8%
19.3	0.9%	0.9%	0.0%	0.0%	0.0%	1.8%
19.4	0.9%	1.8%	0.9%	0.0%	0.9%	4.4%
19.5	0.9%	5.3%	2.6%	1.8%	2.6%	13.2%
19.6	0.0%	0.0%	1.8%	3.5%	1.8%	7.0%
19.7	1.8%	0.9%	1.8%	0.9%	0.9%	6.1%
19.8	2.6%	1.8%	1.8%	1.8%	1.8%	9.6%
19.9	0.9%	1.8%	2.6%	4.4%	0.0%	9.6%
19.10	1.8%	0.0%	2.6%	2.6%	2.6%	9.6%
19.11	0.0%	0.0%	0.9%	0.0%	1.8%	2.6%
19.12	0.0%	1.8%	0.0%	0.9%	3.5%	6.1%
19.13	1.8%	0.9%	0.0%	2.6%	1.8%	7.0%
19.14	0.9%	0.0%	0.0%	0.0%	0.0%	0.9%
						100%

Table C-58: Breakdown including unclassified among Developed, Developing and LDCs

	1st MI				2nd MI				3rd MI				4th MI				5th MI				
	D	Dev	L	UC	D	Dev	L	UC	D	Dev	L	UC	D	Dev	L	UC	D	Dev	L	UC	
19.1	0	1	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	3	0	0	
19.2	1	5	1	1	2	2	0	0	0	3	0	0	1	2	0	0	0	0	0	0	
19.3	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
19.4	0	1	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
19.5	1	0	0	0	1	4	1	0	1	1	1	0	1	1	0	0	1	2	0	0	
19.6	0	0	0	0	0	0	0	0	1	1	0	0	1	1	2	0	0	2	0	0	
19.7	2	0	0	0	0	1	0	0	0	2	0	0	0	1	0	0	1	0	0	0	
19.8	1	2	0	0	1	0	0	1	1	0	1	0	0	2	0	0	1	0	1	0	
19.9	0	1	0	0	0	2	0	0	2	1	0	0	1	4	0	0	0	0	0	0	
19.10	1	1	0	0	0	0	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
19.11	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	
19.12	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	2	1	0	
19.13	0	1	1	0	1	0	0	0	0	0	0	0	1	2	0	0	1	1	0	0	
19.14	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7	13	2	1	7	12	2	1	7	13	2	0	7	15	2	0	7	14	2	0	114

Table C-59: Breakdown excluding unclassified

	1st MI			2nd MI			3rd MI			4th MI			5th MI			Total
	D	Dev	L	D	Dev	L	D	Dev	L	D	Dev	L	D	Dev	L	
19.1	0	1	0	0	1	0	0	2	0	0	0	0	0	3	0	7
19.2	1	5	1	2	2	0	0	3	0	1	2	0	0	0	0	17
19.3	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2
19.4	0	1	0	0	2	0	0	1	0	0	0	0	0	1	0	5
19.5	1	0	0	1	4	1	1	1	1	1	1	0	1	2	0	15
19.6	0	0	0	0	0	0	1	1	0	1	1	2	0	2	0	8
19.7	2	0	0	0	1	0	0	2	0	0	1	0	1	0	0	7
19.8	1	2	0	1	0	0	1	0	1	0	2	0	1	0	1	10
19.9	0	1	0	0	2	0	2	1	0	1	4	0	0	0	0	11
19.10	1	1	0	0	0	0	1	2	0	1	2	0	1	2	0	11
19.11	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	3
19.12	0	0	0	2	0	0	0	0	0	1	0	0	1	2	1	7
19.13	0	1	1	1	0	0	0	0	0	1	2	0	1	1	0	8
19.14	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	7	13	2	7	12	2	7	13	2	7	15	2	7	14	2	112

Table C-60: Total responses of all five Most important rankings (nos)

	1-5 MI		
	D	Dev	L
19.1	0	7	0
19.2	4	12	1
19.3	0	1	1
19.4	0	5	0
19.5	5	8	2
19.6	2	4	2
19.7	3	4	0
19.8	4	4	2
19.9	3	8	0
19.10	4	7	0
19.11	2	1	0
19.12	4	2	1
19.13	3	4	1
19.14	1	0	0
	35	67	10
			112

Table C-61: All five Most Important as a % of each group totals

	1-5 MI		
	D	Dev	L
19.1	0%	10%	0%
19.2	11%	18%	10%
19.3	0%	1%	10%
19.4	0%	7%	0%
19.5	14%	12%	20%
19.6	6%	6%	20%
19.7	9%	6%	0%
19.8	11%	6%	20%
19.9	9%	12%	0%
19.10	11%	10%	0%
19.11	6%	1%	0%
19.12	11%	3%	10%
19.13	9%	6%	10%
19.14	3%	0%	0%
	100%	100%	100%

Table C-62: 13 Most Important Rankings (nos)

	Developed	Developing	LDCs	Total
Rank 1	7	13	2	22
Rank 2	7	12	2	21
Rank 3	7	13	2	22
	21	38	6	65

Table C-63: Breakdown of the three Most Important Rankings (nos)

	1st MI	2nd MI	3rd MI
19.1	1	1	2
19.2	7	4	3
19.3	1	1	0
19.4	1	2	1
19.5	1	6	3
19.6	0	0	2
19.7	2	1	2
19.8	3	1	2
19.9	1	2	3
19.10	2	0	3
19.11	0	0	1
19.12	0	2	0
19.13	2	1	0
19.14	1	0	0
	22	21	22

Table C-64: Breakdown of the three Most Important Rankings (%)

	1st MI	2nd MI	3rd MI
19.1	5%	5%	9%
19.2	32%	19%	14%
19.3	5%	5%	0%
19.4	5%	10%	5%
19.5	5%	29%	14%
19.6	0%	0%	9%
19.7	9%	5%	9%
19.8	14%	5%	9%
19.9	5%	10%	14%
19.10	9%	0%	14%
19.11	0%	0%	5%
19.12	0%	10%	0%
19.13	9%	5%	0%
19.14	5%	0%	0%
	100%	100%	100%

Table C-65: Breakdown of the three Most Important Rankings among the Delegates

	1st MI			2nd MI			3rd MI			Total
	D	Dev	L	D	Dev	L	D	Dev	L	
19.1	0	1	0	0	1	0	0	2	0	4
19.2	1	5	1	2	2	0	0	3	0	14
19.3	0	1	0	0	0	1	0	0	0	2
19.4	0	1	0	0	2	0	0	1	0	4
19.5	1	0	0	1	4	1	1	1	1	10
19.6	0	0	0	0	0	0	1	1	0	2
19.7	2	0	0	0	1	0	0	2	0	5
19.8	1	2	0	1	0	0	1	0	1	6
19.9	0	1	0	0	2	0	2	1	0	6
19.10	1	1	0	0	0	0	1	2	0	5
19.11	0	0	0	0	0	0	1	0	0	1
19.12	0	0	0	2	0	0	0	0	0	2
19.13	0	1	1	1	0	0	0	0	0	3
19.14	1	0	0	0	0	0	0	0	0	1
	7	13	2	7	12	2	7	13	2	65
	22			21			22			

Table C-66: Three Most Important Rankings for Developed

	1st MI	2ndMI	3rdMI
	D	D	D
19.1	0%	0%	0%
19.2	14%	29%	0%
19.3	0%	0%	0%
19.4	0%	0%	0%
19.5	14%	14%	14%
19.6	0%	0%	14%
19.7	29%	0%	0%
19.8	14%	14%	14%
19.9	0%	0%	29%
19.10	14%	0%	14%
19.11	0%	0%	14%
19.12	0%	29%	0%
19.13	0%	14%	0%
19.14	14%	0%	0%
	100%	100%	100%

Table C-67: Three Most Important Rankings for Developing

	1st MI	2ndMI	3rdMI
	Dev	Dev	Dev
19.1	8%	8%	15%
19.2	38%	17%	23%
19.3	8%	0%	0%
19.4	8%	17%	8%
19.5	0%	33%	8%
19.6	0%	0%	8%
19.7	0%	8%	15%
19.8	15%	0%	0%
19.9	8%	17%	8%
19.10	8%	0%	15%
19.11	0%	0%	0%
19.12	0%	0%	0%
19.13	8%	0%	0%
19.14	0%	0%	0%
	100%	100%	100%

Table C-68: Three Most Important Rankings for LDCs

	1st MI	2ndMI	3rdMI
	LDC	LDC	LDC
19.1	0%	0%	0%
19.2	50%	0%	0%
19.3	0%	50%	0%
19.4	0%	0%	0%
19.5	0%	50%	50%
19.6	0%	0%	0%
19.7	0%	0%	0%
19.8	0%	0%	50%
19.9	0%	0%	0%
19.10	0%	0%	0%
19.11	0%	0%	0%
19.12	0%	0%	0%
19.13	50%	0%	0%
19.14	0%	0%	0%
	100%	100%	100%

C-3.2 Researchers and officials

Table C-69: Total responses

	No of responses
Researchers	69
Officials	38
Total	107

Table C-70: Breakdown of overall responses (nos)

	1st MI	2nd MI	3rd MI	4th MI	5th MI	Total
19.1	3	0	1	3	1	8
19.2	5	5	1	2	2	15
19.3	0	3	2	1	2	8
19.4	2	3	2	0	2	9
19.5	10	1	2	2	1	16
19.6	1	2	2	2	0	7
19.7	0	0	1	2	1	4
19.8	0	4	1	1	2	8
19.9	0	2	4	2	2	10
19.10	0	1	3	3	2	9
19.11	1	1	1	0	1	4
19.12	0	0	1	2	2	5
19.13	0	0	0	0	0	0
19.14	1	0	1	0	2	4
						107

Table C-71: Breakdown of overall responses (%)

	1st MI	2nd MI	3rd MI	4th MI	5th MI	Total
19.1	2.8%	0%	0.9%	2.8%	0.9%	7.5%
19.2	4.7%	4.7%	0.9%	1.9%	1.9%	14.0%
19.3	0%	2.8%	1.9%	0.9%	1.9%	7.5%
19.4	1.9%	2.8%	1.9%	0%	1.9%	8.4%
19.5	9.3%	0.9%	1.9%	1.9%	0.9%	15.0%
19.6	0.9%	1.9%	1.9%	1.9%	0%	6.5%
19.7	0%	0%	0.9%	1.9%	0.9%	3.7%
19.8	0%	3.7%	0.9%	0.9%	1.9%	7.5%
19.9	0%	1.9%	3.7%	1.9%	1.9%	9.3%
19.10	0%	0.9%	2.8%	2.8%	1.9%	8.4%
19.11	0.9%	0.9%	0.9%	0%	0.9%	3.7%
19.12	0%	0%	0.9%	1.9%	1.9%	4.7%
19.13	0%	0%	0%	0%	0%	0.0%
19.14	0.9%	0%	0.9%	0%	1.9%	3.7%
						100%

Table C-72: Breakdown among researchers and officials

	1st MI		2nd MI		3rd MI		4th MI		5th MI		Total
	Res	Off	Res	Off	Res	Off	Res	Off	Res	Off	
19.1	2	1	0	0	1	0	2	1	0	1	8
19.2	4	1	3	2	1	0	1	1	1	1	15
19.3	0	0	1	2	2	0	0	1	2	0	8
19.4	2	0	2	1	0	2	0	0	2	0	9
19.5	4	6	1	0	2	0	2	0	0	1	16
19.6	1	0	2	0	2	0	1	1	0	0	7
19.7	0	0	0	0	0	1	1	1	1	0	4
19.8	0	0	2	2	0	1	1	0	1	1	8
19.9	0	0	2	0	3	1	1	1	1	1	10
19.10	0	0	0	1	2	1	3	0	2	0	9
19.11	1	0	1	0	1	0	0	0	1	0	4
19.12	0	0	0	0	0	1	1	1	1	1	5
19.13	0	0	0	0	0	0	0	0	0	0	0
19.14	1	0	0	0	0	1	0	0	1	1	4
	15	8	14	8	14	8	13	7	13	7	
											107

Table C-73: Total responses of all five Most important rankings (nos)

	1-5 MI	
	Res	Off
19.1	5	3
19.2	10	5
19.3	5	3
19.4	6	3
19.5	9	7
19.6	6	1
19.7	2	2
19.8	4	4
19.9	7	3
19.10	7	2
19.11	4	0
19.12	2	3
19.13	0	0
19.14	2	2
	69	38

Table C-74: All five Most Important as a % of each group totals

	1-5 MI	
	Res	Off
19.1	7%	8%
19.2	14%	13%
19.3	7%	8%
19.4	9%	8%
19.5	13%	18%
19.6	9%	3%
19.7	3%	5%
19.8	6%	11%
19.9	10%	8%
19.10	10%	5%
19.11	6%	0%
19.12	3%	8%
19.13	0%	0%
19.14	3%	5%
	100%	100%

Table C-75: Three Most Important Rankings (nos)

	Researchers	Officials	Total
Rank 1	15	8	23
Rank 2	14	8	22
Rank 3	14	8	22
	43	24	67

Table C-76: Breakdown of the three Most Important Rankings (nos)

	1st MI	2nd MI	3rd MI
19.1	3	0	1
19.2	5	5	1
19.3	0	3	2
19.4	2	3	2
19.5	10	1	2
19.6	1	2	2
19.7	0	0	1
19.8	0	4	1
19.9	0	2	4
19.10	0	1	3
19.11	1	1	1
19.12	0	0	1
19.13	0	0	0
19.14	1	0	1
	23	22	22

Table C-77: Breakdown of the three Most Important Rankings (%)

	1st MI	2nd MI	3rd MI
19.1	13%	0%	5%
19.2	22%	23%	5%
19.3	0%	14%	9%
19.4	9%	14%	9%
19.5	43%	5%	9%
19.6	4%	9%	9%
19.7	0%	0%	5%
19.8	0%	18%	5%
19.9	0%	9%	18%
19.10	0%	5%	14%
19.11	4%	5%	5%
19.12	0%	0%	5%
19.13	0%	0%	0%
19.14	4%	0%	5%
	100%	100%	100%

Table C-78: Breakdown of the three Most Important Rankings among researchers and officials

	1st MI		2nd MI		3rd MI		Total
	Res	Off	Res	Off	Res	Off	
19.1	2	1	0	0	1	0	4
19.2	4	1	3	2	1	0	11
19.3	0	0	1	2	2	0	5
19.4	2	0	2	1	0	2	7
19.5	4	6	1	0	2	0	13
19.6	1	0	2	0	2	0	5
19.7	0	0	0	0	0	1	1
19.8	0	0	2	2	0	1	5
19.9	0	0	2	0	3	1	6
19.10	0	0	0	1	2	1	4
19.11	1	0	1	0	1	0	3
19.12	0	0	0	0	0	1	1
19.13	0	0	0	0	0	0	0
19.14	1	0	0	0	0	1	2
	15	8	14	8	14	8	67
	23		22		22		

Table C-79: Three Most Important Rankings for researchers

	1st MI	2ndMI	3rdMI
	Res	Res	Res
19.1	13%	0%	7%
19.2	27%	21%	7%
19.3	0%	7%	14%
19.4	13%	14%	0%
19.5	27%	7%	14%
19.6	7%	14%	14%
19.7	0%	0%	0%
19.8	0%	14%	0%
19.9	0%	14%	21%
19.10	0%	0%	14%
19.11	7%	7%	7%
19.12	0%	0%	0%
19.13	0%	0%	0%
19.14	7%	0%	0%
	100%	100%	100%

Table C-80: Three Most Important Rankings for officials

	1st MI	2ndMI	3rdMI
	Off	Off	Off
19.1	13%	0%	0%
19.2	13%	25%	0%
19.3	0%	25%	0%
19.4	0%	13%	25%
19.5	75%	0%	0%
19.6	0%	0%	0%
19.7	0%	0%	13%
19.8	0%	25%	13%
19.9	0%	0%	13%
19.10	0%	13%	13%
19.11	0%	0%	0%
19.12	0%	0%	13%
19.13	0%	0%	0%
19.14	0%	0%	13%
	100%	100%	100%

C-4 Questions 3-30, excluding Question 19: Calculations and response rates

Note: Because of rounding, totals do not necessarily add up to 100 (%). Total responses of delegates contain the responses of one delegate who had not classified its country's development level. Therefore, responses of individual development levels may not be equal to the number of total responses.

Table C-81: Delegates' responses for Questions 3-7

	Q3 n=28	Q4 n=28	Q5 n=28	Q6 n=28	Q7 n=28
Not at all	0%	11%	22%	0%	14%
To a very small extent	10%	48%	30%	30%	7%
To some extent	30%	26%	41%	26%	36%
To a considerable extent	41%	15%	7%	44%	25%
To a greater extent	19%	0%	0%	0%	18%
	100%	100%	100%	100%	100%

	Q3			Q4			Q5			Q6			Q7		
	LDC n=2	Dev n=18	D n=7	LDC n=2	Dev n=18	D n=7	LDC n=2	Dev n=18	D n=7	LDC n=2	Dev n=18	D n=7	LDC n=2	Dev n=18	D n=7
Not at all	0%	0%	0%	0%	17%	0%	0%	33%	0%	0%	0%	0%	0%	22%	0%
To a very small extent	0%	11%	14%	0%	50%	57%	50%	22%	43%	50%	28%	29%	0%	11%	0%
To some extent	0%	39%	14%	50%	28%	14%	0%	44%	43%	50%	33%	0%	50%	22%	57%
To a considerable extent	100%	33%	43%	50%	6%	29%	50%	0%	14%	0%	39%	71%	50%	28%	14%
To a greater extent	0%	17%	29%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	17%	29%
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table C-82: Researchers' and officials' responses for Questions 3-7

	Q3 n=21	Q4 n=22	Q5 n=22	Q6 n=22	Q7 n=21
Not at all	0%	0%	5%	0%	0%
To a very small extent	0%	32%	40%	5%	10%
To some extent	33%	50%	50%	59%	29%
To a considerable extent	53%	18%	5%	31%	38%
To a greater extent	14%	0%	0%	5%	24%
	100%	100%	100%	100%	100%

	Q3		Q4		Q5		Q6		Q7	
	Res n=13	Off n=8	Res n=14	Off n=8	Res n=14	Off n=8	Res n=14	Off n=8	Res n=13	Off n=8
Not at all	0%	0%	0%	0%	7%	0%	0%	0%	0%	0%
To a very small extent	0%	0%	21%	50%	43%	38%	0%	13%	8%	13%
To some extent	31%	38%	64%	25%	50%	50%	50%	75%	15%	50%
To a considerable extent	46%	63%	14%	25%	0%	13%	43%	13%	46%	25%
To a greater extent	23%	0%	0%	0%	0%	0%	7%	0%	31%	13%
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table C-83: Delegates' responses for Questions 8 & 9

	Q8 n=27	Q9 n=27
Not at all	7%	4%
To a very small extent	26%	11%
To some extent	34%	44%
To a considerable extent	26%	34%
To a greater extent	7%	7%
	100%	100%

	Q8			Q9		
	LDC n=2	Dev n=18	D n=6	LDC n=2	Dev n=18	D n=6
Not at all	0%	0%	33%	0%	0%	17%
To a very small extent	0%	22%	33%	0%	11%	0%
To some extent	50%	33%	34%	0%	45%	66%
To a considerable extent	50%	33%	0%	100%	33%	17%
To a greater extent	0%	12%	0%	0%	11%	0%
	100%	100%	100%	100%	100%	100%

Table C-84: Researchers' and officials' responses for Questions 8 & 9

	Q8 n=20	Q9 n=20
Not at all	15%	5%
To a very small extent	35%	15%
To some extent	40%	50%
To a considerable extent	5%	20%
To a greater extent	5%	10%
	100%	100%

	Q8		Q9	
	Res n=12	Off n=8	Res n=12	Off n=8
Not at all	25%	0%	8%	0%
To a very small extent	17%	62%	17%	13%
To some extent	50%	25%	50%	50%
To a considerable extent	8%	0%	17%	24%
To a greater extent	0%	13%	8%	13%
	100%	100%	100%	100%

Table C-85: Delegates' responses for Questions 10 & 11

	Q10 n=28	Q11 n=28
Strongly disagree	11%	14%
Somewhat disagree	14%	14%
Undecided	4%	11%
Somewhat agree	36%	36%
Strongly agree	35%	25%
	100%	100%

	Q10			Q11		
	LDC n=2	Dev n=18	D n=7	LDC n=2	Dev n=18	D n=7
Strongly disagree	0%	17%	0%	0%	11%	29%
Somewhat disagree	0%	22%	0%	0%	17%	13%
Undecided	0%	6%	0%	0%	6%	29%
Somewhat agree	50%	38%	29%	50%	33%	29%
Strongly agree	50%	17%	71%	50%	33%	0%
	100%	100%	100%	100%	100%	100%

Table C-86: Researchers' and officials' responses for Questions 10 & 11

	Q10 n=22	Q11 n=22
Strongly disagree	0%	13%
Somewhat disagree	0%	9%
Undecided	5%	23%
Somewhat agree	27%	32%
Strongly agree	68%	23%
	100%	100%

	Q10		Q11	
	Res n=14	Off n=8	Res n=14	Off n=8
Strongly disagree	0%	0%	14%	13%
Somewhat disagree	0%	0%	0%	25%
Undecided	7%	0%	21%	25%
Somewhat agree	22%	38%	36%	25%
Strongly agree	71%	62%	29%	13%
	100%	100%	100%	100%

Table C-87: Delegates' responses for Questions 12 & 13

	Q12 n=28	Q13 n=28
Very ineffective	11%	40%
Somewhat ineffective	21%	32%
Undecided	4%	7%
Somewhat effective	53%	14%
Very effective	11%	7%
	100%	100%

	Q12			Q13		
	LDC n=2	Dev n=18	D n=7	LDC n=2	Dev n=18	D n=7
Very ineffective	0%	11%	14%	0%	33%	57%
Somewhat ineffective	0%	17%	43%	0%	33%	43%
Undecided	0%	0%	14%	50%	6%	0%
Somewhat effective	100%	55%	29%	50%	17%	0%
Very effective	0%	17%	0%	0%	11%	0%
	100%	100%	100%	100%	100%	100%

Table C-88: Researchers' and officials' responses for Questions 12 & 13

	Q12 n=22	Q13 n=22
Very ineffective	5%	45%
Somewhat ineffective	32%	32%
Undecided	14%	14%
Somewhat effective	40%	9%
Very effective	9%	0%
	100%	100%

	Q12		Q13	
	Res n=14	Off n=8	Res n=14	Off n=8
Very ineffective	0%	12%	43%	50%
Somewhat ineffective	36%	25%	36%	24%
Undecided	14%	13%	14%	13%
Somewhat effective	36%	50%	7%	13%
Very effective	14%	0%	0%	0%
	100%	100%	100%	100%

Table C-89: Delegates' responses for Questions 14-18

	Q14 n=28	Q15 n=27	Q16 n=28	Q17 n=26	Q18 n=28
Not at all	4%	4%	0%	0%	0%
To a very small extent	10%	4%	32%	0%	18%
To some extent	14%	19%	29%	0%	21%
To a considerable extent	36%	30%	32%	35%	32%
To a greater extent	36%	43%	7%	65%	29%
	100%	100%	100%	100%	100%

	Q14			Q15			Q16			Q17			Q18		
	LDC n=2	Dev n=18	D n=7	LDC n=2	Dev n=17	D n=7	LDC n=2	Dev n=18	D n=7	LDC n=1	Dev n=18	D n=6	LDC n=2	Dev n=18	D n=7
Not at all	0%	0%	14%	0%	0%	14%	0%	0%	0%	0%	0%	0%	0%	0%	0%
To a very small extent	0%	0%	43%	0%	0%	14%	50%	45%	0%	0%	0%	0%	0%	22%	14%
To some extent	0%	11%	14%	0%	12%	29%	0%	33%	29%	0%	0%	0%	0%	11%	43%
To a considerable extent	100%	33%	29%	100%	18%	43%	50%	22%	57%	0%	33%	50%	100%	22%	43%
To a greater extent	0%	56%	0%	0%	70%	0%	0%	0%	14%	100%	67%	50%	0%	45%	0%
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table C-90: Researchers' and officials' responses for Questions 14 - 18

	Q14 n=22	Q15 n=22	Q16 n=21	Q17 n=22	Q18 n=20
Not at all	0%	0%	0%	0%	15%
To a very small extent	14%	23%	29%	0%	10%
To some extent	50%	41%	57%	10%	40%
To a considerable extent	27%	27%	14%	45%	25%
To a greater extent	9%	9%	0%	45%	10%
	100%	100%	100%	100%	100%

	Q14		Q15		Q16		Q17		Q18	
	Res n=14	Off n=8	Res n=14	Off n=8	Res n=14	Off n=7	Res n=14	Off n=8	Res n=13	Off n=7
Not at all	0%	0%	0%	0%	0%	0%	0%	0%	23%	0%
To a very small extent	14%	13%	21%	24%	21%	43%	0%	0%	8%	14%
To some extent	43%	62%	44%	38%	65%	43%	14%	0%	39%	43%
To a considerable extent	29%	25%	21%	38%	14%	14%	43%	50%	15%	43%
To a greater extent	14%	0%	14%	0%	0%	0%	43%	50%	15%	0%
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table C-91: Delegates' responses for Questions 20 & 21

	Q20 n=28	Q21 n=27
Strongly disagree	4%	4%
Somewhat disagree	7%	15%
Undecided	4%	26%
Somewhat agree	25%	52%
Strongly agree	60%	4%
	100%	100%

	Q20			Q21		
	LDC n=2	Dev n=18	D n=7	LDC n=2	Dev n=18	D n=7
Strongly disagree	0%	0%	14%	0%	6%	0%
Somewhat disagree	0%	6%	14%	0%	17%	14%
Undecided	0%	0%	14%	50%	22%	29%
Somewhat agree	50%	22%	29%	50%	50%	57%
Strongly agree	50%	72%	29%	0%	6%	0%
	100%	100%	100%	100%	100%	100%

Table C-92: Researchers' and officials' responses for Questions 20 & 21

	Q20 n=22	Q21 n=20
Strongly disagree	0%	0%
Somewhat disagree	0%	5%
Undecided	9%	20%
Somewhat agree	36%	60%
Strongly agree	55%	15%
	100%	100%

	Q20		Q21	
	Res n=14	Off n=8	Res n=13	Off n=7
Strongly disagree	0%	0%	0%	0%
Somewhat disagree	0%	0%	0%	14%
Undecided	7%	13%	23%	14%
Somewhat agree	29%	50%	62%	57%
Strongly agree	64%	37%	15%	14%
	100%	100%	100%	100%

Table C-93: Delegates' responses for Questions 22-23

	Q22 n=28	Q23 n=28	Q24 n=28
Very unsatisfied	21%	7%	39%
Somewhat unsatisfied	36%	25%	32%
Neutral	25%	18%	18%
Somewhat satisfied	18%	50%	11%
Very satisfied	0%	0%	0%
	100%	100%	100%

	Q22			Q23			Q24		
	LDC n=2	Dev n=18	D n=7	LDC n=2	Dev n=18	D n=7	LDC n=2	Dev n=18	D n=7
Very unsatisfied	0%	28%	14%	0%	6%	14%	50%	44%	14%
Somewhat unsatisfied	50%	39%	29%	0%	22%	43%	0%	39%	29%
Neutral	50%	17%	43%	50%	11%	29%	50%	6%	43%
Somewhat satisfied	0%	17%	14%	50%	61%	14%	0%	11%	14%
Very satisfied	0%	0%	0%	0%	0%	0%	0%	0%	0%
	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table C-94: Researchers' and officials' responses for Questions 22-24

	Q22 n=19	Q23 n=19	Q24 n=18
Very unsatisfied	0%	5%	22%
Somewhat unsatisfied	42%	32%	39%
Neutral	26%	37%	28%
Somewhat satisfied	26%	26%	11%
Very satisfied	5%	0%	0%
	100%	100%	100%

	Q22		Q23		Q24	
	Res n=12	Off n=7	Res n=12	Off n=7	Res n=11	Off n=7
Very unsatisfied	0%	0%	8%	0%	18%	29%
Somewhat unsatisfied	42%	43%	25%	43%	55%	14%
Neutral	25%	29%	42%	29%	18%	43%
Somewhat satisfied	33%	14%	25%	29%	9%	14%
Very satisfied	0%	14%	0%	0%	0%	0%
	100%	100%	100%	100%	100%	100%

Table C-95: Delegates' responses for Questions 25-27

	Q25 n=27	Q26 n=28	Q27 n=28
Strongly disagree	0%	4%	14%
Somewhat disagree	7%	32%	21%
Undecided	0%	29%	14%
Somewhat agree	52%	25%	37%
Strongly agree	41%	11%	14%
	100%	100%	100%

	Q25			Q26			Q27		
	LDC n=2	Dev n=18	D n=6	LDC n=2	Dev n=18	D n=7	LDC n=2	Dev n=18	D n=7
Strongly disagree	0%	0%	0%	0%	6%	0%	0%	22%	0%
Somewhat disagree	0%	11%	0%	0%	28%	57%	100%	22%	0%
Undecided	0%	0%	0%	100%	28%	0%	0%	17%	14%
Somewhat agree	100%	33%	83%	0%	22%	43%	0%	33%	57%
Strongly agree	0%	56%	17%	0%	17%	0%	0%	6%	29%
	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table C-96: Researchers' and officials' responses for Questions 25-27

	Q25 n=20	Q26 n=22	Q27 n=22
Strongly disagree	0%	0%	4%
Somewhat disagree	0%	32%	23%
Undecided	5%	14%	18%
Somewhat agree	30%	50%	32%
Strongly agree	65%	5%	23%
	100%	100%	100%

	Q25		Q26		Q27	
	Res n=13	Off n=7	Res n=14	Off n=8	Res n=14	Off n=8
Strongly disagree	0%	0%	0%	0%	7%	0%
Somewhat disagree	0%	0%	14%	63%	14%	37%
Undecided	0%	14%	7%	25%	21%	13%
Somewhat agree	31%	29%	71%	13%	37%	25%
Strongly agree	69%	57%	7%	0%	21%	25%
	100%	100%	100%	100%	100%	100%

Table C-97: Delegates' responses for Question 28

	Q28 n=28
Fully self-sufficiency	14%
Mostly self-sufficiency	11%
Mixture of both	57%
Mostly trade reliance	11%
Fully trade reliance	7%
	100%

	Q28		
	LDC n=2	Dev n=18	D n=7
Fully self-sufficiency	0%	17%	14%
Mostly self-sufficiency	50%	11%	0%
Mixture of both	0%	61%	57%
Mostly trade reliance	50%	6%	14%
Fully trade reliance	0%	6%	14%
	100%	100%	100%

Table C-98: Researchers' and officials' responses for Question 28

	Q28 n=21
Fully self-sufficiency	0%
Mostly self-sufficiency	5%
Mixture of both	67%
Mostly trade reliance	19%
Fully trade reliance	10%
	100%

	Q28	
	Res n=14	Off n=7
Fully self-sufficiency	0%	0%
Mostly self-sufficiency	7%	0%
Mixture of both	57%	86%
Mostly trade reliance	21%	14%
Fully trade reliance	14%	0%
	100%	100%

Table C-99: Delegates' responses for Questions 29 &30

	Q29 n=28	Q30 n=28
Not at all important	4%	7%
To a very small extent	36%	32%
To some extent	50%	43%
To a considerable extent	11%	14%
To a greater extent	0%	4%
	100%	100%

	Q29			Q30		
	LDC n=2	Dev n=18	D n=7	LDC n=2	Dev n=18	D n=7
Not at all important	0%	6%	0%	0%	11%	0%
To a very small extent	0%	39%	43%	50%	39%	14%
To some extent	100%	44%	43%	50%	28%	86%
To a considerable extent	0%	11%	14%	0%	17%	0%
To a greater extent	0%	0%	0%	0%	6%	0%
	100%	100%	100%	100%	100%	100%

Table C-100: Researchers' and officials' responses for Questions 29 & 30

	Q29 n=21	Q30 n=21
Not at all important	5%	5%
To a very small extent	24%	33%
To some extent	43%	43%
To a considerable extent	24%	14%
To a greater extent	5%	5%
	100%	100%

	Q29		Q30	
	Res n=13	Off n=8	Res n=13	Off n=8
Not at all important	8%	0%	8%	0%
To a very small extent	15%	38%	39%	25%
To some extent	46%	38%	39%	50%
To a considerable extent	31%	13%	15%	13%
To a greater extent	0%	13%	0%	13%
	100%	100%	100%	100%

Appendix D: Supporting material for Chapter 4

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Note: Because of rounding, totals in table columns do not necessarily add up to 100 (%).

D-1: Negotiating groups at the WTO discussed section 4.3

Table D-1.1: Cairns Group

	Availability	Accessibility	Utilisation	Stability	Total
People	23%	15%	12%	17%	68%
Trade	8%	8%	3%	5%	23%
Resources	3%	5%	0%	2%	9%
Total	34%	28%	15%	23%	100%

	Availability		Accessibility		Utilisation		Stability		Total	
	Dev	D	Dev	D	Dev	D	Dev	D	Dev	D
People	21%	31%	15%	15%	12%	15%	13%	31%	62%	92%
Trade	10%	0%	10%	0%	4%	0%	6%	0%	29%	0%
Resources	2%	8%	6%	0%	0%	0%	2%	0%	10%	8%
Total	33%	38%	31%	15%	15%	15%	21%	31%	100%	100%

Table D-1.2: G-20

	Availability	Accessibility	Utilisation	Stability	Total
People	20%	19%	9%	14%	62%
Trade	9%	11%	3%	6%	30%
Resources	2%	5%	0%	2%	8%
Total	31%	34%	13%	22%	100%

Table D-1.3: G-10

	Availability	Accessibility	Utilisation	Stability	Total
People	11%	11%	11%	11%	44%
Trade	17%	17%	6%	17%	56%
Resources	0%	0%	0%	0%	0%
Total	28%	28%	17%	28%	100%

	Availability		Accessibility		Utilisation		Stability		Dev	D
	Dev	D	Dev	D	Dev	D	Dev	D		
People	17%	8%	17%	8%	0%	17%	17%	8%	50%	42%
Trade	17%	17%	17%	17%	0%	8%	17%	17%	50%	58%
Resources	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	33%	25%	33%	25%	0%	25%	33%	25%	100%	100%

Table D-1.4: G-33

	Availability	Accessibility	Utilisation	Stability	Total
People	19%	24%	10%	15%	68%
Trade	8%	10%	3%	5%	26%
Resources	2%	3%	0%	2%	6%
Total	29%	37%	13%	21%	100%

	Availability		Accessibility		Utilisation		Stability		Dev	LDC
	Dev	LDC	Dev	LDC	Dev	LDC	Dev	LDC		
People	18%	40%	23%	40%	11%	0%	14%	20%	65%	100%
Trade	9%	0%	11%	0%	4%	0%	5%	0%	28%	0%
Resources	2%	0%	4%	0%	0%	0%	2%	0%	7%	0%
Total	28%	40%	37%	40%	14%	0%	21%	20%	100%	100%

Table D-1.5: ACP

	Availability	Accessibility	Utilisation	Stability	Total
People	28%	21%	3%	21%	72%
Trade	10%	10%	0%	3%	24%
Resources	3%	0%	0%	0%	3%
Total	41%	31%	3%	24%	100%

	Availability		Accessibility		Utilisation		Stability		Dev	LDC
	Dev	LDC	Dev	LDC	Dev	LDC	Dev	LDC		
People	28%	27%	17%	27%	6%	0%	22%	18%	72%	73%
Trade	11%	9%	11%	9%	0%	0%	6%	0%	28%	18%
Resources	0%	9%	0%	0%	0%	0%	0%	0%	0%	9%
Total	39%	45%	28%	36%	6%	0%	28%	18%	100%	100%

Table D-1.6: African Group

	Availability	Accessibility	Utilisation	Stability	Total
People	30%	22%	0%	22%	74%
Trade	9%	9%	0%	4%	22%
Resources	4%	0%	0%	0%	4%
Total	43%	30%	0%	26%	100%

	Availability		Accessibility		Utilisation		Stability		Dev	LDC
	Dev	LDC	Dev	LDC	Dev	LDC	Dev	LDC		
People	33%	27%	17%	27%	0%	0%	25%	18%	75%	73%
Trade	8%	9%	8%	9%	0%	0%	8%	0%	25%	18%
Resources	0%	9%	0%	0%	0%	0%	0%	0%	0%	9%
Total	42%	45%	25%	36%	0%	0%	33%	18%	100%	100%

Table D-1.7: OECD and APEC

	Availability		Accessibility		Utilisation		Stability	
	OECD	APEC	OECD	APEC	OECD	APEC	OECD	APEC
People	18%	23%	18%	15%	13%	13%	15%	21%
Trade	10%	8%	10%	8%	3%	2%	10%	8%
Resources	3%	2%	3%	0%	0%	0%	0%	0%
Total	30%	33%	30%	23%	15%	15%	25%	29%

Table D-1.8: OECD

	Availability		Accessibility		Utilisation		Stability		Totals		
	Dev	D	Dev	D	Dev	D	Dev	D	Dev	D	Group
People	18%	17%	18%	17%	0%	17%	9%	17%	45%	69%	63%
Trade	18%	7%	18%	7%	0%	3%	18%	7%	55%	24%	33%
Resources	0%	3%	0%	3%	0%	0%	0%	0%	0%	7%	4%
Total	36%	28%	36%	28%	0%	21%	27%	24%	100%	100%	100%

Table D-1.9: APEC

	Availability		Accessibility		Utilisation		Stability		Total		
	Dev	D	Dev	D	Dev	D	Dev	D	Dev	D	Group
People	22%	25%	16%	15%	13%	15%	19%	25%	69%	80%	73%
Trade	9%	5%	9%	5%	3%	0%	9%	5%	31%	15%	25%
Resources	0%	5%	0%	0%	0%	0%	0%	0%	0%	5%	2%
Total	31%	35%	25%	20%	16%	15%	28%	30%	100%	100%	100%

D-2: Summary of delegates' views

Table D-2.1 is a summary of the main outcome for the orientations and dimension aspects of the four different representative groups referred to in section 4.3. This matrix was designed by the researcher for the purpose of presenting different views. The percentages displayed in this table are used to draw observations, which are tested further in Chapter 5.

The predesigned matrix has three parts:

1. The top rows (yellow) interpret results of **overall dimensions** (section 5).
2. The last column depicts **overall orientation** for people, trade and resources orientations separately.
3. The columns and rows in the middle depict the interception between orientations – people (blue), trade (orange) and resources (green) listed in sections 2, 3 & 4 – and dimensions (in columns 1–4). Percentages for the four different representative groups are listed under each combination.

The rates displayed are obtained from Tables 4.5 – 4.11 in section 4.3 and Tables D-1.1 – D1.9 as in Appendix D-1.

Representative groups that received high percentage values for these combinations are placed in the relevant cell. Within each cell, the groups are re-ranked in descending order.

The salient points observed in the table are summarised as follows.

D-2.1 Overall orientation and dimensions

As repeatedly observed and clustered in section 4 of Table D-2.1, most of the delegates' overall responses on orientations of food security are associated with the requirements of people. Of all the groups considered, respondents from LDCs (84%), NFIDCs (75%), African Group (74%), ACP (73%) and developed countries (72%) rated people highly compared to others. In contrast, G-10 and OECD developing country views preferring trade orientation are displayed in section 3.

The overall dimensions of food security mostly rally around the availability and accessibility columns (1 & 2). Among the different groups, the highest values for availability were given by the African Group (43%), ACP (41%) and LDCs (39%). On the other hand, respondents from the NFIDCs (38%), G-33 (37%), developing countries (33%) and LDCs (33%) considered

accessibility to be the most important dimension in food security. It is noted that G-10 members placed equal importance on availability, accessibility and stability.

Table D-2.1: The groups' views at a glance

Dimensions		Availability		Accessibility		Utilisation		Stability		Sections	
→		1		2		3		4		←	
Overall Dimensions	Negotiation groups (Tables D-1.1 – D-1.6)	African	43%	G-33	37%	G-10	17%	G-10	28%	Overall dimension Overall orientation 5	←
		ACP	41%	G-20	34%	Cairns	15%	African	26%		
		Cairns	34%	G-10	28%	G-20	13%	ACP	24%		
		G-20	31%	ACP	31%	G-33	13%	Cairns	23%		
		G-33	29%	African	30%			G-20	22%		
		G-10.	28%	G-10	28%			G-33	21%		
	Vulnerability (Table 4.8)	NFIDC	33%	NFIDC	38%	R	15%	R	24%		
		R	31%	R	30%	NFIDC	10%	NFIDC	20%		
	Development levels (Table 4.7)	LDC	39%	Dev	33%	D	21%	LDC	22%		
		Dev	32%	LDC	33%	Dev	13%	Dev	22%		
D		27%	D	27%	LDC	6%	D	24%			
Other groups (Table D-1.7)	APEC	33%	OECD	30%	APEC	15%	APEC	29%			
	OECD	30%	APEC	23%	OECD	15%	OECD	25%			
People	G-33 – LDC.	40%	G-33 – LDC	40%	G-10 – D	17%	C-D	31%	African	74%	4
	Afri – Dev	33%	Afri – LDC	27%	C – D	15%	Afri – Dev	25%	ACP.	73%	
	C – D	31%	ACP – LDC	27%	C – Dev	12%	ACP – Dev	22%	Cairns	68%	

Negotiation groupings (Tables 4.10 and D-1.1 – D1.6)	ACP – Dev	28%	G-33 – Dev	23%	G-33 – Dev	11%	G-33 – LDC	20%	G-33	68%
	ACP – LDC	27%	G-20 – Dev	19%	G-20 – Dev	9%	ACP – LDC	18%	G-20	62%
	Afri – LDC	27%	G-10 – Dev	17%	ACP – Dev	6%	Afri – LDC	18%	G-10	42%
	C – Dev	21%	ACP – Dev	17%			G-10 – Dev	17%		
	G-20 – Dev	20%	Afri – Dev	17%			G-20 – Dev	14%		
	G-33 – Dev	18%	C – D	15%			G-33 – Dev	14%		
	G-10 – Dev	17%	C – Dev	15%			C – Dev	13%		
Vulnerability (Tables: 4.8 and 4.9)	NFIDC	23%	NFIDC	25%	R – D	18%	NFIDC	20%	NFIDC	75%
	R – Dev	22%	R – D	18%	R – Dev	11%	R – D	18%	R	68%
	R – D	18%	R – Dev	18%	NFIDC	8%	R – Dev	15%	R – D	73%
								R – Dev	67%	
Development levels (Table 4.7)	LDC	28%	LDC	28%	D	18%	LDC	22%	LDC	84%
	Dev	21%	Dev	19%	Dev	11%	D	18%	D	72%
	D	18%	D	18%	LDC	6%	Dev	16%	Dev	67%
Other groups (Tables 4.11, D-1.8, D-1.9)	APEC-D	25%	OECD – Dev	18%	OECD – D	17%	APEC – D	25%	APEC	73%
	APEC-Dev	22%	OECD – D	17%	APEC – D	15%	APEC – Dev	19%	OECD	63%
	OECD – Dev	18%	APEC-Dev	16%	APEC – Dev	13%	OECD – D	17%	APEC – D	80%
	OECD – D	17%	APEC-D	15%					OECD – D	69%
								APEC – Dev	69%	

Trade	Negotiation groupings (Tables 4.10, and D-1.1 – D1.6)	G-10 – Dev	17%	G-10 – Dev	17%	G-10 – D	8%	G-10 – Dev	17%	G-10	58%	3
		G-10 – D	17%	G-10 – D	17%	G-33 – Dv	4%	G-10 – D	17%	G-20	30%	
		ACP – Dev	11%	G-20-Dev	11%	C– Dev	4%	Afri – Dev	8%	G-33	26%	
		C-Dev	10%	ACP – Dev	11%	G-20	3%	ACP – Dev	6%	ACP.	24%	
		G-20-Dev	9%	G-33 – Dev	11%			G-20-Dev	6%	Cairns	23%	
		G-33-Dev	9%	C-Dev	10%			C-Dev	6%	African	22%	
		ACP – LDC	9%	ACP – LDC	9%			G-33-Dev	5%			
		Afri – LDC	9%	Afri – LDC	9%							
	Afri – Dev	8%	Afri – Dev	8%								
	Vulnerability (Tables 4.8 and 4.9)	R – Dev	10%	R – Dev	11%	NFIDC	3%	R – Dev	7%	R	27%	
NFIDC		8%	NFIDC	8%	R – D	3%	R – D	6%	NFIDC	18%		
R – D		6%	R – D	6%								
Development levels (Table 4.7)	Dev	10%	Dev...	11%	D	3%	D	6%	Dev	28%		
	D	6%	D	6%	Dev	2%	Dev	5%	D.	21%		
	LDC	6%	LDC	6%					LDC	12%		

	Other groups (Tables 4.11, and D-1.8 & D-1.9)	OECD – Dev 18% APEC – Dev 9% OECD – D 7% APEC-D 5%	OECD – Dev 18% APEC-Dev 9% OECD – D 7% APEC-D 5%	OECD – D 3% APEC -Dev 3%	OECD – Dev 18% APEC-Dev 9% OECD – D 7% APEC-D 5%	OECD 33% OECD – Dev 55% APEC 25% APEC-DV 31%	
Resources	Negotiation groupings (Tables 4.10, and D-1.1 – D1.6)	ACP – LDC 9% Afri – LDC 9% C-D 8% G-33-Dev 2% C-Dev 2% G-20 – Dev 2%	C-Dev 6% G-20 – Dev 5% G-33-Dv 4%	-	C-Dev 2% G-20 – Dev 2% G-33-Dev 2%	Cairns 9% G-20 8% G-33 6% African 4% ACP 3%	2
	Vulnerability (Tables 4.8, 4.9)	NFIDC 3% R – D 3%	NFIDC 5% R – D 3%	-	R – Dev 1%	NFIDC 8% R 5%	
	Development levels (Table 4.7)	LDC 6% D 3%	D 3% Dev 3%	-	Dev 1%	LDC 6% D 6% DV 5%	
	Other groups (Tables 4.11, D-1.8, D-1.9)	APEC-D 5% OECD – D 3%	OECD – D 3%	-	-	OECD 4% APEC 2%	
Dimensions →	Availability	Accessibility	Utilisation	Stability	Overall Orientation ↑	1	

Abbreviations

Development Levels:	D- Developed	Dev- Developing	LDC – Least-developed countries	
Vulnerability:	NFIDC	Rest – Dev & D		
Negotiation groupings:	Cairns Group-C-D	G-20 – Dev	G-10 – D	G-33 – Dev
	Cairns Group-C-Dev	G-10 – Dev		G-33 – LDC
	ACP –Dev	Afri – Dev		
	ACP-LDCs	Afri – LDCs		
Other groups:	OECD – D	OECD -Dev	APEC – D	APEC -Dev

D-2.2 People orientation

Section 4 of Table D-2.1 illustrates the importance placed by different groupings across the four dimensions within the people orientation.

Overall, availability and accessibility are the two dimensions mostly associated with food security of the LDCs and the developing country members.

The LDCs' interests are consistent. All LDC respondents as a group and as members of the G-33, African and ACP groups identified both availability and accessibility as important dimensions under people orientation by allocating to it 28%, 40%, 27% and 27% of their responses.

Diverse reactions were observed among the developing country members. More than accessibility, the availability dimension was commonly considered by the developing respondents of the African Group (33%), ACP (28%), Cairns Group (21%) and APEC (22%). Respondents from the G-20 and OECD supported both the availability and accessibility dimensions. Respondents from the G-10 placed equal importance on availability, accessibility and stability. Accessibility was perceived as an interest by respondents from the NFIDCs (25%) and G-33 (23%) developing countries.

Developed country members within the Cairns Group and APEC supported availability and stability.

Utilisation was important for the developed country members (18%), and it is also evident within responses from delegates of the G-10 (17%) and OECD (17%) developed countries.

Stability is understood to be significant for LDCs (22%) and developed countries (18%), in particular for the Cairns Group's developed country members and the African, ACP, APEC, NFIDCs and G-33 LDCs groups.

D-2.3 Trade orientation

Section 3 of Table D-2.1 reflects the importance the groupings place on trade. The rankings clearly identify that trade aspects are acknowledged mostly by developing country respondents and commonly rally around the accessibility dimension, followed by the availability dimension.

Largely, respondents from the G-10, OECD and APEC supported the availability, accessibility and stability dimensions. Accessibility was the main interest for G-20 (11%) and G-33 (11%) developing countries. Other groups supported both availability and accessibility. None gave high prominence to the nutrient aspect of traded food.

D-2.4 Resources orientation

Compared to the other two orientations, much less prominence was given to a resource focus, although it was acknowledged in individual responses. The availability of resources in the form of arable and farming land was suggested by the LDC respondents as a group (6%) and more specifically, by LDC respondents among the ACP (9%) and African Group (9%) and developed country respondents of the Cairns and APEC groups. The NFIDCs (5%) clearly identified accessibility of resources, meaning that they view food security as a source of employment and income generation. This view was also supported by developing country members of G-20, G-33 and the Cairns Group, at different strengths.

D-3: Reasons for diverse views – Cloud Tags (word frequency)



Figure D-3.1 Word frequency cloud tag of comments by developing country delegates

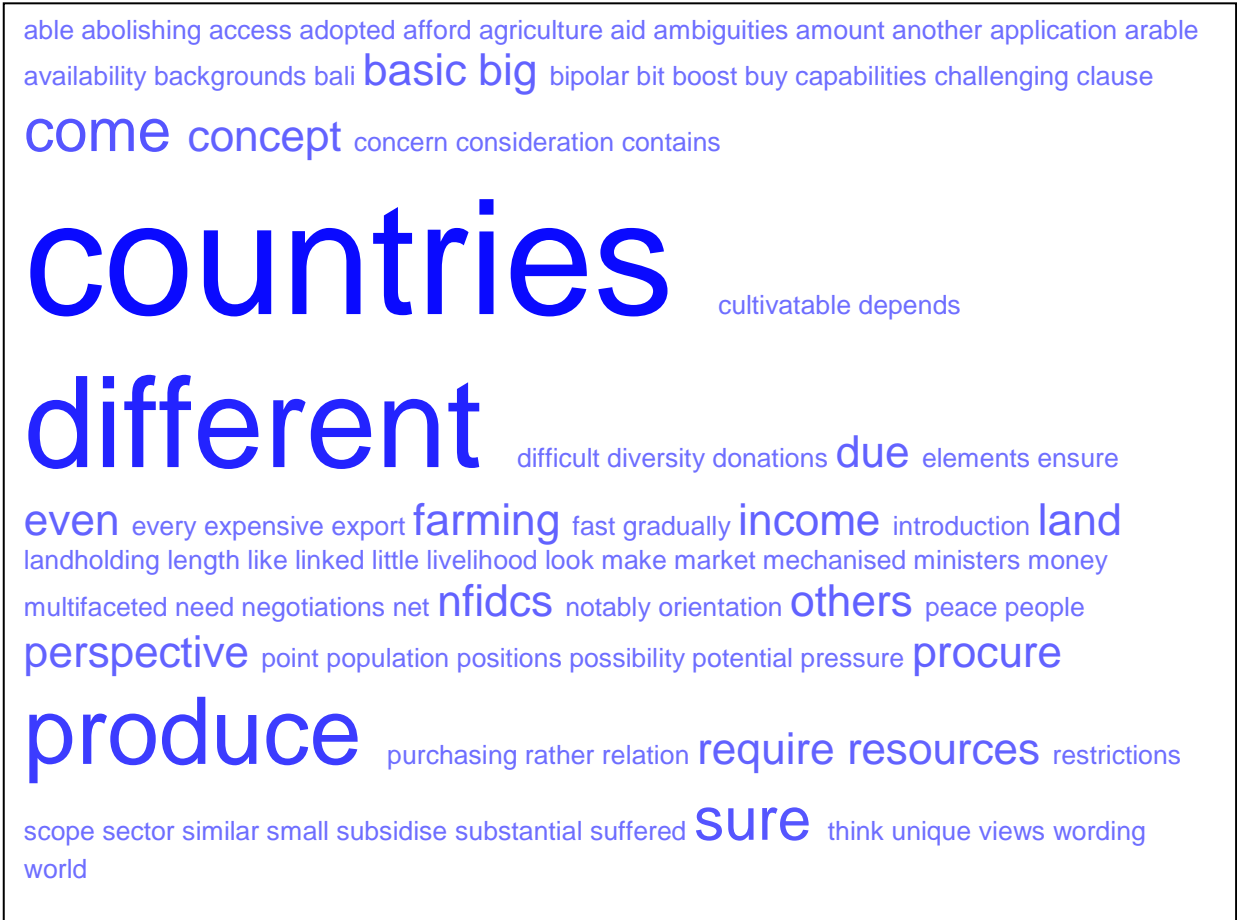


Figure D-3.2 Word frequency cloud tag of comments by LDC delegates



Figure D-3.3 Word frequency cloud tag of comments by developed country delegates

Appendix E: Hypotheses tested for tables in Chapter 5, and supporting tables

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E-1: Hypotheses for section 5.3

E-1.1: Hypotheses for the overall p-values: relationship between people orientation and development levels

Hypothesis testing for any statistically significant relationship between the variables people orientation versus other orientations (trade & resources) and development levels (least developed, developing & developed) (Table 5.1)

Development levels	Hypothesis	P -values – Fisher's exact
LDCs	<p>H₀: There is no statistically significant relationship between people orientation versus other orientations and LDCs versus other development levels.</p> <p>H₁: There is a statistically significant relationship between people orientation versus other orientations and LDCs versus other development levels.</p>	1.000
Developing	<p>H₀: There is no statistically significant relationship between people orientation versus other orientations and developing versus other development levels.</p> <p>H₁: There is a statistically significant relationship between people orientation versus other orientations and developing versus other development levels.</p>	1.000
Developed	<p>H₀: There is no statistically significant relationship between people orientation versus other orientations and developed versus other development levels.</p> <p>H₁: There is a statistically significant relationship between people orientation versus other orientations and developed versus other development levels.</p>	0.433

E-1.2: Hypothesis for the overall p-values: relationship between the four dimensions of people orientation and development levels (Table 5.2)

Hypothesis testing for any statistically significant relationship between the variables availability, accessibility, stability and utilisation dimensions and overall development levels.

Relationship between availability dimension versus other dimensions and development levels

H₀: There is no statistically significant relationship between availability dimension versus other dimensions and development levels.

H₁: There is a statistically significant relationship between availability dimension versus other dimensions and development levels.

Relationship between accessibility dimension versus other dimensions and development levels

H₀: There is no statistically significant relationship between accessibility dimension versus other dimensions and development levels.

H₁: There is a statistically significant relationship between accessibility dimension versus other dimensions and development levels.

Relationship between stability dimension versus other dimensions and development levels

H₀: There is no statistically significant relationship between stability dimension versus other dimensions and development levels.

H₁: There is a statistically significant relationship between stability dimension versus other dimensions and development levels.

Relationship between utilisation dimension versus other dimensions and development levels

H₀: There is no statistically significant relationship between utilisation dimension versus other dimensions and development levels.

H₁: There is a statistically significant relationship between utilisation dimension versus other dimensions and development levels.

E-1.3: Hypothesis testing for any statistically significant relationship between the variables availability, accessibility, stability and utilisation dimensions of people orientation and development levels (Table 5.2)

Hypothesis testing for availability dimension versus other dimensions (accessibility and stability and utilisation) and development levels (least developed, developing and developed):

Development levels	Hypothesis	P-values – Fisher's exact
LDCs	<p>H₀: There is no statistically significant relationship between availability dimension versus other dimensions and LDCs versus other development levels.</p> <p>H₁: There is a statistically significant relationship between availability dimension versus other dimensions and LDCs versus other development levels.</p>	0.310
Developing	<p>H₀: There is no statistically significant relationship between availability dimension versus other dimensions and developing versus other development levels.</p> <p>H₁: There is a statistically significant relationship between availability dimension versus other dimensions and developing versus other development levels.</p>	1.000
Developed	<p>H₀: There is no statistically significant relationship between availability dimension versus other dimensions and developed versus other development levels.</p> <p>H₁: There is a statistically significant relationship between availability dimension versus other dimensions and developed versus other development levels.</p>	0.222

Hypothesis testing for accessibility dimension versus other dimensions (availability and stability and utilisation) and development levels (least developed, developing and developed):

Development levels	Hypothesis	P-values – Fisher's exact
LDCs	<p>H₀: There is no statistically significant relationship between accessibility dimension versus other dimensions and LDCs versus other development levels.</p> <p>H₁: There is a statistically significant relationship between accessibility dimension versus other dimensions and LDCs versus other development levels.</p>	0.298
Developing	<p>H₀: There is no statistically significant relationship between accessibility dimension versus other dimensions and developing versus other development levels.</p> <p>H₁: There is a statistically significant relationship between accessibility dimension versus other dimensions and developing versus other development levels.</p>	1.000
Developed	<p>H₀: There is no statistically significant relationship between accessibility dimension versus other dimensions and developed versus other development levels.</p> <p>H₁: There is a statistically significant relationship between accessibility dimension versus other dimensions and developed versus other development levels.</p>	0.441

Hypothesis testing for stability dimension versus other dimensions (availability, accessibility & utilisation) and development levels (least developed, developing & developed):

Development levels	Hypothesis	P-values – Fisher's exact
LDCs	<p>H₀: There is no statistically significant relationship between stability dimension versus other dimensions and LDCs versus other development levels.</p> <p>H₁: There is a statistically significant relationship between stability dimension versus other dimensions and LDCs versus other development levels.</p>	0.632
Developing	<p>H₀: There is no statistically significant relationship between stability dimension versus other dimensions and developing versus other development levels.</p> <p>H₁: There is a statistically significant relationship between dimension versus other dimensions and developing versus other development levels.</p>	0.742
Developed	<p>H₀: There is no statistically significant relationship between stability dimension versus other dimensions and developed versus other development levels.</p> <p>H₁: There is a statistically significant relationship between stability dimension versus other dimensions and developed versus other development levels.</p>	1.000

Hypothesis testing for utilisation dimension versus other dimensions (availability, accessibility & stability) and development levels (least developed, developing & developed):

Development levels	Hypothesis	P-values: Fisher's exact
LDCs	<p>H₀: There is no statistically significant relationship between utilisation dimension versus other dimensions and LDCs versus 2 development levels.</p> <p>H₁: There is a statistically significant relationship between utilisation dimension versus other dimensions and LDCs versus 2 development levels.</p>	0.382
Developing	<p>H₀: There is no statistically significant relationship between utilisation dimension versus other dimensions and developing versus 2 development levels.</p> <p>H₁: There is a statistically significant relationship between utilisation dimension versus other dimensions and developing versus 2 development levels.</p>	0.745
Developed	<p>H₀: There is no statistically significant relationship between utilisation dimension versus other dimensions and developed versus 2 development levels.</p> <p>H₁: There is a statistically significant relationship between utilisation dimension versus other dimensions and developed versus 2 development levels.</p>	0.270

E-2: Hypotheses for section 5.4

E-2.1: Hypothesis for the overall p-values: relationship between trade orientation and development levels (Table 5.3)

Hypothesis testing for any statistically significant relationship between the trade orientation versus other orientations (people and resources) and development levels as a whole:

H₀: There is no statistically significant relationship between trade orientation versus other orientations and development levels.

H₁: There is a statistically significant relationship between trade orientation versus other orientations and development levels.

E-2.2: Hypotheses for separate p-values for development levels (Table 5.3)

Hypothesis testing for any statistically significant relationship between trade orientation versus other two orientations (people & resources) and development levels (least developed, developing & developed):

Development levels	Hypothesis	P-values – Fisher's exact
LDCs	<p>H₀: There is no statistically significant relationship between trade orientation versus other orientations and LDCs versus development levels.</p> <p>H₁: There is a statistically significant relationship between trade orientation versus other orientations and LDCs versus development levels.</p>	1.000
Developing	<p>H₀: There is no statistically significant relationship between trade-orientation versus other orientations and developing versus development levels.</p> <p>H₁: There is a statistically significant relationship between trade orientation versus other orientations and developing versus development levels.</p>	0.305
Developed	<p>H₀: There is no statistically significant relationship between trade orientation versus other orientations and developed versus development levels.</p> <p>H₁: There is a statistically significant relationship between trade orientation versus other orientations and developed versus development levels.</p>	0.458

E-2.3: Hypothesis for the overall p-values: relationship between the three dimensions of trade orientation and development levels (Table 5.4)

Hypothesis testing for any statistically significant relationship between the variables availability, accessibility and stability dimensions and overall development levels.

Relationship between availability dimension versus other dimensions (accessibility and stability) and development levels:

H₀: There is no statistically significant relationship between availability dimension versus other dimensions and development levels:

H₁: There is a statistically significant relationship between availability dimension versus other dimensions and development levels.

Relationship between accessibility dimension versus other dimensions (availability and stability) and development levels:

H₀: There is no statistically significant relationship between accessibility dimension versus other dimensions and development levels.

H₁: There is a statistically significant relationship between accessibility dimension versus other dimensions and development levels.

Relationship between stability dimension versus other dimensions (availability and accessibility) and development levels:

H₀: There is no statistically significant relationship between stability dimension versus other dimensions and development levels.

H₁: There is a statistically significant relationship between stability dimension versus other dimensions and development levels.

E-2.4 Hypotheses for separate p-values for development levels (Table 5.4)

The hypotheses developed for testing each dimension of trade orientation versus other two, and the views of each development level versus other two development levels.

Hypothesis testing for availability dimension of trade orientation versus other dimensions (accessibility & stability) and development levels (least developed, developing & developed):

Development levels	Hypothesis	P-values – Fisher's exact
LDCs	<p>H₀: There is no statistically significant relationship between availability dimension versus other dimensions and LDCs versus other development levels.</p> <p>H₁: There is a statistically significant relationship between availability dimension versus other dimensions and LDCs versus other development levels.</p>	1.000
Developing	<p>H₀: There is no statistically significant relationship between availability dimension versus other dimensions and developing versus other development levels.</p> <p>H₁: There is a statistically significant relationship between availability dimension versus other dimensions and developing versus other development levels.</p>	0.480
Developed	<p>H₀: There is no statistically significant relationship between availability dimension versus other dimensions and developed versus other development levels.</p> <p>H₁: There is a statistically significant relationship between availability dimension versus other dimensions and developed versus other development levels.</p>	0.694

Hypothesis testing for accessibility dimension of trade orientation versus other dimensions (availability & stability) and development levels (least developed, developing & developed):

Development levels	Hypothesis	P-values – Fisher's exact
LDCs	<p>H₀: There is no statistically significant relationship between accessibility dimension versus other dimensions and LDCs versus other development levels.</p> <p>H₁: There is a statistically significant relationship between accessibility dimension versus other dimensions and LDCs versus other development levels.</p>	1.000

Developing	<p>H₀: There is no statistically significant relationship between accessibility dimension versus other dimensions and developing versus other development levels.</p> <p>H₁: There is a statistically significant relationship between accessibility dimension versus other dimensions and developing versus other development levels.</p>	0.305
Developed	<p>H₀: There is no statistically significant relationship between accessibility dimension versus other dimensions and developed versus other development levels.</p> <p>H₁: There is a statistically significant relationship between accessibility dimension versus other dimensions and developed versus other development levels.</p>	0.458

Hypothesis testing for stability dimension of trade orientation versus other dimensions (availability & accessibility) and development levels (least developed, developing & developed):

Development levels	Hypothesis	P-values – Fisher's exact
LDCs	<p>H₀: There is no statistically significant relationship between stability dimension versus other dimensions and LDCs versus development levels.</p> <p>H₁: There is a statistically significant relationship between stability dimension versus other dimensions and LDCs versus development levels.</p>	0.567
Developing	<p>H₀: There is no statistically significant relationship between stability dimension versus other dimensions and developing versus development levels.</p> <p>H₁: There is a statistically significant relationship between stability dimension versus other dimensions and developing versus development levels.</p>	1.000
Developed	<p>H₀: There is no statistically significant relationship between stability dimension versus other dimensions and developed versus development levels.</p>	1.000

	<p>H₁: There is a statistically significant relationship between stability dimension versus other dimensions and developed versus development levels.</p>	
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E-2.5: Hypothesis for the overall p-values: relationship between trade orientation and income levels (Table 5.5)

Hypothesis testing for overall income levels and trade-orientation versus other orientations (people and resources).

H₀: There is no statistically significant relationship between trade-orientation versus other orientations and income levels.

H₁: There is a statistically significant relationship between trade-orientation versus other orientations and income levels.

E-2.6: Hypothesis for separate p-values (Table 5.5)

Hypothesis testing for any statistically significant relationship between the trade orientation versus other orientations (people & resources) and income levels (High-income developing, upper-middle income developing, lower-middle income developing, developing & least developed):

Development levels	Hypothesis	P-values – Fisher's exact
High-income developing	<p>H₀: There is no statistically significant relationship between trade orientation versus other orientations and high-income developing group versus other income levels.</p> <p>H₁: There is a statistically significant relationship between trade orientation versus other orientations and high-income developing group versus other income levels.</p>	0.002
Upper middle-income developing	<p>H₀: There is no statistically significant relationship between trade orientation versus other orientations and upper middle-income developing group versus other income levels.</p> <p>H₁: There is a statistically significant relationship between trade orientation versus other orientations and upper middle-income developing group versus other income levels.</p>	0.399
Lower middle-income developing	<p>H₀: There is no statistically significant relationship between trade orientation versus other orientations and lower middle-income developing group versus other income levels.</p> <p>H₁: There is a statistically significant relationship between trade orientation versus other orientations and lower middle-income developing group versus other income levels.</p>	1.000
LDCs	<p>H₀: There is no statistically significant relationship between trade orientation versus other orientations and lowest income group (LDCs) versus other income levels.</p> <p>H₁: There is a statistically significant relationship between trade orientation versus other orientations and lowest income group (LDCs) versus other income levels.</p>	1.000

Developed	<p>H₀: There is no statistically significant relationship between trade orientation versus other orientations and highest income group (developed) versus other income levels.</p> <p>H₁: There is a statistically significant relationship between trade orientation versus other orientations and highest income group (developed) versus other income levels.</p>	0.458
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E-2.7: Hypotheses for the overall p-values: relationship between the three dimensions and overall income levels (Table 5.6)

Hypothesis testing for any statistically significant relationship between the variables availability, accessibility and stability dimensions of developing countries and overall income levels.

Relationship between availability dimension versus other dimensions (accessibility and stability) and income levels:

H₀: There is no statistically significant relationship between availability dimension versus other dimensions and income levels.

H₁: There is a statistically significant relationship between availability dimension versus other dimensions and income levels.

Relationship between accessibility dimension versus other dimensions (availability and stability) and development levels:

H₀: There is no statistically significant relationship between accessibility dimension versus other dimensions and income levels.

H₁: There is a statistically significant relationship between accessibility dimension versus other dimensions and income levels.

Relationship between stability dimension and development levels:

H₀: There is no statistically significant relationship between stability dimension versus other dimensions and income levels.

H₁: There is a statistically significant relationship between stability dimension versus other dimensions and income levels.

E-2.8: Hypotheses for separate p-values (Table 5.6)

Hypothesis testing for any statistically significant relationship between the variables availability, accessibility and stability dimensions and their income levels (High-income developing, upper-middle income developing, lower-middle income developing, developing & least developed).

Hypothesis testing for availability dimension of trade orientation versus other dimensions (accessibility & stability) and income levels:

Development levels	Hypothesis	P-values – Fisher's exact
High-income developing	<p>H₀: There is no statistically significant relationship between availability dimension versus other dimensions and high- income developing group versus other income levels.</p> <p>H₁: There is a statistically significant relationship between availability dimension versus other dimensions and high- income developing group versus other income levels.</p>	0.001
Upper middle-income developing	<p>H₀: There is no statistically significant relationship between availability dimension versus other dimensions and upper middle-income developing group versus other income levels.</p> <p>H₁: There is a statistically significant relationship between availability dimension versus other dimensions and upper middle-income developing group versus other income levels.</p>	0.651
Lower middle-income developing	<p>H₀: There is no statistically significant relationship between availability dimension versus other dimensions and lower middle-income developing group versus other income levels.</p> <p>H₁: There is a statistically significant relationship between availability dimension versus other dimensions and lower middle-income developing group versus other income levels.</p>	0.494
LDCs	<p>H₀: There is no statistically significant relationship between availability dimension versus other dimensions and lowest income group (LDCs) versus other income levels.</p>	1.000

	H₁ : There is a statistically significant relationship between availability dimension versus other dimensions and lowest income group (LDCs) versus other income levels.	
Developed	H₀ : There is no statistically significant relationship between availability dimension versus other dimensions and highest income group (developed) versus other income levels. H₁ : There is a statistically significant relationship between availability dimension versus other dimensions and highest income group (developed) versus other income levels.	0.694

Hypothesis testing for the accessibility dimension of trade orientation versus other dimensions (availability and stability) and income levels:

Development Levels	Hypothesis	P-values – Fisher's exact
High-income developing	H₀ : There is no statistically significant relationship between accessibility dimension versus other dimensions and high- income developing group versus other income levels. H₁ : There is a statistically significant relationship between accessibility dimension versus other dimensions and high- income developing group versus other income levels.	0.002
Upper middle-income developing	H₀ : There is no statistically significant relationship between accessibility dimension versus other dimensions and upper middle-income developing group versus other income levels. H₁ : There is a statistically significant relationship between accessibility dimension versus other dimensions and upper middle-income developing group versus other income levels.	0.399
Lower middle-income developing	H₀ : There is no statistically significant relationship between accessibility dimension versus other dimensions and lower middle-income developing group versus other income levels. H₁ : There is a statistically significant relationship between accessibility dimension versus other dimensions and lower middle-income developing group versus other income levels.	1.000

LDCs	<p>H₀: There is no statistically significant relationship between accessibility dimension versus other dimensions and lowest income group (LDCs) versus other income levels.</p> <p>H₁: There is a statistically significant relationship between accessibility dimension versus other dimensions and lowest income group (LDCs) versus other income levels.</p>	1.000
Developed	<p>H₀: There is no statistically significant relationship between accessibility dimension versus other dimensions and highest income group (developed) versus other income levels.</p> <p>H₁: There is a statistically significant relationship between accessibility dimension versus other dimensions and highest income group (developed) versus other income levels.</p>	0.458

Hypothesis testing for the stability dimension of trade orientation versus other dimensions (availability & accessibility) and income levels:

Development Levels	Hypothesis	P-values – Fisher's exact
High-income developing	<p>H₀: There is no statistically significant relationship between stability dimension versus other dimensions and high-income developing group versus other income levels.</p> <p>H₁: There is a statistically significant relationship between stability dimension versus other dimensions and high-income developing group versus other income levels.</p>	0.028
Upper middle-income developing	<p>H₀: There is no statistically significant relationship between stability dimension versus other dimensions and upper middle-income developing group versus other income levels.</p> <p>H₁: There is a statistically significant relationship between stability dimension versus other dimensions and upper middle-income developing group versus other income levels.</p>	0.321
Lower middle-income developing	<p>H₀: There is no statistically significant relationship between stability dimension versus other dimensions and lower middle-income developing group versus other income levels.</p> <p>H₁: There is a statistically significant relationship between stability dimension versus other dimensions and lower middle-income developing group versus other income levels</p>	1.000
LDCs	<p>H₀: There is no statistically significant relationship between stability dimension versus other dimensions and lowest income group (LDCs) versus other income levels.</p> <p>H₁: There is a statistically significant relationship between stability dimension versus other dimensions and lowest income group (LDCs) versus other income levels.</p>	0.567
Developed	<p>H₀: There is no statistically significant relationship between stability dimension versus other dimensions and highest income group (developed) versus other income levels.</p>	1.000

	H₁: There is a statistically significant relationship between stability dimension versus other dimensions and highest income group (developed) versus other income levels.	
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Appendix F: Hypotheses tested for tables in Chapter 6, and supporting tables

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F-1: Analysis of the survey findings for Question 3-6: survey responses (%) of delegates, researchers & officials as referred to in section 6.2.1

Table F-1.1 Analysis of the survey findings for Questions 3-6

Note: Because of rounding, totals in table columns do not necessarily add up to 100 (%).

Cumulative percentages for delegates

Response	Q3	Q4	Q5	Q6
To a greater extent	21%	0%	0%	0%
To a considerable extent	60%	14%	7%	42%
To some extent	89%	43%	50%	71%
To a very small extent	100%	89%	79%	100%
Not at all	100%	100%	100%	100%

Cumulative percentages for researchers and officials

Response	Q3	Q4	Q5	Q6
To a greater extent	14%	0%	0%	5%
To a considerable extent	67%	18%	5%	36%
To some extent	100%	68%	55%	95%
To a very small extent	100%	100%	95%	100%
Not at all	100%	100%	100%	100%

Delegates

Response	Q3			Total
	LDC n = 2	Developing n = 18	Develop n = 7	
Not at all	0%	0%	0%	0%
To a very small extent	0%	11%	14%	11%
To some extent	0%	39%	14%	30%
To a considerable extent	100%	33%	43%	41%
To a greater extent	0%	17%	29%	19%
Total	100%	100%	100%	100%

Researchers & officials

Response	Q3		Total
	Res n = 13	Off n = 8	
Not at all	0%	0%	0%
To a very small extent	0%	0%	0%
To some extent	31%	38%	33%
To a considerable extent	46%	63%	52%
To a greater extent	23%	0%	14%
Total	100%	100%	100%

Delegates

Response	Q4			Total
	LDC n = 2	Developing n = 18	Develop n = 7	
Not at all	0%	17%	0%	11%
To a very small extent	0%	50%	57%	48%
To some extent	50%	28%	14%	26%
To a considerable extent	50%	6%	29%	15%
To a greater extent	0%	0%	0%	0%
Total	100%	100%	100%	100%

Researchers & officials

Response	Q4		Total
	Res n = 14	Off n = 8	
Not at all	0%	0%	0%
To a very small extent	21%	50%	32%
To some extent	64%	25%	50%
To a considerable extent	14%	25%	18%
To a greater extent	0%	0%	0%
	100%	100%	100%

Delegates

Response	Q5			Total
	LDC n = 2	Developing n = 18	Develop n = 7	
Not at all	0%	33%	0%	22%
To a very small extent	50%	22%	43%	30%
To some extent	0%	44%	43%	41%
To a considerable extent	50%	0%	14%	7%
To a greater extent	0%	0%	0%	0%
Total	100%	100%	100%	100%

Researchers & Officials

Response	Q5		Total
	Res n = 14	Off n = 8	
Not at all	7%	0%	5%
To a very small extent	43%	38%	40%
To some extent	50%	50%	50%
To a considerable extent	0%	13%	5%
To a greater extent	0%	0%	0%
	100%	100%	100%

Delegates

Response	Q6			Total
	LDC n = 2	Developing n = 18	Develop n = 7	
Not at all	0%	0%	0%	0%
To a very small extent	50%	28%	29%	30%
To some extent	50%	33%	0%	26%
To a considerable extent	0%	39%	71%	44%
To a greater extent	0%	0%	0%	0%
Total	100%	100%	100%	100%

Researchers & Officials

Response	Q6		Total
	Res n = 14	Off n = 8	
Not at all	0%	0%	0%
To a very small extent	0%	13%	5%
To some extent	50%	75%	59%
To a considerable extent	43%	13%	32%
To a greater extent	7%	0%	4%
Total	100%	100%	100%

F-2: How can food security challenges be addressed in the MTS? (Section 6.5)

F-2.1: Hypotheses for delegates referred to in section 6.5.1

Relationship between individual suggestions and development levels (see Table 6.3)

Improvements to rules:

H₀: There is no statistically significant relationship between improvements and better implementation of rules and development levels.

H₁: There is a statistically significant relationship between improvements and better implementation of rules and development levels.

More trade liberalisation:

H₀: There is no statistically significant relationship between more trade liberalisation and development levels.

H₁: There is a statistically significant relationship between more trade liberalisation and development levels.

More policy space for domestic productions:

H₀: There is no statistically significant relationship between the need for enhancing domestic production and development levels.

H₁: There is a statistically significant relationship between the need for enhancing domestic production and development levels.

F-2.2: Hypotheses for researchers and officials referred to in section 6.5.2

Relationship between individual suggestions and researchers and officials (see Table 6.4)

Improvements to rules:

H₀: There is no statistically significant relationship between improvements and better implementation of rules and the researchers and officials group (as a whole group).

H₁: There is a statistically significant relationship between improvements and better implementation of rules and the researchers and officials group (as a whole group).

More trade liberalisation:

- H₀:** There is no statistically significant relationship between more trade liberalisation and the researchers and officials group (as a whole group).
- H₁:** There is a statistically significant relationship between more trade liberalisation and the researchers and officials group (as a whole group).

More policy space for domestic productions:

- H₀:** There is no statistically significant relationship between the need for enhancing domestic production and the researchers and officials group (as a whole group).
- H₁:** There is a statistically significant relationship between the need for enhancing domestic production and the researchers and officials group (as a whole group).

F-3: Why are WTO Rules inadequate in addressing food security challenges? (Section 6.6)

F3.1: Hypotheses for delegates referred to in section 6.6.1

Relationship between individual reasons and development levels (see Table 6.6)

Need for more policy space:

- H₀:** There is no statistically significant relationship between need for more policy space and development levels.
- H₁:** There is a statistically significant relationship between need for more policy space *and* development levels.

Need for disciplining trade-distortive measures:

- H₀:** There is no statistically significant relationship between need for disciplining trade-distortive measures and development levels.
- H₁:** There is a statistically significant relationship between need for disciplining trade-distortive measures and development levels.

Need for balanced and transparent rules:

H₀: There is no statistically significant relationship between need for balanced and transparent rules and development levels.

H₁: There is a statistically significant relationship between need for balanced and transparent rules and development levels.

Need for contemporary, relevant rules:

H₀: There is no statistically significant relationship between need for contemporary, relevant rules and development levels.

H₁: There is a statistically significant relationship between need for contemporary, relevant rules and development levels.

F-3.2: Hypothesis for researchers and officials referred to in section 6.6.2

Relationship between adequateness of rules and researchers and official group (see Table 6.9)

H₀: There is no statistically significant relationship between adequateness of rules and overall views of the researchers and officials group (as a whole group).

H₁: There is a statistically significant relationship between adequateness of rules and overall views of the researchers and officials group (as a whole group).

Relationship between individual reasons and researchers and official group (see Table 6.10)

Need for more policy space:

H₀: There is no statistically significant relationship between need for more policy space and the researchers and official group (as a whole group).

H₁: There is a statistically significant relationship between need for more policy space and the researchers and official group (as a whole group).

Need for disciplining trade-distortive measures:

- H₀:** There is no statistically significant relationship between need for disciplining trade-distortive measures and the researchers and official group (as a whole group).
- H₁:** There is a statistically significant relationship between need for disciplining trade-distortive measures and the researchers and official group (as a whole group) .

Need for balanced and transparent rules:

- H₀:** There is no statistically significant relationship between need for balanced and transparent rules and the researchers and official group (as a whole group).
- H₁:** There is a statistically significant relationship between need for balanced and transparent rules and the researchers and official group (as a whole group).

Need for contemporary, relevant rules:

- H₀:** There is no statistically significant relationship between need for contemporary, relevant rules and the researchers and official group (as a whole group).
- H₁:** There is a statistically significant relationship between need for contemporary, relevant rules and the researchers and official group (as a whole group).

Appendix G: Supporting material for Chapter 7: Trade restrictions and food security

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G-1. Analysis of the survey data referred to in section 7.2: cumulative response percentages for delegates and researchers and officials for Qu 8-18, 20 and 27.

Note: Because of rounding, totals in table columns do not necessarily add up to 100 (%).

Table G-1.1: Cumulative response percentages for delegates & researchers /officials for Questions 8 and 9

	Q8	Q9	Q8	Q9
	Delegates		Researchers & Officials	
To a greater extent	7%	7%	5%	10%
To a considerable extent	33%	41%	10%	30%
To some extent	67%	85%	50%	80%
To a very small extent	93%	96%	85%	95%
Not at all	100%	100%	100%	100%

Table G-1.2: Cumulative response percentages for delegates & researchers /officials for Questions 10 and 11

	Q10	Q11	Q10	Q11
	Delegates		Researchers & Officials	
Strongly agree	35%	25%	68%	23%
Somewhat agree	71%	61%	95%	55%
Undecided	75%	72%	100%	78%
Somewhat disagree	89%	86%	100%	87%
Strongly disagree	100%	100%	100%	100%

Table G-1.3: Cumulative response percentages for delegates & researchers /officials for Questions 12 and 13

	Q12	Q13	Q12	Q13
	Delegates		Researchers & Officials	
Very effective	11%	7%	9%	0%
Somewhat effective	64%	21%	49%	9%
Undecided	68%	28%	63%	23%
Somewhat ineffective	89%	60%	95%	55%
Very ineffective	100%	100%	100%	100%

Table G-1.4: Cumulative response percentages for delegates for Questions 14-18

	Q14	Q15	Q16	Q17	Q18
To a greater extent	36%	43%	7%	65%	29%
To a considerable extent	72%	73%	39%	100%	61%
To some extent	86%	92%	68%	100%	82%
To a very small extent	96%	96%	100%	100%	100%
Not at all	100%	100%	100%	100%	100%

Table G-1.5: Cumulative response percentages for researchers /officials for Questions 14-18

	Q14	Q15	Q16	Q17	Q18
To a greater extent	9%	9%	0%	45%	10%
To a considerable extent	36%	36%	14%	90%	35%
To some extent	86%	77%	71%	100%	75%
To a very small extent	100%	100%	100%	100%	85%
Not at all	100%	100%	100%	100%	100%

Table G-1.6: Cumulative response percentages for delegates & researchers /officials for Question 20

	Q20	
	Delegates	Res/Off
Strongly agree	60%	55%
Somewhat agree	85%	91%
Undecided	89%	100%
Somewhat disagree	96%	100%
Strongly disagree	100%	100%

Table G-1.7: Cumulative response percentages for delegates & researchers /officials for Question 27

	Q27	
	Delegates	Res/Off
Strongly agree	14%	23%
Somewhat agree	51%	55%
Undecided	65%	73%
Somewhat disagree	86%	96%
Strongly disagree	100%	100%

G-2 Analysis of the interview findings referred to in section 7.3

G-2.1 Assumptions and limitations

The term “food”, is assumed to be the staple food/s of a country.

Import and export restrictions - import and export restrictions have been categorised very broadly. This discussion does not aim at a particular restriction/s e.g. taxes, bans, TQR.

The discussion is on the general impact of import and export restrictions and does not focus on the short- and long-term effects.

Subsidies - export subsidies and domestic support are broadly covered in this study.

Domestic support mainly covers the “green box” subsidies.

Effectiveness of the provisions on export subsidies were not tested, as it has been eliminated at the 10th WTO Ministerial Meeting in Nairobi for developed countries with immediate effect, and with some exemptions for developing countries.

The green box support under domestic support is considered least distortive and limitless, therefore its effectiveness was not tested.

G-3 Analysis of the interview findings presented in section 7.3

Section 7.3 in Chapter 7 addressed following four sections which is elaborated in the appendix:

1. Import and export trade restrictions as a food security policy/measure
2. Export subsidies and domestic support as a food security policy/measure
3. Effectiveness of WTO rules (Article XI of GATT and Article 12 AoA) in disciplining import and export restrictions
4. The dispute settlement mechanism in addressing food security issues.

G-3.1 Import and export trade restrictions as a food security policy/measure (as presented in section 7.3.1)

Responding to interview Question 4, “What is the relationship between food security and the use of trade restrictions?”, all respondents across all categories in their mutually exclusive responses agreed that there is a relationship between food security and import and export restrictions and that these are protectionist measures.

This section examines three areas:

1. The impact of import restrictions as a food security policy/measure
2. The impact of export restrictions as a food security policy/measure
3. The focus of food security and the most affected category of consumers from these restrictions.

G-3.1.1 Impact of import restriction as a food security policy/measure

The mutually exclusive responses to interview Question 4(a) (ii) are categorised as positive, negative and mixed impact on food security. Delegates' reasons and justification for each category is briefly discussed.

Reasons for positive impact

Mostly, the producers with a protectionist perspective are noted having a positive approach towards import restrictions. This view is supported by 12 country representatives, representing 4 LDCs, 6 developing countries and 2 developed countries. Further, these could be categorised as 10 NFIs (comprising 2 developed, 4 developing, and 4 LDCs) and 2 NFEs, which are both developing countries.

Reflected in the responses, LDCs and developing countries with a high populace attach high importance to the agriculture sector, as their rural farming communities depend mostly on this sector for food and livelihood security.

For them, import restriction is a policy that supports and protects the domestic industry. They consider it would be an incentive and a livelihood security for the farmers to continue production. Another objective is to achieve self-sufficiency level for staple food in the country.

The following quotations from the transcripts support these ideas.

According to a delegate from a high populace developing country with subsistence farming:

Import restrictions in form of high tariffs that can be used to prevent imports entering the domestic market, increase domestic production to ensure stable access and availability to food and it is also an incentive for the farmers.

Further, the delegate questions:

Unless the domestic production is developed how will the very poor countries purchase their staple food even others consider it is offered at a reasonable price in the world market?

Another country representative mentioned that:

In view of many farm holders and with the responsibility to feed high population, it is important to have policies aimed at achieving self-sufficiency in staple food production.

A. LDC delegate views:

Domestic production as a vital element as countries should not be totally depending on another for its food security needs.

Another delegate representing a developing country which has imposed Tariff-Rate Quotas (TRQs) considers import restrictions as important to maintain the domestic price in order to protect the farmers' livelihood security. Further, a LDC representative shared an experience where the onion farmers had suffered being unable to sell the locally produced stocks after a delayed harvest, because imported product had flooded the market when import restrictions were relaxed to address the scarcity of onions.

Another believes it is the country's prerogative to impose these restrictions when needed to fulfil the needs of their constituencies, as GATT has given the approval.

Among the few developed countries that have supported import restrictions, they consider it as a policy in protecting the domestic agri-industry and stabilising production. According to a delegate, "if you do not pay farmers they will stop being farmers because they have other alternatives". Mentioned in the responses, for the developed group import restrictions are a policy tool for "national security", more than addressing a country's food security needs.

Reasons for negative impact

Import restrictions, considered as having a direct link to food security needs of the constituencies, are seen from a negative perspective by the delegates depending on their different trade interests as food importing and exporters countries. 18 country representatives, a combination of 11 developing, 1 LDCs and 6 developed have only identified the negative aspects in their comments. These respondents are further categorised as 6 NFI and 12 NFE countries.

These respondents share a common view that import restrictions are trade-distortive, and a protectionist measure, when imposed, consumers will be affected in many ways. According to some respondents, “there will be serious negative impact for food security due to high prices resulting in constrained supply and would enable producer’s potential to inflate the prices as well”. Reasonable prices and stable supply are considered as “fundamental elements in food security” by another group of respondents supporting this view. Another believes it would limit consumer preference.

The comments are presented as importer and exporters views to reflect the contrasting trade interests of the respondents in justifying the negative impact of import restrictions.

Importers’ views

The 6 NFI represent developing and LDCs countries.

These food-importing countries depend on imports when they are unable to produce in the respective country either due to lack of arable land or high competitive cost/ trade costs linked to food production, or faced with unfavourable climatic conditions. Further, there are some countries unable to grow food. Among them, some have resources to purchase while another group rely on export income of intermediate goods and services to purchase food. Therefore, these respondents have strongly rejected import restrictions. Sharing their experiences from a trade angle, a delegate from a small economy favouring liberalised markets has stated:

Import restrictions can affect negatively if imposed in a small country depending much on import and export trade as they can never be self-sufficient or self-reliant. These economies produce a few products and depend on the export income to buy their imports. Therefore import restrictions are seen from a negative perspective.

Another Delegate in emphasising the effects on consumers, believes,

Measures such as import restrictions have negative impacts on people because if importers with comparative advantage are allowed to enter markets, then the people in the country can enjoy better service and better products at cheaper prices. But under the guise of protecting a country's own goods and industries, it restricts this ability and the people are forced to buy domestically produced food.

Exporters' views

The 12 net-food exporters represent a mix of developing and developed views.

According to a developed country exporter, "for a trade liberalising organisation such as WTO these restrictions are not the best options. Import restrictions make it more difficult for countries to develop markets and plan on markets. It brings uncertainty on exporters."

Further, respondents from food exporting countries consider import restrictions as trade-distortive, because they have experienced market displacement due to high tariffs and other restrictions for many of their exports. This situation had created instability among the farmers and industry of the exporting countries.

Reasons for mixed impact

11 Delegates (9 Developing country representatives, one LDCs and one developed country) have expressed mixed views on import restrictions. Among them, there are 6 NFI and 5 NFE countries. Their responses reflect both positive and negative perspectives towards import restrictions. These countries agree that trade liberalisation is important and in that sense, imports should not be restricted. However, reflected in their responses, while importing their staple food, they consider import restrictions as useful policy space to secure food security needs of their domestic farmers and to encourage domestic production, as it is the livelihood of rural populations. Stated by a delegate, "import restriction are problematic but have to be used when considering the protection of the domestic farmers".

On a positive note, they favour import restrictions as a "policy tool to encourage domestic production" in some cases, with the intention of exporting in the long run.

From a negative perspective, these countries promote free trade, favour comparative advantage, and acknowledge the negative effects on domestic consumers when food supply is constrained by the governments.

A net–food exporter although it is a major exporter of rice, supports a mixed approach because the country represented is affected by natural catastrophes. Therefore, for them import restrictions act as a negative policy when there are climatic issues, and as a protectionist measure to secure livelihood security. Another representative favouring import restrictions, whose country has transformed from a net–food importing to a net–food exporting within a few years, still supports some degree of protectionism for the farmers and more market access for their export products.

Simultaneously, respondents have opined that import restrictions should be maintained well as there could be problems otherwise. Alerted by a developing country delegate “there should be a delicate or right balance between those who needs to import and those who wants to grow”. Similar views are shared by a developed country representative who considers that “import restrictions are important in terms of revenue generation”. According to the same respondent:

The appealing question is how much imports and what products are needed for food security, and the logical policy would be to have some production base which provides some level of necessary food security of the country, as complete closing and being entirely self-sufficient is not a good approach to food security.

Hypotheses Delegates’ views on impact of import restriction as a food security policy/measure (see section 7.3.1, Table 7.1)

The following hypotheses deal with the relationship between the views on import restrictions and country representations.

Import restrictions and development levels:

- H₀: There is no statistically significant relationship between overall views on import restrictions and development levels.
- H₁: There is a statistically significant relationship between overall views on import restrictions and development levels.

Import restrictions and trade interests:

H₀: There is no statistically significant relationship between overall views on import restrictions and trade interests.

H₁: There is a statistically significant relationship between overall views on import restrictions and trade interests.

Import restrictions and income levels:

H₀: There is no statistically significant relationship between overall views on import restrictions and income levels.

H₁: There is a statistically significant relationship between overall views on import restrictions and income levels.

G-3.1.2 Impact of export restriction as a food security policy/measure

Responses to interview Question 4(b) on “what is the relationship between food security and export restrictions?” was categorised as positive, negative and mixed reactions in association with export restrictions. Delegates’ reasons and justification for each category is briefly discussed.

Reasons for positive impact

Among the respondents, a total of 8 delegates comprising 7 developing, one LDCs, also representing 2 NFI and 6 NFE countries indicated the need to impose export restrictions to ensure food security needs of their constituencies.

Respondents favour imposing export restrictions for many different reasons.

One such reason given is when there are temporary shortages in the domestic market, export restrictions are allowed by the Article 12 of AoA. Noted in the responses, some reasons for these shortages are low harvest resulting from unexpected weather or climatic conditions, high demand for that particular product in the world market, and also when confronted with issues relating to production. In addition, it is revealed that these export restrictions are imposed as a retaliation or a measure of being cautious, especially for food items such as rice which has a “thin” market.

These respondents have admitted that imposing export restrictions are a very “complex issue” as it will limit the supplies in the world market. However, according to one respondent among

many who have the same view, “When a country is facing shortages or any production issues how can it export forgetting the needs of its consumers?”

Therefore, delegates have reiterated governments’ intervention to impose export restrictions, as “it is a government’s obligation” to feed its own population first. They have mentioned some instances when food security issues have led to political problems. A beef exporter sharing country experiences explained the government had to limit export as the whole production of beef was exported by the private sector to a more profitable market with a high growing demand, creating a shortage in the local market.

A land-locked LDC country in Africa “fully supports export restrictions to protect their harvest being smuggled by neighbouring countries”. According to them, neighbouring countries would reserve the harvest when seeds are germinated, and the subsistence farmers would sell the harvest for their livelihood.

Another different view is expressed by a representative of a country which is a heavy user of export restrictions. The delegate challenged and rationalised its use because the “Uruguay Round has not produced balanced rules between import and export restrictions”. The delegate considers flexibilities are more tilted towards the importers than the exporters.

Another respondent confirms export restrictions are essential to achieve food sovereignty needs to ensure food and livelihood security, and further justifies the act as “depending on the product there are other producing countries able to meet the world demand”.

Reasons for negative impact

22 Delegates representing 3 LDCs, 11 developing and 8 developed, further falling into 12 NFI and 10 NFE countries, identified export restrictions as a policy that can have a negative impact.

A developed country representative is of the view that “of the two measures, export restrictions have the most effective and immediate negative effect”.

These, respondents promote trade liberalisation and commonly share the view that quantitative restrictions should not be trade-distortive, although it is allowed in Article XI of GATT and Article 12 of AoA for certain situations. Further, delegates accept export restrictions as a “bad policy” with an ability to restrict food supply during a food shortage. It is considered lopsided, as it “looks into the interests of domestic consumers”.

The negative impact on the international consumers, and constraints encountered by domestic exporters, are broadly captured in the following comments.

Impact on international consumers

The negative impact of export restrictions is mostly seen from the importers' perspective. Respondents believe it is the "global consumers who will be negatively affected".

In their view, this policy measure affects availability and affordability dimensions by limiting the exports of food stuff in the global market, consequently surging world prices and inducing price volatility for food stocks. According to a delegate, "these prices floats through to the consumers". And could "push food out of reach" in terms of affordability.

It is viewed that especially the vulnerable poor countries such as NFIDCs and Small States¹²¹ (The World Bank n.d.-a) that rely on imports for their staple food will be most affected. According to a developed country respondent, "those countries which had structural difficulties and purchasing power problems beforehand had suffered even more during 2007/2008 subjected to higher amplitude in price movements". According to some delegates, these price movements are due to wrong signals in the markets that further restrict the available tiny quantity on the markets.

The following experiences are shared by the most vulnerable countries, shedding further light on different angles of availability and affordability elements.

According to a NFIDC country representative "export restrictions should be prohibited". For them the situation becomes critical as many NFIDCs do not have resources to stock pile for long periods.

A delegate from a Small State stresses the importance of stability or steady access to food at a reasonable price for the consumers. These countries, mostly NFIDCs and LDCs, are unable to be self-sufficient and rely on imports.

According to a representative from a LDC country with a growing population:

the food market is resilient, the type of rice we consume grows and is available within a limited geographic distribution, and it is not grown in Thailand and not available in

¹²¹ Small States is a World Bank categorisation of 50 countries with less than 1.5 million population. (The World Bank n.d-a)

Brazil or California. Therefore, if the exporting country impose any ban or restrictions our country like many others is affected.

Referring to the 2007/2008 food crisis, a delegate stated, “history has made my country to believe that we cannot rely on neighbours for our food security”. Therefore, a few delegates have favoured the notion that “a country should not be totally depending on another” but encourage domestic production if possible.

Another net–food importer also adversely affected in 2007/2008 indicated the sliding scale of taxes imposed by Vietnam, which were extremely problematic for this country.

Many NFIDCs respondents have experienced negative impact on essential food imports. According to a delegate, “when exports of staple food such as wheat is restricted not only wheat becomes expensive but also other alternative food”.

It was also mentioned that countries such as Singapore although they do not have the ability to grow food but have higher purchasing power will not suffer much from export restrictions.

Impact on domestic exporters

Another perspective is seen from the point of view of exporters. Even though these policy measures increase domestic food availability they escalate frustration among the exporters, as they are unable to sell at the market price and will lose international markets, especially if the restriction is prolonged. This aspect is further highlighted by one respondent.

Businesses from a country which rely on export restrictions more frequently, have been deeply critical of export restrictions in a forum because these reduce the ability to export, reduce their revenue and as a result drop the interest to invest and produce, therefore they had claimed it is bad for businesses.

Further, elaborating this point the delegate is of the view that “even some countries put restrictions under the guise of ensuring that they have food, somehow, it can negatively impact on their domestic consumers in the long run”.

Reasons for mixed impact

11 Delegates (consisting 8 developing, 2 LDCs and 1 developed) also representing 8 NFI and 3 NFE have identified positive and negative aspects in export restrictions.

The respondents confirmed that the AoA has provisions to apply these measures. They favour export restrictions when there is a food shortage to retain sufficient quantities to feed the

populace, but are concerned of the “global responsibility to ensure that those who rely on country export during that time of shortage are not left without food”.

These respondents having experienced export restrictions as food importers and exporters, and having faced the dilemma, expressed mixed views on export restrictions. The commonly identified advantages are its ability to “prevent and relieve domestic food shortages” by addressing food security needs of the domestic consumers when there is a shortage. However, according to a developing net–food importer, “export restrictions qualifies if there is a critical food shortage but critical shortages should not continue for 5-10 years, and should be used diligently for cogent logical reasons”. Among the disadvantages are “scarcity of food in the world market fuelling price volatility and escalating prices, difficulty to define temporarily shortages, and inability to discipline export restrictions”. “Vulnerability situations of the countries depending on imports” have also being identified by respondents sharing these concerns.

More different mixed views are shared by the delegates.

A concerned respondent informed that the domestic industry in an importing country would be destroyed due to the trickledown effect when the food product used as an input commodity is restricted.

Mixed views are supported by small countries trying to develop production of staple food in the rural areas for food security purposes and exports. As importers, export restrictions affect these countries, since their production is limited. As exporters when there is a shortage their first reaction is to impose export restrictions to protect domestic consumers.

A different experience is shared by a representative of a major rice exporting country, which is very protective of its highly political rice industry. According to the representative, during the 2007/2008 food crisis the reaction of the major rice importers and exporters had created an opportunity for exporting farmers in this country to benefit from the situation for about one year. Therefore, this experience of export restrictions is viewed from a positive angle. However, this country also has concerns over export restrictions, as it is prone to unexpected weather conditions that could lead to poor harvests and be constrained when they are unable to import rice from the neighbouring exporters that have imposed export restrictions. Since the rice they consume is not grown in many countries, such a situation can adversely affect their food security.

Another respondent supports protectionist views but also shared difficulties experienced when unilateral export restrictions were imposed by other countries.

According to another delegate, export restriction is a delicate issue and therefore, “there should be a balance between addressing global food security and domestic food security”.

Hypotheses for delegates’ views on impact of export restriction as a food security policy/measure (see section 7.3.1 and Table 7.3)

The following hypotheses deal with the relationship between the views on export restrictions and country representations.

Overall views on export restrictions and development levels:

H₀: There is no statistically significant relationship between overall views on export restrictions and development levels.

H₁: There is a statistically significant relationship between overall views on export restriction and development levels.

Overall views on export restrictions and trade interests:

H₀: There is no statistically significant relationship between overall views on export restrictions and trade interests.

H₁: There is a statistically significant relationship between overall views on export restriction and trade interests.

Overall views on export restrictions and income levels:

H₀: There is no statistically significant relationship between overall views on export restrictions and income levels.

H₁: There is a statistically significant relationship between overall views on export restriction and income levels.

G-3.1.3 The focus of food security and the most affected category of consumers from these restrictions

Delegates' responses to interview Questions 4(a) and (b) are further categorised into two themes to understand food and livelihood security needs, namely, responses acknowledging “only consumers” and “both consumers and farmers”. The mutually exclusive responses of delegates are presented in Table G-3.1.

Table G-3.1: Food security focus (%)

Focus	% n = 41	Development level			Trade interest		Income level				
		LDC n = 6	Dev n = 26	D n = 9	NFI n = 22	NFE n = 19	HD n = 9	HDV n = 5	UMDV n = 7	LMDV n = 14	LDC n = 6
Consumer	61	17	58	100	55	68	100	80	43	57	17
Both	39	83	42	0	45	32	0	20	57	43	83
Total (%)	100	100	100	100	100	100		100	100	100	100
Overall P-values		0.003**			0.522		0.008**				

Source: Interview responses ** indicates significance at the 1% levels.

All 41 delegates have mentioned consumers and among them 61% (25) responses had mentioned “only consumers”, another 39% (16) respondents “both consumers and farmers”.

Two extreme views on the food security focus are noted between the development and income levels.

Food security also as a livelihood security for the farmers is significantly identified by the LDCs (83%) group. According to the responses of these delegates, these are subsistence farmers who consume what they grow. Their produce is mainly for the domestic market, in particularly within their local terrains. In contrast, developed (100%) and high-income developing (80%) country representatives are seen focusing more on the food security needs of consumers. The developing country reaction is observed as mixed with less variations. 58% of them recognised the concerns of consumers, while another 42% acknowledged both.

Both NFI and NFE have mostly focused on consumers. Between them NFI are observed to be interested in both.

Within the income levels, 57% of upper-middle income developing country representatives support both farmers and consumers. These delegates represent countries with high populace, supporting domestic farming and major exporting countries that have now moved to industrialised and emerging status. In contrast, 57% of lower-middle income developing country representatives are more concerned about the consumers, of them, a majority are net-food importers.

Further to explore any statistically significant relationships, the following hypotheses were tested for any relationship between views on food and livelihood security and development/trade interests/income levels. The results are given in Table G-3.1 as overall p-values.

Relationship between the views on food security focus and country representations.

Focus on food security and development levels:

H₀: There is no statistically significant relationship between the focus on food security and development levels.

H₁: There is a statistically significant relationship between the focus on food security and development levels.

Focus on food security and trade interests:

H₀: There is no statistically significant relationship between the focus on food security and trade interests.

H₁: There is a statistically significant relationship between the focus on food security and trade interests.

Focus on food security and income levels:

H₀: There is no statistically significant relationship between the focus on food security and income levels.

H₁: There is a statistically significant relationship between the focus on food security and income levels.

Depicted in Table G-3.1, p-values of 0.003, 0.522 and 0.008 have been recorded. Of the values, 0.003 and 0.008 being $p \leq \alpha$ (0.05), significant relationships are recorded between respondents' views on food security focus and their corresponding development and income levels. Therefore, respective null hypotheses H₀ are rejected and alternative hypotheses H₁ are

favoured, interpreted as food security focus has a bearing on development and income levels of the countries.

In conclusion, it is revealed that majority of the respondents focus on consumer food security. A relationship is identified among the food security focus and income and development levels. The higher the income and development level, the focus is generally more on consumers. In contrast, to the low-income LDCs considering both food and livelihood security of their consumers and farmers as important.

In addition, within the “consumer”¹²² category referred in Table G-3.1, delegates had identified different types of consumers, namely domestic consumers who will be affected by import restrictions, domestic consumers who will be relieved by export restrictions, and international consumers who will be affected by export restrictions.

The focus of food security and the most affected category of consumers from these restrictions.

The percentages of the mutually nonexclusive responses that had identified each consumer group is depicted in Table G-3.2. Further analysis was conducted to explore if any statistically significant relationships were present between the variables “consumer” as a whole and each category under reference. The following hypotheses were formulated and tested with p-values listed in Table G-3.2.

Relationship between the consumers and three categories of consumers.

H₀: There is no statistically significant relationship between consumers as a whole and domestic consumer affected by import restrictions.

H₁: There is a statistically significant relationship between consumers as a whole and domestic consumer affected by import restrictions.

H₀: There is no statistically significant relationship between consumers as a whole and domestic consumer affected by export restrictions.

H₁: There is a statistically significant relationship between consumers as a whole and domestic consumer affected by export restrictions.

¹²² Although all 41 delegates had mentioned consumers, only “consumers only” responses excluding “both” have been analysed further to bring out a meaningful result to identify any relationship between the variables. If all 41 has been considered as a variable STATA is unable to produce any p-values.

H₀: There is no statistically significant relationship between consumers as a whole and international consumers affected by export restrictions.

H₁: There is a statistically significant relationship between consumers as a whole and international consumer affected by export restrictions.

Table G-3.2: Most affected consumer group (%)

Consumer groups	%	P-values
Domestic consumers – imports restriction	28%	0.441
Domestic consumers – export restriction	48%	1.000
International consumers	92%	0.040

Source: Interview responses * indicates significance at the 5% levels.

Table G-3.2 shows that 28% of the responses identified that domestic consumers will be affected by import restrictions, with another 48% affected by export restrictions, and 92% had concerns about other international consumers. With a recorded p-value of 0.040, a significant relationship is established between responses of consumers and international consumers, interpreted as there is a substantive concern over the international consumers that will be affected when a country imposes export restrictions.

Researchers' and officials' views

Researchers' and officials' views on the food security focus and most affected consumer group are presented in Tables G-3.3 and G-3.4 respectively.

Table G-3.3: Food security focus (%)

Focus	% n = 22	Res n = 10	Off n = 12
Consumer	64	90	42
Both	36	10	58
Total (%)	100	100	100

Source: Interview responses

Table G-3.4: Most affected consumer group (%)

Consumer	%
Domestic consumers – imports restriction	21%
Domestic consumers – export restriction	50%
International consumers	79%

Source: Interview responses

Depicted in the tables, 64% of the researchers and officials, mostly reflecting 90% of the researchers, looks at trade restrictions from the consumers' point of view. Officials' views are nearly equally split between the two. The researchers and officials group also identified the concerns of the international consumers compared to domestic consumers affected by trade restrictions.

G-3.2 Export subsidies and domestic support as a food security policy/measure (see section 7.3.2 of Chapter 7)

Three reasons for each negative and positive view on subsidies are discussed next. The delegates' and researchers and officials' views are then presented in separate sections.

G-3.2.1 Negative effect of subsidies as a food security policy measure

Delegates' responses are grouped as displacement of domestic products, displacement of export markets, and creation of unfair playing field among the members, and these three effects are discussed below.

Displacement of domestic products

As explained by the delegates, the subsidised imports sold at cheaper prices compete with similar food products of domestic producers, and can easily displace the domestic production. According to one delegate "the price difference between the domestically produced and imported is huge and cannot be compared and competed".

In their view, food security and livelihood security of the rural farmers depends on the sale of their production. When the consumers purchase low-priced imported food it will have a detrimental impact on these small-scale farmers of the poor developing and LDCs countries. This concern is bluntly expressed by a LDCs delegate as, "subsidised products kill our markets,

because subsidised products flood our markets, make it difficult to engage in production and it frustrates every effort”. Similarly, some delegates have pointed out that these distortive measures or “dumping” can have a serious and immediate impact where “businesses can be made disappeared very fast”.

Reiterated by many delegates, these subsidised imports act as a disincentive for investments in the agriculture sector. According to one delegate representing a country with a high subsistence farming population, “farmers borrow money from the banks and are in debt when they cannot payback and they lose interest in farming”.

Displacement is a major issue for the less developed economies, even if some have identified safeguards to mitigate the situations. A LDCs delegate indicated that LDCs and other small countries are not able to apply trade remedies fast, or refer to dispute settlement, as they are challenged with capacity and technology issues. Explained further by these respondents, because these countries lack data to stop shipments at the point of Customs compared to the developed countries, by the time they notice an import surge, imported products are released to the market and the damage to the farmers and to the domestic industry is already done.

Displacement of export markets

Reiterated by many developed country respondents, subsidies have an immediate and a damaging impact on the exporters. According to one developed country delegate, “subsidised exports can destroy export markets overnight. Low prices of the subsidised food in the world market cannot be matched by other unsubsidised competitors, even by efficient producers. Therefore, for lacking competitiveness and competitive advantage, exporters will be displaced from the market”. Further, they have identified that subsidised programs create uncertainties in the market, and distort the signals that are sent to farmers “whether they should invest or not”.

On the other hand, developing country respondents have pointed out that:

...subsidies mainly provided by the developed countries to their farmers have reduced the capacity of the developing country exporters to compete in the world market and therefore, the revenue forgone have reduced the purchasing power and their access to food.

As a result, “these implications affect the food security and livelihood of the exporters, industries and employees”.

Some respondents are of the view that when there are many suppliers rather than it being dominated by a few subsidised exporters, markets can absorb shocks from natural calamity that can disrupt markets and drive prices for the rest of the world. Therefore they consider displacement of exporters as a negative implication.

Unfair playing field

Unfair playing field is another negative aspect of subsidies identified among the developing and developed members, due to their differing capacity in providing support to the farmers and agriculture sector. LDCs and developing respondents are of the opinion that their countries are lacking the strength and ability to face the competition, and further flagged that not only export subsidies, but also domestic support creates the same advantage to one side of producers thus preventing a level playing field for them. Moreover, some of the developing country delegates recognised that export subsidies are “more related to the developing countries, but developing countries do not have the capacity to provide.” These less developed economies are of the view that most governments provide seeding or a bag of fertiliser directly to the poor farmers producing staple food, or some meagre funding for research and development etc, as subsidies which cannot be compared to the quantum of subsidies extended by the developed countries. Among the developing, there is a view that “developed countries are using domestic subsidies on top of export subsidies”.

Developed countries also have diverse views on this matter. According to one developed country respondent, the country represented is unable to spend on domestic support to the extent of others, and explains that:

US is spending 135 billion, the EU is spending almost 120 billion, India’s spending close to 90 billion, China is now outspending everyone and those four countries and to a lesser extent Japan, can spend on agricultural subsidies almost no one else in the world can afford to do at that level.

Commenting on the export subsidies of the developed countries, many delegates are of the view that the US and EU have conducted policy reforms reducing and laying off many export

subsidy programs¹²³, which they consider as moving in the right direction, but strongly believe that these countries still hold the amenity to utilise export subsidies if required.

Some delegates representing affected countries are of the view that these trade-distortive subsidies should be eliminated. In their view, “if subsidies are not there it will be an incentive for investment, and more countries will produce with higher number of suppliers rather than subsidising few”.

G-3.2.2. Hypothesis for export subsidies and domestic support as a food security policy/measure (see Chapter 7, section 7.3.2)

The results of the following analysis are discussed in section 7.3.2.

Relationship between challenge for domestic exporters and trade interests (net importers and net exporters).

H₀: There is no statistically significant relationship between challenge for domestic exporters and trade interests (net importers and net exporters).

H₁: There is a statistically significant relationship between challenge for domestic exporters and trade interests (net importers and net exporters).

Table G-3.5: Challenge for domestic exporters and trade interests (net importers and net exporters) (%)

Challenge for domestic exporters	Trade interest		Total
	Non-responses (0)	Responses (1)	
Non-responses (0)	59% (13)	21% (4)	42% (17)
Responses (1)	41% (9)	79% (15)	58% (24)
Total	100% (22)	100% (19)	100% (41)
Fisher's exact = 0.025*			

Source: Interview responses * indicates significance at the 5% levels.

¹²³ According to a Delegate, EU is entitled to have 8 billion euros worth of export subsidies, but due to reforms have €400 million euros available to them in any budget year.

Relationship between market displacement and trade interests (net importers and net exporters):

H₀: There is no statistically significant relationship between market displacement and trade interests (net importers and net exporters).

H₁: There is a statistically significant relationship between market displacement and trade interests (net importers and net exporters).

Table G-3.6: Market displacement and trade interests (net importers and net exporters) (%)

Market displacement	Trade interest		Total
	Non-responses (0)	Responses (1)	
Non-responses (0)	59% (13)	21% (4)	42% (17)
Responses (1)	41% (9)	79% (15)	58% (24)
Total	100% (22)	100% (19)	100% (41)
Fisher's exact = 0.025*			

Source: Interview responses * indicates significance at the 5% levels.

G-3.2.3 Positive effect of subsidies as a food security policy measure

Some respondents are of the view that there are positive effects of subsidies. Three main reasons for having a positive impact on domestic producers and consumers (importers) are categorised as the ability to (1) enhance domestic production, (2) attract investments into agriculture sector, and (3) provide food at a low price or cheaper price.

Enhance domestic production

Shared by many delegates, subsidies also act as a catalyst in enhancing production.

LDCs and developing countries are of the view that “subsidies are essential and is a part of food security”. According to a delegate, “a lot of African, developing and LDCs farmers require government subsidies to produce for the domestic markets and to export”. In sharing country experiences, developing countries indicated that the governments are providing subsidies only for the staple food growers. They mentioned further that “exporting products do

not need government support, as these are commercial investments”. Even some developed country representatives agree that “subsidies are needed during early stages of development to protect the industries and to get it off the ground”.

Some reasons given for enhancing production go beyond food security, touching livelihood security and national security. One developed country delegate flagged the need to provide subsidies for fulfilling national security purposes in that country. According to this delegate, otherwise demotivated farmers would discontinue producing. Some delegates acknowledged that these subsidies have helped to address hunger in countries like India, by securing the livelihood security of small farmers producing and making food available to many people who previously had difficulties in affording.

Among other reasons discussed, delegates believe that subsidies would increase quantities in the market and export earnings, ensure food security and retain livelihood especially in the rural sector, achieve self-sufficiency levels, enable countries to face any food shortages due to export restrictions or natural calamities especially for countries with big markets and high populations, and to prepare for future global food challenges anticipated with the growing populations.

Incentive to attract investment into agriculture sector

Some respondents believe subsidies act as a catalyst to attract investments. Viewed by a developed country delegate, “it is a needed signal for farmers”, in order to “produce food reliably and stably to feed its own population”. This view is reiterated by a developing country respondent. According to that respondent, “subsidies are very important and necessary for many developing countries and for farmers to be ‘assured’ what they produce can be sold and survive in the market”.

Favouring this notion, a LDCs delegate questions:

If subsidies were not given where would some poor economies be today? They will not be able to gain the competitive advantage. Similarly, some countries have arable lands but needs investment. Government support is an incentive for the investors to invest in these countries.

Provide food at a low price or cheaper price

Delegates agree that subsidies increase production and have a positive impact on world food prices when the surpluses are exported, where the end consumers would benefit from the

subsidised imports which are cheap or low-priced. As revealed in the responses, countries such as low-income food-deficit countries (LIFDC) and NFIDCs having difficulties to meet the food bill, countries with high populations and high demand for food as well as countries unable to produce and grow food, favour subsidies. Confirming this idea one delegate mentioned that “if countries get those products at very low prices they can feed their populations at very low prices”. It is viewed that subsidised low-priced food can address hunger of poor people. According to a developed country delegate, “export subsidies are good for countries relying on imports for food security”, and similarly, “domestic subsidies fuelling production enables food to reach people who have difficulty in affording it otherwise”. However, some delegates have indicated that the low-priced food supplies may not be consistent.

Although there is a criticism that these subsidised imports could displace domestic industry, according to a few other delegates “it also compete the prices in the international and domestic markets and lower prices for the consumers”.

Implications of subsidies on other food security related areas

Responses also captured related implications on food security, such as livelihood and migration to cities, and possible effects on the sovereignty of a country as a result of too much dependence on importers.

Table G-3.7: Delegates views on other related issues (%)

Other issues	%	Development level			Trade interest		Income level				
		LDC n = 6	Dev n = 26	D n = 9	NFI n = 22	NFE n = 19	HD n = 9	HDV n = 5	UMDV n = 7	LMDV n = 14	LDC n = 6
Livelihood and migration (%)	32	67	27	22	41	21	22	20	43	21	67
Dependence (%)	10	33	8	0	18	0	0	0	14	7	33

Source: Interview responses

Employment of the farmers and migration is considered as an issue among 32% of the delegates, mostly LDCs (67%), NFI (41%), and upper-middle income (43%) developing category (Table G-3.7).

LDCs and developing countries are concerned about issues related to unemployment, social unrest and urbanisation. This view is expressed by a developing country delegate stating

“government needs to provide subsidy to agriculture sector to retain people in rural areas and continue and create jobs in rural areas and discourage moving to the city”.

Another 10% of the respondents are of the view that subsidies would increase dependence on another country which may threaten the sovereignty of the importing country. This view is mostly shared by the LDCs (33%) group.

Researchers’ and officials’ views

Table G-3.8: Researchers and officials views on other related issues (%)

Other issues	% n = 22	Res n = 10	Off n = 12
Livelihood and migration (%)	27	50	8
Dependence (%)	14	10	17

Source: Interview responses

Depicted in Table G-3.8, among the other issues, livelihood and migration is a concern mostly recognised by the researchers.

G-3.3 WTO rules (Article XI of GATT and Article 12 AoA) in disciplining import and export restrictions (see section 7.3.3 in Chapter 7)

The rules for imposing import and export restrictions are covered under the Article XI of GATT (1994¹²⁴) on General elimination of quantitate restrictions, which prohibits any restrictions other than duties, taxes and other charges. However, there are exemptions for both these restrictions. Exemptions on import restrictions as given in Article XI:2 (c) focusing on domestic markets and different situations have been tested in the dispute settlement.

Exemptions for imposing export restrictions are stipulated in Article XI:2 (a). Rules allow applying restrictions “temporarily” when needed to prevent or relieve “critical shortages” of “foodstuff” or other essential products (WTO n.d-w, WTO n.d-j). Identified by the Uruguay Round negotiators, export prohibitions or restrictions mostly affect the food security needs of the importers. In this regard, importers’ concerns have been further taken into consideration in Article 12 of the AoA on “Disciplining export prohibitions and restrictions” on foodstuffs with

¹²⁴ Same as GATT 1947.

reference to Article XI of GATT (WTO n.d-x). According to these provisions, an exporter is obliged to give advance notice in writing (notification) to the Committee on Agriculture before imposing export restrictions, with information as to the nature and duration of the measure. Furthermore, the exporter imposing the measure is requested to consult with the affected importers in relation to any matter in question and by providing necessary information. However, this provision is not applicable to developing country members, unless it is imposed by a developing country which is a “net-food exporter” of the specific foodstuff concerned.

Based on proposals submitted, the “Revised Draft Modalities for Agriculture” or the “Report by the Chair to the Trade Negotiations Committee” (WTO document TN/AG/W/4/Rev.4, of 6 December 2008 or TN/AG/26 of 21 April 2011) (WTO 2008), which is part of the DDA (that was not agreed but still remains open) contains some suggestions to strengthen the existing disciplines on export prohibitions and restrictions under Article XI 2(a) of GATT 1994 and Article 12 of the AoA. The following are some of the suggestions made on more specific time lines, information and transparency requirements relating to notifications, as listed in section v under “other issues – (part C)” in the extensively discussed text:

Prohibitions or restrictions under Article XI.2(a) of GATT 1994 in Members' territories shall be notified to the Committee on Agriculture within 90 days of the coming into force of these provisions.

A Member instituting export prohibitions and restrictions under that provision shall give notice of the reasons for introducing and maintaining such measures.

A Member which intends to institute export prohibitions and restrictions shall consult, upon request, with any other Member having a substantial interest as an importer with respect to any matter related to the proposed measure. The Member instituting such export prohibitions and restrictions shall provide, up request, the interested importing Member with necessary information, including relevant economic indicators.

The Member instituting the measure shall report the progress made in the consultations to the Committee on Agriculture.

The Committee on Agriculture shall provide for annual notification update and surveillance of these obligations.

As provided in paragraph 7 of Article 18 of the Agreement on Agriculture, any Member may bring to the attention of the Committee on Agriculture such measures under that provision which it considers ought to have been notified by another Member.

Existing export prohibitions and restrictions in foodstuffs and feeds under Article XI.2 (a) of GATT 1994 shall be eliminated by the end of the first year of implementation.

Any new export prohibitions or restrictions under Article XI.2 (a) of GATT 1994 should not normally be longer than 12 months, and shall only be longer than 18 months with the agreement of the affected importing Members.

The above provisions apply consistently with Article 12.2 of the Agreement on Agriculture. To the extent that the above provisions on consultations apply any obligations additional to Article 12 of the Agreement on Agriculture, they shall not apply to least-developed and net food-importing developing countries.¹²⁵

¹²⁵Cameroon, Congo (Brazzaville), Ghana, Nigeria and Swaziland shall have access also to this provision.

G-3.3.1 Views on ambiguity in the provisions disciplining import and export restrictions

Table G-3.9: Delegates' views on ambiguity in the provisions (%)

Views	%	Development level			Trade interest		Income level				
		LDC n = 6	Dev n = 26	D n = 9	NFI n = 22	NFE n = 19	HD n = 9	HDV n = 5	UMDV n = 7	LMDV n = 14	LDC n = 6
Yes (%)	24	0	39	0	14	37	0	60	29	36	0
No (%)	7	0	0	33	14	0	33	0	0	0	0

Source: Interview responses

Table G-3.10: Researchers' and officials' views on ambiguity in the provisions (%)

Views	%	Res	Off
	n = 21	n = 10	n = 11
Yes (%)	19	30	9
No (%)	5	10	0

Source: Interview responses

Depicted in Table G-3.9 and G-3.10, the responses of some delegates indicate their preference to retain the ambiguity in the provisions. Developed (33%) consider it negatively, but the developing respondents (39%) prefer to maintain this aspect. “We can live with it-why burden the system?”, one developing country respondent added.

Among the researchers and officials, only five mentioned ambiguity and mostly it is to support ambiguity.

Delegates who support ambiguity believe that “Uruguay Round negotiators have purposely left the space for manoeuvring” therefore “rules are deliberately vague”. Some stated that the system was not necessarily designed for being fair, but for equity. Another view is “there is no perfect rule, however, most of the provisions solve a great deal, but there is always some grey areas or loopholes, and therefore it is how a country implement it, so it is a good basis”.

G-3.4 The dispute settlement mechanism in addressing food security issues (see section 7.3.4 in Chapter 7)

The WTO is commended as having “one of the most active international Dispute Settlement Mechanisms (DSM) in the world” (WTO n.d-y). The DSM is one of the 3 pillars in the WTO, even acclaimed by the respondents as the “most active pillar”. It makes the trading system more secure and predictable (WTO n.d-y). According to respondents, panel rulings on dispute settlements bring in new laws, interpretations and clarity into the system, trade negotiations and rules.

Explained in the WTO website (WTO n.d-z), “a dispute arises when a member government believes another member government is violating an agreement or a commitment that it has made in the WTO”. According to the WTO, since the establishment of the WTO in 1995, over 500 disputes have been brought to the WTO and of them over 350 rulings have been issued. Since the system encourages settling disputes through consultation (Article 3.7 of the Dispute Settlement Understanding (DSU)), some disputes are resolved in the process and notified as settled “out of court”. However, some remain in a prolonged consultation phase (WTO n.d-y).

The text of the DSU annexed to the WTO Agreement specifies the procedures governing the settlement of disputes. It applies to disputes brought pursuant to the “covered agreements” or WTO Agreements listed. The DSB is the sole authority in establishing panels and conducting the functions as stipulated in the DSU (WTO n.d-ab).

The dispute settlement procedure has different stages and approximate periods of time set out for each stage. The process commences when the complaining member submits a “request for consultations” to the DSB quoting the agreements it believes to have been violated. Often, a dispute is invoked under more than one agreement. The consultation phase allows 60 days for the parties to the dispute to resolve the differences. Failing which, at the request of the complaining member (complainant), a panel of experts can be appointed by the DSB in consultation with the parties to the dispute. The respondent or the “country in dock” can block the request to create a panel only once at the DSB meeting. The second phase of setting up and appointing a panel can take up to 45 days. The panel’s final report should be given to the parties to the dispute within 6 months. However, in cases of urgency such as perishable goods there is a shorter deadline of 3 months to issue the panel report. Panel reports may be endorsed or only be rejected at the DSB by consensus of the WTO membership. However, panel rulings can be appealed by either side to the dispute. Appeals are heard by 3 members of the permanent 7

member Appellate Body. The Appellate Body report is expected to be submitted within 60-90 days. If the defending country loses the dispute it is generally expected to follow the recommendations of the panel report or the appeal report to bring measures found in violation back into compliance with the WTO agreements. The country must state its intention to do so at the DSB held within 30 days of the report's adoption. It is further allowed to negotiate with the complainant for a "reasonable period of time" to comply with the recommendations, or mutually acceptable compensation. In the event, if the parties are unable to agree on a satisfactory compensation after 20 days the complainant can seek permission from the DSB to retaliate in the form of suspending concessions or other obligations. This is a temporary measure to force the other party to comply. The DSB monitors adoption and implementation of rulings, and until a case is resolved it remains on its agenda. According to the WTO resources, if the dispute is not appealed, it can be resolved approximately in a year. If the case is appealed then it could take up to 1 year and 3 months (WTO n.d-y). However, reported by the respondents, in reality disputes can be prolonged and lengthier than the time specified in the rules. One such example is the DS27: European Communities – Regime of the Importation, Sale and Distribution of Bananas case which had taken 12 years (1996 to 2008).

Only WTO Member governments have direct access to its DSS, either as parties or as third parties. The "complainant" and "respondent" are the parties to a dispute. Other Members with substantial interests or invoking a systemic interest in the issue can notify their interest to the DSB to participate as third parties. These third parties may make written and oral submissions to the panel. However, their participation can be restricted by the parties to the dispute depending on the Article selected to base the dispute¹²⁶ (WTO n.d-ac, WTO n.d-ad) WTO panel and Appellate Body reports are binding on the parties to the dispute and have no legal effect on other members. The panels cite these rulings and use them for reasoning and the Appellate Body try not to deviate from the interpretations established by the precedents (Matsushita, Schoenbaum & Mavroidis 2006). The entire procedure from consultation to the circulation of the reports and Appellate Body procedure are confidential (WTO n.d-ae).

¹²⁶ The dispute can be based on either Article XXII:1 or XIII:1 of GATT 1994. If the complainant bases the dispute on Article XXII:1 of GATT, the third party's involvement is allowed and depends on the respondent's permission. By selecting Article XIII:1 of GATT the complainant can prevent any involvement of the third parties.

G-3.4.1 Members' usage of the DSS

With regard to the usage, all respondents were satisfied with the DSM within the WTO as it was “police”. According to a delegate “you cannot measure the value of the DSM by looking at the number and the nature of disputes in the outcomes”. They also consider DSM as the “best way to make a law” and as an “instructive and important element for the whole system”. It was noted that “some countries have changed laws to comply with the DSB rulings”.

Table G-3.11: Members' use of the DSM by category (%) – (Data for Figure 7.7 in Chapter 7)

	% n = 41	Development level			Trade interest		Income level				
		LDC n = 6	Dev n = 26	D n = 9	NFI n = 22	NFE n = 19	HD n = 9	HDV n = 5	UMDV n = 7	LMDV n = 14	LDC n = 6
Usage of the DSM	90	33	100	100	82	100	100	100	100	100	33
P-values		0.000**			0.111		0.000**				

(Source: Interview responses)

** indicates significance at the 1% levels. * indicates significance at the 5% levels.

G-3.4.2 Usage of different articles

With regard to the AoA, in total there are 80¹²⁷ cases citing the issues related to export subsidies, domestic support and export credit guarantees, import taxes, price bands, safeguard measures, importation of food, import licensing, anti-dumping and countervailing duties, additional duties, TRQs, measures concerning inspection of agricultural products, and protection of trademarks and Geographical Indications for agricultural products etc (WTO n.d-af). A more specific account of the disputes on export and import restrictions and subsidies is given below:

Import and export restrictions are covered in Article 12¹²⁸ of AoA and Article XI¹²⁹ of GATT. There are no cases citing Article 12 of AoA. Further, there are 77 cases citing GATT Article

¹²⁷ All disputes recorded as at 18.03.2017 in the WTO website: <https://www.wto.org/english/tratop_e/dispu_e/dispu_agreements_index_e.htm?id = A9> (WTO n.d-af).

¹²⁸ Disciplines on export prohibitions and restrictions.

¹²⁹ General Elimination of Quantitative Restrictions

XI on General elimination of quantitative restrictions and of that 65 on GATT Article XI:I¹³⁰. However there are no cases citing GATT Article XI: 2¹³¹ on temporary export prohibitions applied to prevent or relieve critical food shortages of exporting countries, also an exemption to Article XI: 1.

Export subsidies are referred in AoA part V – Article 8¹³², 9¹³³ & 10¹³⁴ with also reference to Subsidies and Countervailing Measures Article 3¹³⁵. There are 12, 8 and 8 cases referring to AoA Article 8, 9¹³⁶ and 10¹³⁷ respectively.

Domestic support pertaining to AoA part II – Article 3¹³⁸, part IV -Articles 6¹³⁹ and 7¹⁴⁰ and part VI – Article 12¹⁴¹ & 13¹⁴². There are 3, 2, and 4 cases citing Article 6¹⁴³, 7¹⁴⁴ and 13

¹³⁰ Article XI: General Elimination of Quantitative Restriction - 1. No prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas, import or export licences or other measures, shall be instituted or maintained by any contracting party on the importation of any product of the territory of any other contracting party or on the exportation or sale for export of any product destined for the territory of any other contracting party.

¹³¹ GATT XI: 2. The provisions of paragraph 1 of this Article shall not extend to the following: (a) Export prohibitions or restrictions temporarily applied to prevent or relieve critical shortages of foodstuffs or other products essential to the exporting contracting party;

¹³² Export competition commitments.

¹³³ Export subsidy commitments.

¹³⁴ Prevention of circumvention of export subsidy commitments.

¹³⁵ SCM - Part II: Prohibited Subsidies Article 3: Prohibition

¹³⁶ Of the 8 cases on Article 9, 7 cases are under Article 9.1

¹³⁷ Of the 8 cases on Article 10, 7 cases are under Article 10.1

¹³⁸ Incorporation of concessions and commitments.

¹³⁹ Domestic support commitments.

¹⁴⁰ General discipline on domestic support.

¹⁴¹ Disciplines on export prohibitions and restrictions.

¹⁴² Due restraint.

¹⁴³ Of the 3 cases on Article 6, only 1 case cited Article 6.1 and 2 under Article 6.3.

¹⁴⁴ Of these 2 cases on Article 7, one case each cited 7.1 and 7.2 (b) respectively.

respectively. Most recently, a case on domestic support citing AoA Articles 3.2, 6.3 and 7.2(b) has been filed by USA on China's domestic support for agricultural producers¹⁴⁵ (WTO 2017-a).

G-3.4.3 Effective use of the DSS in disciplining trade-distortive measures

Hypothesis: Reference to section 7.3.4 the dispute settlement mechanism in addressing food security issues – Table 7.16

Relationship between the views on effectiveness of the DSS and development levels/income levels and trade interests.

Development levels:

H₀: There is no statistically significant relationship between the views on effectiveness of the DSS and development levels.

H₁: There is a statistically significant relationship between the views on effectiveness of the DSS and development levels.

Income levels:

H₀: There is no statistically significant relationship between the views on effectiveness of the DSS and income levels.

H₁: There is a statistically significant relationship between the views on effectiveness of the DSS and income levels.

Trade interests:

H₀: There is no statistically significant relationship between the views on effectiveness of the DSS and trade interests.

H₁: There is a statistically significant relationship between the views on effectiveness of the DSS and trade interests.

G-3.4.4 Reasons for not being effective

Two major reasons emerged in the respondents' responses for the system being not effective. First, constraints encountered by members in managing a dispute at the WTO. Second, the

¹⁴⁵ DS511- China – Domestic Support for Agricultural Producers (Complainant: United States) – 13 September 2016.

demotivation associated with nonconformity practices of a few members with the panel rulings. The responses for the mutually nonexclusive responses are given in Tables G-3.12 and G-3.13.

Depicted in the Tables G-3.12 and G-3.13, constraints (61%) and nonconformity (27%) to DSB rulings are considered as main factors hindering the effectiveness of DSS. Constraints are a main concern for the developing (73%), represented by the upper-middle (71%), lower–middle (79%) and high-income developing (60%) categories. The researchers and officials group only identified constraints which are stumbling blocks for the members.

Nonconformity is an issue acknowledged by some delegates, mainly the LDCS (50%) and upper-middle income countries (43%). They consider it to be a bad precedent by a few countries with political muscle, who tend to dishonour and violate the panel rulings. Respondents who identified nonconformity consider it is necessary to respect the panel rulings because “conformity is the only way to address the dispute as, unlike in domestic courts, there is no payment of damages or retroactive compensation system in WTO but to bring the measure into conformity”.

Constraints are further grouped, associated with cost, time, expertise and evidence. Table G-3.14 contains the data for Figure 7.9 in Chapter 7.

Table G-3.12: Delegates' views on the main reasons for the DSS not being effective (%)

Effectiveness	%	Development level			Trade interest		Income level				
		LDC	Dev	D	NFI	NFE	H	HDV	UMDV	LMDV	LDC
	n = 41	n = 6	n = 26	n = 9	n = 22	n = 19	n = 9	n = 5	n = 7	n = 14	n = 6
Constraints (%)	61	33	73	44	59	63	44	60	71	79	33
Nonconformity (%)	27	50	27	11	32	21	11	20	43	21	50

Source: Interview responses

Table G-3.13: Researchers' and officials' views on the main reasons for the DSS not being effective (%)

Effectiveness	%	Res	Off
	n = 20	n = 10	n = 10
Constraints	70	80	60

Source: Interview responses

Table G-3.14: Delegates' views on constraints (%) – Data for Figure 7.9

Constraints	%	Development level			Trade interest		Income level				
		LDC	Dev	D	NFI	NFE	H	HDV	UMDV	LMDV	LDC
	n = 41	n = 6	n = 26	n = 9	n = 22	n = 19	n = 9	n = 5	n = 7	n = 14	n = 6
Cost (%)	46	33	54	33	50	42	33	40	57	57	33
Time (%)	24	17	27	22	32	16	22	20	14	36	17

Evidence (%)	24	17	27	22	9	42	22	20	43	21	17
Expertise (%)	22	17	27	11	18	26	11	0	29	35	17

Source: Interview responses

Appendix H: Supporting material for Chapter 8

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H-1: Survey Question 19 – feedback of the delegates and researchers/officials

Survey Question 19: In your view what are the factors that have led to the inability of WTO members to arrive at a consensus on agriculture issues?

Table H-1: Reasons hindering negotiations

Reasons	
A - 19.1	Unprecedented global events that have affected economic stability of countries
B - 19.2	Trade policies of major trading partners
C - 19.3	Bargaining power of lobbyists
D - 19.4	Weak bargaining power of developing countries
E - 19.5	Changes in the dynamics now and when AoA was signed in 1994
F - 19.6	Use of more protectionist measures to safeguard the interests of farmers
G - 19.7	Effectiveness of bilateral agreements
H - 19.8	Powerfulness of emerging markets
I - 19.9	Lack of trust, transparency and inclusiveness in negotiations
J - 19.10	Low interest in the MTS after the long haul of DDA
K - 19.11	“Development issues” being at the centre of Doha round and hindering the progress
L - 19.12	Single undertaking commitment
M - 19.13	Reluctance to revisit the texts (Rev 4)
19.14	Any other

H-2: Feedback of the delegates and researchers/officials to Survey Question 19

Delegates:

- Trade policies of major trading partners (19.2) – 16%
- Change in dynamic now and when AoA was signed (19.5) – 13%
- Powerfulness of emerging markets (19.8) – 10%
- Lack of trust, transparency and inclusiveness in negotiations (19.9) – 10%
- Low interest in the MTS after the impasse of DDA (19.10) – 10%

Three most important ranking of delegates:

- Trade policies of major trading partners (19.2) – 32%
- Change in dynamic now and when AoA was signed (19.5) – 29%
- Lack of trust, transparency and inclusiveness in negotiations (19.9) – 14%
- Low interest in the MTS after the impasse of DDA (19.10) – 14%

Researchers and officials:

- Change in dynamic now and when AoA was signed (19.5) – 15%
- Trade policies of major trading partners (19.2) – 14%
- Lack of trust, transparency and inclusiveness in negotiations (19.9) – 9%
- Weak bargaining power of the developing countries (19.4) – 8%
- Low interest in the MTS after the impasse of DDA (19.10) – 8%

Three most important ranking of researchers and officials:

- Change in dynamic now and when AoA was signed (19.5) – 43%
- Trade policies of major trading partners (19.2) – 23%
- Lack of trust, transparency and inclusiveness in negotiations (19.9) – 18%

H-3: Summary of the interview responses: eight reasons for failure to arrive at a consensus

Table H-3.1: Delegates' reasons for failure to arrive at a consensus (%)

Reasons	% n=40	Development level %		Trade interest %			Income levels %				
		LDCs n=5	Dev n=26	D n=9	NFI n=21	NFE n=19	D n=9	HDV n=5	UMDV n=7	LMDV n=14	LDC n=5
Negotiating positions of emerging developing countries	88	80	85	100	86	89	100	80	100	79	80
More engagement of developing countries	45	60	46	33	48	42	33	40	86	29	60
Different development levels within the developing group	45	40	50	33	33	58	33	60	57	43	40
Increasing shift to green box subsidies	43	80	35	44	48	37	44	40	14	43	80
Views on the DDA impasse	23	0	27	22	24	21	22	0	43	29	0
Bilateral trade agreements	23	20	19	33	29	16	33	20	14	21	20
Increase in membership and negotiating groups	23	20	19	33	29	16	33	20	29	14	20
High food prices	10	0	15	0	10	11	0	40	0	14	0

(Source: interview responses)

Table H-3.2: Researchers' & officials' reasons for failure to arrive at a consensus (%)

Reasons	Total n = 23	Researchers n = 10	Officials n = 13
Negotiating positions of emerging developing countries	91%	90%	92%
Different development levels within the developing group	61%	70%	54%
Increasing shift to green box domestic subsidies	52%	40%	62%
High food prices	48%	40%	54%
Increase in membership and negotiating groups	35%	50%	23%
Views on the DDA impasse	35%	40%	31%
More engagement of developing countries	26%	20%	31%
Bilateral trade agreements	13%	20%	8%

(Source: interview responses)

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