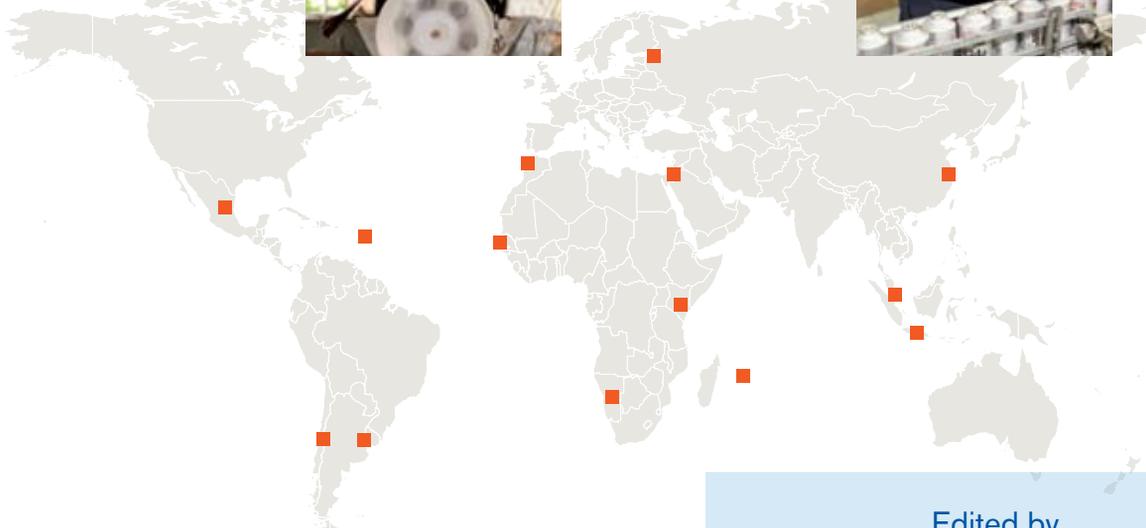


Connecting to global markets

Challenges and opportunities:
case studies presented by WTO chair-holders



Edited by
Marion Jansen
Mustapha Sadni Jallab
Maarten Smeets

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WORLD TRADE ORGANIZATION
ORGANISATION MONDIALE DU COMMERCE
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Foreword by the WTO Director-General

It is a central premise of the World Trade Organization (WTO) that trade drives growth and development. By liberalizing trade, countries benefit not only from increased access to technology and consumer goods but also from the chance to find new markets and connect to global value chains. This can quickly translate into GDP growth and a rise in the standard of living. But why do some countries seem to benefit more – and more quickly – than others? That is the question that this book tries to answer.

Within these pages you will find valuable insights into the challenges that countries face in their attempts to connect to global markets, and the solutions that they employ to overcome them. The contributions have been authored by academics affiliated with the WTO Chairs Programme (WCP). This programme was launched in 2010 to enhance knowledge and understanding of the trading system among academics and policy-makers in developing countries by stimulating teaching, research and public debate on international trade and trade policies.

In 2013, the Fourth Global Review of Aid for Trade (AFT) and the WCP Annual Conference were held in Geneva. As part of these events, the 14 WTO Chairs were invited to make contributions on the challenges of connecting to global value chains, including overcoming supply-side constraints. Those contributions are now brought together in this volume, providing a comprehensive picture of the policy debates in WTO member countries on the challenges they face in connecting to global markets and the different experiences that they have had in meeting those challenges. You will find a variety of innovative private sector approaches and policy responses detailed here, presented from both a national and a regional perspective.

A range of interesting issues is explored. For example, it is clear that most countries design their trade policy with the aim of increasing and diversifying trade. But it is equally clear that non-tariff barriers to trade, including sanitary and phytosanitary (SPS) measures, continue to represent a major hurdle for developing-country exporters. Several contributions highlight the opportunities that the multilateral trade rules provide in supporting countries to become more active players in the most

dynamic segments of global markets. Other questions addressed include how small and medium-sized enterprises (SMEs) can become active exporters in research and development (R&D)-intensive industries and how multilateral trade rules can contribute to strengthening the domestic business environment.

One point underscored by this volume is that, while the multilateral trading system provides rules and mechanisms to help countries overcome supply-side constraints, the AFT framework provides additional support to achieve those objectives. There is some useful evaluation here of how AFT achieves its objectives, as well as thoughts on how developing countries could potentially contribute more actively in the design and implementation of the AFT initiative as a means of better connecting to global markets.

I believe this volume furthers our understanding of some of the major challenges that developing countries face in becoming part of global value chains and overcoming supply-side constraints. In addition, it reaffirms my sense that the WCP provides a mechanism not only to conduct research and analysis but also to strengthen the relationship between academics and policy-makers. And, in the end, that means we all make better decisions.



Roberto Azevêdo
Director-General



Note on the WTO Chairs Programme

The WTO Chairs Programme (WCP) was launched in 2010 as a capacity-building project. It aims to enhance knowledge and understanding of the trading system among academics and policy makers in developing countries through curriculum development, research and outreach activities by universities and research institutions. Information on the WCP is available at www.wto.org/wcp.

In the first phase of the WTO Chairs Programme (2010-2013), 14 academic institutions were awarded a WTO Chair. Each of them contributed a chapter to this volume.

In the second phase of the Programme (2014-2017), the WTO will extend the network by an additional seven chairs. The programme will provide financial support of up to CHF 50,000 per annum per institution for a period of up to four years to each newly-selected chair. A call for tenders was launched in October 2013. The chairs will be selected in early 2014.

The current chair-holders are:

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Nairobi, Kenya
- University of Mauritius
Reduit, Mauritius
- Instituto Tecnológico Autónomo de México (ITAM)
Mexico City, Mexico
- Mohammed V University-Souissi
Rabat, Morocco
- University of Namibia (UNAM)
Windhoek, Namibia
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Introduction

*Marion Jansen, Mustapha Sadni Jallab
and Maarten Smeets*

Over the past decades, trade flows have become increasingly global. Today, South-South trade represents around one-half of global trade and the top ranks of major traders are not exclusively occupied by industrialized countries (OECD, 2010). Trade now spans all major world regions and continues to grow within and across those regions. Trade also takes new forms as trade in goods is increasingly accompanied by trade in tasks. Capital flows more freely across regions and trade and capital flows together have contributed to an increased transfer of technological change across regions. There is a strong sense that companies and countries well integrated in these global networks are part of a virtuous circle involving technological progress and growth. Not being connected, however, can represent a very serious bottleneck for future growth and economic development.

Policy-makers at the national and global levels are aware of the need to ensure that every country can connect to global markets. Notably, several initiatives have arisen at the global level to assist those countries which face difficulties achieving that objective successfully. These initiatives have, for instance, led to increased and more coordinated efforts to direct technical assistance to developing countries facing supply-side constraints, notably in the context of the Aid for Trade (AFT) initiative and the Enhanced Integrated Framework.

However, in this rapidly changing world, it is not just trade flows that change. Developing countries evolve and so do the challenges they face, including the private sector and policy responses that can be provided. To get a better understanding of the supply-side constraints its members face, the WTO invited the members of its academic network in developing countries – the WTO Chairs Programme (WCP) – to identify major challenges in their respective countries and, possibly, ways to overcome them. The WTO Chairs responded to this invitation by submitting a set of papers, most of which were presented to and discussed with policy-makers in Geneva during the Fourth Global Review of AFT and the WCP Annual Conference in July 2013. This volume combines the contributions from the 14 WTO Chairs and organizes them in four sections. The messages arising from the contributions are interesting because of the common lines that emerge from them, but also because of the diversity that characterizes them.

The first section of this volume focuses on major challenges developing countries face to achieve a sustainable growth path in the context of open markets. The main themes that emerge from the three contributions to this section are related to diversification and the role of small and medium-sized enterprises (SMEs) in global value chains. Both themes have frequently been highlighted in the literature on trade and development (e.g. Acemoglu and Zilibotti, 1997; Ben Hammouda et al., 2010). It is a well-known fact that countries that manage to grow also manage to diversify exports (Cadot, Carrère and Strauss-Kahn, 2011). Recent years have witnessed an increased interest in the question of how to achieve this virtuous circle of growth and diversification (e.g. Newfarmer, Shaw and Walkenhorst [Eds.], 2009), yet many open questions remain. The contribution by Sannasse, Seetana and Lamport presented in this volume (Chapter 1) confirms that the positive relationship between export diversification and GDP also holds for Mauritius, as the country has experienced a positive evolution along both variables in recent decades. Their study, however, also highlights some of the challenges developing countries face as they take this path. Notably, they have to find ways to consolidate their position in traditional exports while moving into new export lines. The former often implies that the country needs to find ways to move into higher-value-added segments within traditional export lines. The latter implies identifying new areas of competitiveness and avoiding “overdoing it” by creating export concentration in the new activities.

The chapter by Arfani and Sulistyani Winanti (Chapter 2) on Indonesia complements the analysis on Mauritius by examining in detail the different options Indonesia faces in order to move up the value chain within traditional areas of exports. The focus of the study is on the country's mining, oil and gas, and plantation industries. The authors analyse a set of factors that restrain the industries from diversifying or creating higher value added, including infrastructure and logistical constraints, lack of availability or quality of production factors, and institutional or policy constraints.

SMEs represent a dynamic, yet also vulnerable, segment of most economies (OECD, 2000; UNCTAD, 2010). They face particular challenges when it comes to international trade, as emphasized in the so-called new–new trade literature that builds on the seminal contribution by Melitz (2003). Zhang and Xia (Chapter 3) examine constraints Chinese SMEs face in expanding their activities in global markets, and the study focuses on a particular market segment: research and development (R&D)-intensive activities. The authors make the argument that China has the potential to strengthen its export capacity in R&D-intensive sectors and that stronger protection of the intellectual property (IP) of Chinese SMEs, combined with assistance to SMEs to more effectively employ their IP, could help Chinese entrepreneurs to exploit this potential.

Section II of this volume focuses on the role of non-tariff measures for export performance and policy-making in developing countries. One of the messages arising from this section is that non-tariff measures can represent major barriers to trade for developing countries. This does not come as a surprise and is in line with existing evidence and literature on non-tariff measures (e.g. WTO, 2012). The case study by Kiriti Nganga (Chapter 4) on Kenya emphasizes that domestic factors can represent formidable barriers to domestic imports and exports. Based on a survey of private and public sector actors, this chapter finds that transaction costs in the form of procedural obstacles are significant in Kenya. They take the form, for instance, of delays in the clearance of goods documentation or waiting times in ports and at weighbridges. Findings reported in this chapter thus provide support for the emphasis put on trade facilitation in recent policy debates at the national and international levels.

For many developing countries, revenue from agricultural exports is a major source of income. In Latin America, excluding Mexico, the share of agricultural export revenue in total merchandise export revenue reaches 30 per cent (Cheong and Jansen, 2013). In some sub-Saharan African countries and several other low-income countries, agricultural products account for almost half of merchandise export revenue. This may explain why two of the three chapters in Section II focus on sanitary and phytosanitary (SPS) measures. The contribution by Mbaye and Gueye (Chapter 5) examines the role of SPS standards for exports of mangos, green beans and tomatoes by Senegal. The authors find that SPS standards act as non-tariff barriers but that they allow producers who manage to meet those standards to capture significant price mark-ups. This can be explained by the fact that higher standards reflect higher product quality. In markets where quality competition matters, products of higher quality attain higher prices. The findings in the chapter on Senegal, therefore, suggest that investments in meeting SPS measures do not only represent a cost for producers but also have the potential to lead to higher revenues for some firms. The authors suggest that importing and exporting countries should work together to guarantee consumer health and protection while, at the same time, avoiding restrictions to trade.

The chapter by Delich and Lengyel (Chapter 6) makes a similar argument on the basis of three case studies: Argentina's exports of apples, lemons and rice. The authors describe in detail the success stories of lemon and rice exports and compare these with the relative struggle of apple producers to remain competitive in global markets. Export success appears to be partly based on producers' ability to move into higher quality and thus higher price segments. The authors also argue that producer associations and government policies can facilitate such a process. In line with this, they argue in favour of a more proactive approach by policy-makers towards SPS policies, notably at the regional level, that is, within Mercosur.

The three chapters in Section III look at the relationship between international economic law on the one hand, and export performance and national policy-making on the other. The chapter by Sutyryn, Koval and Trofimenko on Russia (Chapter 7) focuses on the adjustment challenges the private sector and policy-makers face in a country that only recently acceded to the WTO, and that is characterized by a relatively high level of export concentration due to the high importance of minerals in its export basket.

In Chapter 8, Condon and Sinha focus on how international economic law may restrict developing countries' ability to overcome the supply-side constraints they face when trying to address climate change. In this context, the authors discuss rules set out in international investment, IP and trade agreements. The fact that these three different vehicles of international economic law are discussed jointly is interesting in itself, and probably reflects the increased interconnection between trade, foreign direct investment (FDI) and technological change in a world dominated by global supply chains.

Furthermore, Ewing-Chow, Losari and Vilarasau Slade (Chapter 9) explicitly emphasize the role of international rules governing FDI, in their study on the ASEAN region. They make the argument that international commitments in the area of trade and investment can contribute to strengthening the domestic rule of law and, through this vehicle, to stimulating international trade. Their chapter thus supports existing empirical evidence with regard to a positive link between the rule of law and international trade (e.g. de Groot et al., 2004; Yang, 2013). The authors emphasize that the role of the rule of law has, if anything, become more important, due to the increased role of global value chains in trade.

The volume concludes with a section that focuses on another multilateral vehicle that can assist developing countries in overcoming supply-side constraints and that has, in fact, been explicitly created for this purpose: the AFT initiative. Section IV starts with a chapter by Lopez and Muñoz (Chapter 10) that provides a short overview of the evolution of the AFT framework and argues that upper-middle-income countries such as Chile find it hard to position themselves within this framework. On the one hand, such countries are not wealthy enough to be important donors within the framework. On the other hand, they are too wealthy to be important beneficiaries of aid. Lopez and Muñoz propose that upper-middle-income countries can play the very useful role of intermediary between donor and beneficiary. In particular, they argue that these countries' own development experience positions them well to assist low-income countries in the identification of needs for aid, and in the design and implementation of AFT projects.

The chapter by Nurse and Greene (Chapter 11) examines AFT flows to the Caribbean region. The authors discuss both statistical information on such flows, and processes and stakeholders involved in the disbursement of funds and implementation of AFT projects. Their analysis of the relationship between AFT and trade performance in the region indicates that this relationship is likely to be positive, but that it is difficult to draw strong conclusions, notably regarding causality. They call for a stronger and more targeted monitoring and evaluation system to facilitate future assessments of the effectiveness of AFT.

Morocco is one of the main recipients of AFT, and Ghoufrane and Boubrahimi's assessment of the effectiveness of AFT in this country (Chapter 12) comes to a rather positive conclusion. Yet, in the case study of Morocco, the authors also express some caution when it comes to interpreting their findings and hint at the methodological difficulties in assessing the impact of AFT, notably due to the lack of a commonly accepted definition of AFT and the ensuing difficulties in achieving a coherent way of quantifying it. On the policy side, the authors also refer to a number of institutional aspects that may negatively affect the effectiveness of AFT in Morocco and, possibly, the Middle East and North Africa (MENA) region more generally. Notably, they mention the lack of prioritization of barriers to trade by policy-makers, the lack of coherence between national and regional programmes, and the low involvement of the private sector.

Baloro (Chapter 13) highlights similar challenges in his case study of Namibia. He refers to the limited capacity of relevant ministries to plan the disbursement of aid flows as a possible reason why AFT flows to Namibia have remained rather limited. He emphasizes the greater need for coordination of AFT with national development objectives and priorities. In order to increase aid flows to the country and increase the effectiveness of AFT, he argues that it would be necessary to strengthen coordination among relevant government ministries as well as the dialogue between the Namibian Government and the donor community. This is very much in line with the recommendations that have emerged from the global reviews of AFT.

The chapter by Warrad (Chapter 14) complements the previous chapter as it also provides information on AFT flows to the MENA region, but with a focus on the link between AFT and export diversification.¹ An econometric exercise on the relationship between AFT and economic growth in Jordan reveals a positive and significant relationship, although the author also argues in this case that the findings have to be interpreted with caution due to the methodological constraints imposed by data limitations. In line with other contributions in this volume, Warrad emphasizes the link between trade and FDI, and the role AFT can play in stimulating FDI.

The choice of themes developed by the WTO Chairs within each of the four sections covers a large variety of trade-related concerns, which probably reflects the variety in economic conditions across the countries covered in this volume. It is interesting to note that, in some countries, the academic and policy thinking regarding supply-side constraints focuses on R&D-intensive or environmentally friendly sectors. It is also interesting to note that some countries may see themselves more as facilitators in the provision of aid than as receivers, which may also seem to provide an indication of their having successfully made the connection to global markets.

Another message arising from the chapters in this volume is that there appears to be an increased awareness of the opportunities international rules provide for developing countries to connect to global value chains and to better integrate in global trade. Overall, the volume reveals a strong interest and will on the side of policy-makers, private sector actors and researchers alike to think creatively and constructively about how to take advantage of the standards and rules applied in international trade for the benefit of their own economies. The possibilities seem to be myriad, as reflected in the contributions to this volume.

It is hoped that policy-makers, and the readers of this book more generally, will find some interesting and powerful arguments in support of using trade policy instruments as an engine for inclusive growth and economic development. Connecting to markets and overcoming supply-side constraints are critical elements in support of countries' efforts to integrate into the multilateral trading system, and this volume provides valuable insights into how to achieve this objective.

Endnotes

1. Other studies on export diversification in the MENA region include Al-Marhubi (2000) and Ben Hammouda, Oulmane and Sadni Jallab (2009).

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Export diversification, SMEs and new market opportunities

1 Export diversification and economic growth: the case of Mauritius

*Raja Vinesh Sannassee, Boopendra Seetannah
and Matthew John Lamport**

1.1 Introduction

The acceleration of global trade in the latter half of the 20th century has seen patterns of trade vastly differing from those predicted by classical trade theories built around perfect competition, comparative advantage and constant returns to scale (Krugman, 1980). Based on Adam Smith's concept of division of labour and specialization for economic growth and development, and the Heckscher-Ohlin Samuelson (HOS) model of international trade, countries should specialize in producing those goods in which they have a comparative advantage. Recent literature, instead, has found that countries appear to diversify in terms of production and exports as they grow.¹

In most of the studies carried out, reference is made to the "concentration phenomenon", which basically consists of commodity and market concentration and which is believed to be the major contributor to instability in export revenue. It is argued that countries with commodity concentration are adversely affected by volatility in market prices through swings in foreign exchange revenues. In this regard, it has commonly been suggested that a broadening of the export base through a more diversified national trade portfolio can help in maintaining stability in export receipts, thus fostering long-term economic growth.²

In addition, it has been argued that, for poor countries to grow rich, it is important for them to modify the composition of their exports. The debates about the Prebisch-Singer hypothesis (1959) and the need for industrialization gave priority to diversifying economies away from primary commodities because of unfavourable and declining terms of trade, low value added, and slow productivity growth.

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Similarly, the Food and Agriculture Organization of the United Nations (FAO) (2004) maintains that, due to the absence of export diversification in developing countries, decline and fluctuations in export earnings have negatively influenced income, investment and employment. With diversification, investment risks are spread over a broader portfolio of economic sectors, which eventually increases income (Acemoglu and Zilibotti, 1997). Romer (1990) believes that diversification can be seen as an input factor that has an effect in improving the efficiency of other factors of production. Moreover, diversification helps countries to hedge against adverse terms of trade shocks by stabilizing export revenues. Economic growth and structural change depends upon the types of products that are being traded (Hausmann and Klinger, 2006; Hwang, 2006). Thus, through export diversification, an economy can progress towards the production and exportation of sophisticated products which may greatly contribute towards economic development. Besides, export diversification allows a government to achieve some of its macroeconomic objectives, namely sustainable economic growth, a satisfactory balance of payments situation, employment and redistribution of income.

Given the above, and in view of the focus given to export diversification in the development plans of Mauritius, the aim of the present study is to investigate the interplay between export diversification and economic growth for Mauritius in the period 1980 to 2010. The remaining parts of the chapter are structured as follows: Section II provides some stylized facts on the relationship between export diversification and economic growth. Section III discusses the empirical literature and presents some of the results obtained from the analysis undertaken for Mauritius. Finally, Section IV draws conclusions and outlines possible policy implications.

1.2 Export diversification and economic development: stylized facts

It is often argued that it is not only the level of exports that leads to growth, but what also matters is the degree of diversification of such exports or of the export base. Proponents of such a view have highlighted the prevalence of the diversification aspect as a major contributor to growth. For instance, Romer (1990) has identified diversification as a production factor whilst Acemoglu and Zilibotti (1997) claim that diversification may increase income by expanding the possibilities of spreading investment risks over a wider portfolio. However, more recent literature has centered attention on examining the existence of a non-monotonic relationship between diversification and growth.

In this regard, Imbs and Wacziarg (2003), in their seminal paper, used domestic production and labour data to investigate the relationship between domestic sectoral concentration and per capita income patterns across various countries. Results of

their studies revealed the presence of a non-linear pattern between production and employment diversification and growth. Using data on sector-level employment and value added covering a wide cross-section of countries at various levels of sectoral disaggregation, they found that the process of development is characterized by two stages of diversification. In the first instance, as a result of growth, sectoral diversification increases, but beyond a certain level of per capita income, sectoral distribution of economic activity starts concentrating again. Thus, they argued, sectoral concentration follows a U-shaped pattern. Interestingly, the work by Imbs and Wacziarg (2003) raises an important question as to whether such a U-shaped pattern would hold for export diversification as well.

Indeed, Klinger and Lederman (2004) demonstrated that this was actually the case. Using disaggregated export data, the authors found that overall diversification increases at low levels of development but declines as the country matures beyond a middle-income point. In addition, Klinger and Lederman analysed the relationship between export discoveries, as measured by new export products introduced and the level of development. In that particular instance, they found that the number of new export products follows an inverted U-curve in income which indicates that, as incomes increase, economies become less concentrated and more diversified. It is only at relatively high levels of income that further growth is associated with increased specialization and less diversification.

Furthermore, Cadot, Carrère and Strauss-Kahn (2011a) derived and revisited a decomposition of Theil's concentration index that maps directly into the extensive and intensive (new products or new markets) margins of export diversification. In order to analyse how the two margins evolve as functions of GDP per capita, they constructed a very large database covering 156 countries. And they also found a hump-shaped (inverted U-shaped) relationship between economic development and export diversification, similar to the findings of Klinger and Lederman (2004).

In the present analysis, we use some of the insights from the above to discuss the link between export diversification and growth in the case of an island economy, namely Mauritius. Despite being a small island with a relatively limited endowment of productive resources, Mauritius, it could be argued, has been able to transform itself from a low-income mono-crop economy to a middle-income country, and is now one of the most successful countries in the African region. Due to its former colonial ties, Mauritius has been able to greatly benefit from the EU's Sugar Protocol since the 1970s. However, the country's exports were heavily concentrated in the sugar and, to a lesser extent, the textile and garment sectors. As illustrated in Table 1, together the two sectors accounted for approximately 86 per cent of total exports. However, what successive governments and local investors have successfully managed to achieve over the years has been the gradual diversification of their investment into other, higher value-added sectors.

Table 1 Share of total exports, 1980-2010 (per cent)

Areas	1980	1990	1995	2000	2007	2008	2009	2010
Food and live animals	-	-	-	-	15.13	13.09	14.37	14.20
Cane sugar	68.87	29.68	24.88	8.31	7.37	5.87	5.28	5.25
Fish and fish preparations	1.33	0.92	2.58	1.44	6.29	5.63	6.97	6.94
Miscellaneous manufactured goods	0.00	0.00	0.00	0.00	24.60	19.94	21.41	20.05
Articles of apparel and clothing accessories	17.99	52.34	55.29	37.12	21.23	16.96	18.05	16.31
Jewellery, goldsmiths' and silversmiths' wares	0.00	0.94	0.98	0.97	0.78	0.78	0.97	1.41
Ships' stores and bunkers	0.00	3.24	2.24	2.71	4.19	6.35	4.26	5.15
Total exports of commodities	100.00	100.00	100.00	57.85	53.64	48.22	47.66	47.37
Transportation	0.00	0.00	0.00	8.79	9.83	9.35	9.07	7.35
Passenger	0.00	0.00	0.00	0.00	8.15	7.78	7.39	5.89
Freight	0.00	0.00	0.00	0.00	0.55	0.61	0.56	0.51
Travel	0.00	0.00	0.00	21.32	27.89	30.58	28.81	25.38
Business	0.00	0.00	0.00	0.00	9.92	10.68	10.17	8.61
Personal	0.00	0.00	0.00	0.00	17.97	19.90	18.65	16.77
ICT	0.00	0.00	0.00	0.74	1.31	1.89	1.92	2.00
Other services	0.00	0.00	0.00	11.30	7.33	9.96	12.54	17.90
Total exports of services	0.00	0.00	0.00	42.15	46.36	51.78	52.34	52.63
Total exports	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Central Statistical Office.

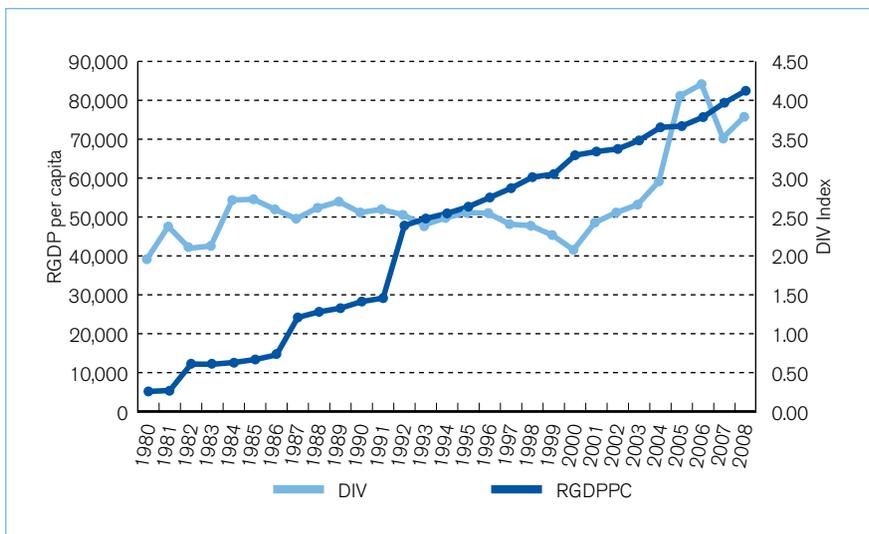
With the ever-decreasing preferential treatment being accorded to ACP (African, Caribbean and Pacific Group of States) and developing countries, as a result of GATT in the first instance and the WTO since 1995, a sustained reliance on the sugar and garment sectors as the only drivers of export growth would have seriously undermined the island's GDP growth potential. Instead, with private investment derived from monies obtained from the sugar prices boom in the 1980s, coupled with the thoughtful and forward-looking government strategies (geared towards major investment in education and infrastructure), Mauritius has been able to successfully move from an overtly export-dependent economy to a relatively well-diversified one, with the tourism and services sectors emerging as major contributors to export growth. Figures for the last two decades bear testimony to such an analogy. Nonetheless, the Government has also been striving to consolidate the existing traditional base with measures being adopted to encourage the restructuring and modernization of the textile and sugar sectors.

Finally, over the last few years, policies geared towards the promotion of new sectors which include, amongst others, land-based oceanic activities, hospitality and property development, healthcare and biomedical activities, and the knowledge hub, have been promulgated. These would, without any doubt, only serve to diversify and expand the export base. Indeed, the success of the Mauritian economy can be largely attributed to the country’s policy of trade openness, given its small domestic market. In this regard, the local economy has been growing almost consistently at an average of 5 per cent since its independence, GDP per capita rising from US\$ 260³ in 1968 to US\$ 6,000 in 2011.

The positive relationship between export diversification and growth in Mauritius is depicted in Figure 1, where export diversification is reflected by the inverse of the Herfindahl index.⁴

Figure 1 shows that GDP per capita in Mauritius has been positively correlated with export diversification. While export diversification kept on fluctuating (as shown per the Herfindahl index), economic growth increased steadily over the entire sample period. In short, Mauritius has seen an increase in diversification together with an increase in real GDP per capita over the three decades or so. The fact that diversification is still trending upwards indicates that Mauritius has not reached the level of diversification of mature economies.⁵

Figure 1 Evolution of export diversification and real GDP per capita in Mauritius, 1980–2008



Source: Authors’ computation.

1.3 Export diversification and economic growth

One of the main advantages of export diversification which has been put forward by economists is that it tends to increase economic growth in the host economy. There are two essential questions that the literature on the relationship between export diversification and economic growth has tried to answer: first, does export diversification affect long run economic growth? And secondly, can a country boost its economic performance by diversifying its exports?

A number of empirical studies have shown that export diversification is contributing to higher per capita income growth. Love (1986), for example, suggested that a country should avoid heavy dependence on limited products since it diminishes the state's potential to partially offset fluctuations in some export sectors with sectors in which stability prevails. Love concluded that export diversification is a useful strategy to reduce instability and should not be restricted only to those sectors outside agriculture.

In addition, Gutiérrez de Piñeres and Ferrantino (2000), in their study of Latin American countries, found that there was a positive interplay between export diversification and economic growth. Some examples of countries that experienced considerable diversification of their exports and a fairly strong growth performance were Chile, Colombia, El Salvador, Paraguay, the Plurinational State of Bolivia and Uruguay. Similar results were also uncovered by Balaguer and Cantavella-Jordá (2004) with respect to Spain, and Hammouda et al. (2006) with respect to African countries.

Interestingly, the findings of Greenaway, Morgan and Wright (1999) showed that not only export growth led to economic growth, but export composition also mattered. Their study also supported the view that there were greater externalities attached to the manufacturing sector when compared with other sectors. Such externalities may lead to horizontal diversification and advancement in the capacity of all industries to face foreign competition (Matthee and Naudé, 2007). Moreover, it could also be argued that the proportion of secondary sector exports in total exports is a satisfactory indicator of the extent to which a country is successful in building up forward linkages and diminishes its reliance on the primary sector. In this light, Levin and Raut (1997), for instance, concluded that there may be a positive and considerable impact on economic growth when a country's total exports consist of a higher proportion of manufactured exports.

The relationship between a country's productivity and its sectoral export variety was also studied by Feenstra and Kee (2004). In a sample of 34 countries for the period 1984 to 1997, they found that a 10 per cent boost in export diversity in all industries resulted in 1.3 per cent growth in a country's productivity. Furthermore, Herzer and Nowak-Lehmann (2006) analysed the hypothesis that there is a relationship between export diversification and economic growth through externalities of learning-by-doing and learning-by-exporting in the case of Chile, and found that economic growth was positively influenced by both horizontal and vertical export diversification.

However, the posited positive relationship between export diversification and growth is not always revealed in the literature. Michaely (1977), for example, found a positive and significant link between exports and economic growth only among the more-developed economies. But this was not the case among least-developed countries. He suggested that a certain minimum level of development is necessary for exports to impact on growth in an economy.

The time series analysis by Gutiérrez de Piñeres and Ferrantino (2000) showed no evidence supporting diversification-induced growth in Chile and Colombia, contrary to their analysis of panel data. Export diversification was not found to be a source of economic growth. Similarly, no support was found for this hypothesis during the period of rapid growth in Chinese Taipei (1971–1995) in the study carried out by Chang et al. (2000). Finally, Sharma and Panagiotidis (2005) tested the export-led growth hypothesis in the case of India using diverse approaches and their findings tended to reinforce the arguments against the export-led growth hypothesis.

It is obvious from the above that quantitative methods exist that allow for the examination of a dynamic relationship between export diversification and growth. For the purpose of this chapter, a dynamic time series framework has been applied in the case of Mauritius and covering the period 1980 to 2010.⁶ The framework makes it possible to analyse both the short- and the long-run relationship between diversification and growth. The use of such a framework also makes it possible to discuss potential causality and indirect effects.

The findings from the empirical exercise reveal a positive relationship between export diversification and economic growth for Mauritius in both the short run and the long run. In the long run, a 1 per cent increase in diversification will lead to a 0.11 per cent increase in real GDP (see Table 2). Domestic investment, trade openness, human capital and foreign direct investment (FDI) are also found to significantly contribute to economic performance in the long run.⁷

Table 2 Long-run relationships (estimated co-integration vector)

Variable	coefficient	t-ratios
Real GDP	1	
Concentration	-0.11***	5.58
Openness	0.39**	2.08
Secondary enrolment ratio	0.29*	1.78
FDI	0.18**	2.22
Gross domestic fixed capital formation	0.65***	3.23

Source: Authors' calculations.

Note: Variables have been used in logs in the regressions.

The estimation of so-called "error correction terms" allows us to analyse the speed of the economy's adjustment to the long-run equilibrium. We find that, in the short run, a 1 per cent increase in export diversification leads to a 0.09 per cent increase in GDP. This implies that the impact of export diversification on economic growth is weaker in the short run than in the long run. The adjustment will, however, not take long, notably because economic growth is also found to contribute to increased diversification. In addition, openness, human capital and FDI are found to favour export diversification.⁸

1.4 Conclusions and policy recommendations

Although it is widely accepted that substantial benefits could be engendered through export diversification, and although we have witnessed a fair degree of liberalization in the area of export, it could be argued that certain barriers which limit export diversification, especially in LDCs, are still present. Such deterrent factors include low elasticity of demand, lack of finance, bureaucracy, barriers to market entry, inadequate infrastructure and lack of skilled manpower. In addition, the World Bank, for instance, has noted that the weakness of public institutions hampers private sector activities, this weakness taking the form of a weakening of sound policy-making and public management, frustration of private entrepreneurship, prevention of competition, and increasing corruption due to heavy regulatory and legal systems and loss-making state-owned business. Similarly, private investment can be deterred because of poorly regulated and undercapitalized commercial banks, and problems in telecommunications and infrastructure, and law and order problems.

The above clearly points to the pivotal role that the state may play, through the adoption of the right policies, in fostering the diversification of the country's export base. For example, as purported by the endogenous growth model, exports may be

diversified through learning-by-doing and learning-by-exporting and by adopting the practices of developed countries (Gutiérrez de Piñeres and Ferrantino, 1997). Consequently, the role of the state, in promoting the financial sector and in boosting the level of FDI inflows through the provision of appropriate incentives, should not be understated.

Furthermore, Hammouda et al. (2006) argued that pursuing economic and non-economic policies that lead to exports and product diversification may, to a large extent, help overcome the growth constraints emanating from factor accumulation. Given this, they reasoned that African countries should aim at raising their levels of investment, improving governance, eliminating conflicts, adopting non-conservative fiscal policies and ensuring macroeconomic stability, in addition to the pursuance of industrial and trade policies which foster economic diversification. The adoption of such policies can only serve to enhance export diversification, which will in turn lead to a greater contribution of TFP to economic growth.

In addition, the promotion of export diversification could also be achieved through the provision of incentives which improve trade facilitation by setting policy measures to reduce costs. This is because export diversification is rather sensitive to cost. Such measures include lowering domestic barriers to entry, facilitating company registration by reducing the number of procedures and applying a fixed registration fee, and removing the need for pre-tax payments.

Finally, investment could and should be made in research and development (R&D) activities that enhance the current status of firms, especially in terms of technology, and which may enhance their ability to expand a country's export base. However, since these R&D and technological innovation activities are normally stimulated through fiscal and financial incentives, it is crucial that such accompanying measures are provided to those firms which are investing in new technologies and R&D activities.

Interestingly, it could be argued that the positive link found between export diversification and growth in Mauritius in the present study is very much the result of sound government policies (discussed in section II) which have served to create a conducive environment for the private sector to operate in and accordingly diversify its export base, both across differing industries and within the same sector.

However, although it is safe to advance the proposition that Mauritius has performed tremendously well since the 1980s, recent global events may, unfortunately, have a negative bearing on any future growth expectations unless appropriate measures and policies are devised and adopted. The negative repercussions of the 2008 financial crisis are already being felt. Decreasing tourism arrivals and the resulting

fall in related local sector activities have already been witnessed. Unfortunately, this is not the only challenge. The guaranteed sugar quota from the EU is due to end soon, and it is obvious that Mauritius will not be able to compete with countries such as Brazil. Given this, the following measures are proposed:

- There should be further consolidation of the island's traditional sectors with greater emphasis still being placed on the production of higher-value-added products, which entails investment in modernizing the technology base for these sectors.
- The current financial crisis has served to highlight the island's overreliance on the traditional tourism markets. For this reason, it is proposed that the Government embark on an intensive marketing campaign to foster demand for our tourism products from other regions, particularly from emerging economies and the BRICs.
- Mauritius has always been at the forefront of the various regional initiatives of which it is a member. Accordingly, it is proposed that measures geared towards the identification of new regional export markets be undertaken. This may be achieved through the signing of bilateral treaties and regional trade agreements with member countries, which would undoubtedly serve to expand our trade in goods and services. In a similar vein, the government should closely work with its regional counterparts to streamline the administrative requirements and the number of NTMs prevailing in the region to increase market access by and to member countries.
- Mauritius possesses some undeniable location advantages in the form of political stability, infrastructure comparable to that of some emerging economies in East Asia, a streamlined tax regime and various double taxation agreements (DTAs) with several countries. These, coupled with the ever-increasing interest being shown by foreign investors from Europe and East Asia, offer an excellent opportunity for the Government to market the country as a platform for reinvestment in the region.
- Although the Mauritian offshore sector has had quite remarkable success since its inception, it has, unfortunately, relied extensively on the DTA with India which accords preferential treatment to offshore companies which establish operations in Mauritius. However, there has been increasing pressure from the Indian Government over the last couple of years for a review of such a treaty, given that government's supposed losses in tax revenues. To mitigate any potential negative impact that such a change in the DTA may have, it is proposed that the Government, together with the private sector, invest in the training of personnel for high-value services which would serve to increase the substance of offshore operations.

Endnotes

1. Please see Imbs, J., and R. Wacziarg (2003) and Cadot, Carrère and Strauss-Kahn (2011a) amongst others.
2. Refer to Meilak (2008); Loayza et al. (2007); World Bank (1999); Ghosh and Ostry (1994); and Bleaney and Greenaway (2001) amongst others.
3. The figures are calculated on the basis that \$1 approximates MUR 30.
4. The Herfindahl index is a measure for concentration that takes values between 0 and 1, with higher values indicating higher degrees of concentration. The inverse of the index therefore is higher, the more diverse are exports.
5. See the discussion on the findings of Klinger and Lederman (2004) above.
6. To be more precise, a Vector Autoregressive (VAR) model has been employed. This approach does not impose a priori restrictions on the dynamic relations among the different variables. It resembles simultaneous equation modeling in that several endogenous variables are considered together.
7. For the more detailed and technical discussions, please refer to the paper presented by the authors at the DAAD Workshop, "Perspectives of Emerging Markets", held in Mauritius in June 2012.
8. This is in line with the findings in Cadot, Carrère and Strauss-Kahn (2011b).

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2 Value chain governance in export commodities: the case of Indonesia

*Riza Noer Arfani and Poppy Sulistyaning Winanti**

2.1 Introduction

Indonesia has been regarded as one of the success stories of developing countries escaping the resource curse (Rosser, 2004; 2007). In many developing countries, instead of becoming a source of economic growth, abundant natural resources have been associated with stagnant growth, a condition known as the resource curse or the paradox of plenty. As argued by Sachs and Warner (1997), economies with abundant natural resources have tended to grow less rapidly than those with scarce natural resources. Similarly, the resource curse has been defined as “the phenomenon whereby a country with an export-driven natural resources sector, generating large revenues for government, leads paradoxically to economic stagnation and political instability” (ODI, 2006). This chapter will review the efforts undertaken by Indonesia to diminish its dependency on natural resources and to better connect to global value chains (GVCs).

2.2 Some key challenges

Unlike other resource-abundant countries, particularly its counterparts in sub-Saharan Africa, Indonesia’s economic growth since the 1970s has been remarkable, especially prior to the financial crisis. For Conceição, Fuentes and Levine (2011), the ability of a developing country to deal with the resource curse depends on two preconditions: avoiding conflict and enhancing its national institutions. According to these authors, developing countries need to effectively manage their natural resource wealth by improving governance and the institutional framework, avoiding “the Dutch disease” and minimizing the effects of price volatility and pro-cyclicality.

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Improving governance and the institutional framework is crucial since “the effectiveness of all policies to manage risk associated with natural resources requires a strong institutional framework” (ibid). Nevertheless, there are cases where countries with relatively low institutional capacity are also able to develop the right conditions to exploit their natural resources. Along with Chile and Malaysia, Indonesia has managed to create credible and stable groups of “technocrats” willing to engage and influence political leaders, while successfully managing to preserve social stability, accelerate economic growth and maintain economic diversification in addition to natural resources. Along with Botswana and Chile, Indonesia has been successful in beating the curse, “in part due to having small groups of highly qualified bureaucrats with the right expertise in macro-economic policy” (ODI, 2006).

In addition to sound governance structures and a good institutional framework, another important element in dealing with the resource curse is the ability of a country to avoid the so-called Dutch disease. The Dutch disease refers to some possibly unpleasant side-effects of a boom in oil or other mineral or agricultural commodities, which include a large, real appreciation in the currency, an increase in spending, an increase in the price of non-traded goods, a resultant shift of labour and land out of non-export-commodity traded goods, and a current account deficit (Frankel, 2010). Sachs and Warner (1997) argue that the Dutch disease can be avoided if the proceeds from natural resources are invested in projects that increase the productivity of the whole economy.

The ability of a country to successfully deal with the resource curse also depends on its capability to minimize the effects of commodity price volatility. The prices of oil, natural gas, gold and other commodities are extremely volatile, which obviously has the potential to create problems for countries relying on natural resources. In this regard, “price volatility is harmful because the effects during booms do not compensate for the losses during price busts” (Conceição, Fuentes and Levine, 2011). Government decision-making regarding investment linked to natural resource revenue is crucial to avoid the curse: “a country that makes use of its natural resource endowment will be sustainable if it invests the money obtained from the sale of minerals and other commodities (non-renewable) into other types of capital: human, physical or ‘institutional’” (ibid).

2.3 The resource curse

Indonesia has been regarded as having successfully diversified its natural resource development into the tradable manufacturing sector, a process that was supported by appropriate trade and business infrastructure policies (ODI, 2006). During the 1970s and 1980s, Indonesia managed to use oil revenues to support improvements

in agricultural productivity and diversification into other sectors, for example by investing in natural gas, which was exported and used as input for fertilizer. During the period 2000-2010, the country's extractive industries only contributed an average of around US\$ 20 billion, or less than 23 per cent, per year as compared with non-extractive sectors, such as agricultural products (including horticultural products and plantations), forestry, machineries and chemical products (Indonesian Statistics Bureau, 2012).

Indonesia's next challenges are how to further diversify its exported commodities, notably by moving up the value chain in established sectors of activity. The top ten commodities include those from both extractive industries (such as petroleum gas, coal, oil and copper) and non-extractive ones (such as palm oil, rubber, coconut and paper), as shown in Table 1. On average, Indonesian production has been concentrated in the low-value-added segments of the value chains of the ten commodities, but the country has undertaken concerted efforts to "downstream" ("hilirisasi" in Indonesian) within the industries involved.¹

This study classifies those ten export commodities into three broad groupings: mining (HS 2701, 2603, 7403), oil and gas (HS 2711, 2709, 2710) and plantation (HS 1511, 4001, 1513, 4802). The groupings are based on the added-value chains within the respective industries.

Table 1 Top ten exports in Indonesia, 2007-2009 and 2009-2011

2007-2009		2009-2011	
1	Petroleum gases (2711)	1	Coal, briquettes (2701)
2	Coal, briquettes (2701)	2	Petroleum gases (2711)
3	Palm oil (1511)	3	Palm oil (1511)
4	Petroleum oils (2709)	4	Petroleum oils (2709)
5	Natural rubber and gums (4001)	5	Natural rubber and gums (4001)
6	Copper ores and concentrates (2603)	6	Copper ores and concentrates (2603)
7	Uncoated paper for writing, printing, office machines (4802)	7	Coconut, palm kernel, babassu oil (1513)
8	Coconut, palm kernel, babassu oil (1513)	8	Refined copper and copper alloys, unwrought (7403)
9	Petroleum coke, bitumen and other oil industry residues (2713)	9	Oils petroleum, bituminous, distillates, except crude (2710)
10	Refined copper and copper alloys, unwrought (7403)	10	Uncoated paper for writing, printing, office machines (4802)

Source: Comtrade (2009; 2011). Numbers in brackets reflect HS 4-digit codes.

In terms of value added (in the context of both domestic and foreign value-added content of export),² the features of Indonesia's exports are as follows. Based on the Trade in Value Added (TiVA) measure (OECD, 2013), mining contributed one-fifth of the country's value-added exports in 2009. However, the domestic value-added (DVA) content of Indonesia's exports was 86 per cent in 2009, well above the OECD average and the fifth highest in the G20 (UNCTAD, 2013). This high level of DVA reflects the fact that Indonesia's trade is characterized predominantly by the export of natural resources and raw materials which use little foreign value added (FVA) content.

However, among the top 25 developing economy exporters (excluding predominantly oil exporting countries), Indonesia, along with Chile, obtains a relatively high share of global value-added trade, when compared with other, relatively open, developing economies with strong performances and which are highly integrated in GVCs, such as Hong Kong (China), Malaysia, the Republic of Korea and Singapore.

Indonesia is placed within the countries which have exceptionally high DVA trade shares (≥ 90 per cent). It has a 91 per cent DVA component, similar to that of other countries such as Bangladesh (91 per cent), Colombia (91 per cent), India (90 per cent) and Peru (93 per cent). Forty-four per cent of Indonesia's exports participate in GVCs, well below the participation rates of economies such as Hong Kong, China (72 per cent) and Singapore (82 per cent). Even when compared with China (59 per cent), Malaysia (63 per cent), the Philippines (56 per cent), South Africa (59 per cent), Tunisia (59 per cent) and Thailand (52 per cent), Indonesia's rate of participation in GVCs reflects the fact that the country's international trade activities are based more on upstream components within value chains. Given the current context, Indonesia faces the challenge to upgrade within established value chains or diversify into new value chains, as highlighted in the government's recent *Master Plan: Acceleration and Expansion of Indonesia's Economic Development 2011-2025* (MP3EI) (CEMA, 2011).

2.4 Market structures and constraints to value addition and diversification

This section presents essential features, market structure and constraints faced by firms and/or businesses dealing with value-addition activities in the three industries under study: the mining industry (with specific reference to coal and copper), oil and gas industry, and plantation industry (with specific reference to palm oil, rubber and paper-related industries). Constraints in value addition/diversification are elaborated here in terms of horizontal policies with impacts which include expansion in the

number of products exported due to lowered transport costs (Moreira, Volpe and Blyde, 2008) and preventing countries from entering specific export markets or participating in global supply chains due to lengthy delays in trade shipment (Nordås, Pinali and Grosso, 2006; Hummels and Schaur, 2013) or being trapped in the low end of the value chain due to failure to properly value key factors of production, such as land (Teh, 2013), as well as of targeted or industrial policies.³

With an industry dominated by coal and copper, Indonesia is still a significant global player in the mining industry, with coal production reaching its peak following rising demand in China and India (PwC, 2011a). In the oil and gas industry, gas production is currently in the final stage of replacing oil production (PwC, 2011b). In competition with (but also complementing) similar industries in Malaysia, the Indonesian plantation industry – primarily producing palm oil and rubber – is the fastest growing non-oil and gas sector, making it a solid support for the country's economic growth.

The domestic market and export restrictions in the mining industry

Coal is the main commodity in Indonesia's mining industry, with strong demand from the Asia-Pacific region as well as growing domestic demand. Indonesia is the largest thermal coal exporter in the world, accounting for around 26 per cent of global exports. With coal production of approximately 200 million metric tons per year, Indonesia has coal reserves for the long term. South Sumatra has the largest coal reserves in the country (47.1 billion tons). Copper, abundant in the islands of Sulawesi and Papua, is second to coal in terms of production capacity. Production reached its peak in 2000, 2003 and 2005, averaging 1 million metric tons per year; furthermore, there has been a steady increase in the world price of copper since 2003. Apart from its contribution to exports, in its downstream supply chains copper plays a crucial part in the information and communication technology industry (CMEA, 2011).

The market structure of the country's mining industry is governed under Law No. 4/2009 regulating the conduct of mineral and coal mining. The industry has concerns with the law's derivative regulations on DMO (domestic market obligation) and export restrictions. The two directives are designed in line with the government's downstream strategic plan under MP3EI, that is, to generate more value addition activities domestically. In the context of GVCs, the country's coal industry is directed more towards supporting domestic energy sectors, that is, to provide adequate electrical power generation as industrial growth is steadily growing. Meanwhile, the copper industry has developed under a scheme to process its ore domestically in order to have domestic and international processing companies (including the existing major players) upgrade their capacities, that is, to move up their value chains in the industry.

Constraints faced by coal producers consist of how to remain competitive in the face of fluctuating world coal prices and domestic economic growth, inflation and exchange rate volatility. The DMO policy may have constructive implications for Indonesia's wider energy sector sustainability and electric power supply needs, as it increases the possibility of initiating the functional, intersectoral upgrading of the coal industry, releasing it from its lower value-added production and processing. Viewed within the wider perspective of horizontal policies over the mining industry, however, the DMO policy coincides with industry benefits from contemporary government schemes under MP3EI to improve major ports and the shipping and transportation infrastructure. Meanwhile, a targeted policy of export restrictions which aims at adding value in the domestic smelter industry has placed copper industries in the position of waiting for the government plans to further encourage domestic smelter investment. The industry faces capacity constraints on processing its products domestically, which are expected as early as next year.

Oil and gas industry

Indonesia's oil and gas sector has been characterized by a large proportion of production going to domestic petroleum consumption (compared with other sources of energy, such as gas, coal and liquefied petroleum gas/LPG). The country's economic recovery from the 1997/1998 crisis has contributed to increasing fuel energy demands, which led to a government decision to quit OPEC due to the country's increasing importation of oil/fuel. Then, as early as 2004, Indonesia's natural gas production surpassed its oil production. Natural gas production stood at 1,369,000 BOEPD (barrels of oil equivalent per day) in 2007 and 2,343,000 BOEPD in 2008, compared with oil production at only 964,000 barrels per day in 2007 and 978,000 barrels per day in 2008 (CMEA, 2011).

Indonesia's exportation of gas (particularly in the form of liquefied natural gas or LNG) has therefore been in an inverse relation to its importation of oil/fuel. The industry is shifting its attention to more domestically driven value-addition activities, particularly in an effort to finance and serve the country's rising demand for fuel.

The promulgation of a new law on the oil and gas industry (Law No. 22/2001) has offered a new perspective on and dimension to upgrading, diversification and other value-addition activities in Indonesia's oil and gas industry. Significant changes made by this law relate particularly to business and commercial relations between state-owned enterprises (SOEs) (i.e. Pertamina) and multinational corporations (MNCs). The law establishes two main bodies, responsible for the industry's upstream and downstream activities.

The establishment of two governmental agencies which operate and function under the coordination of the Ministry of Mining and Energy has paved the way for

Pertamina towards its first major organizational and business reform leading to new value-addition activities, diversification and upgrading, particularly in its downstream business activities. In terms of the country's oil and gas value chains, the strategies affect a full range of upstream, midstream and downstream activities.

Structural problems in the plantation industry

The last 30 to 40 years have seen historic development in Indonesia's plantation industry. Palm oil, largely planted and then industrialized in the 1970s and 1980s – as in Malaysia – has been the major factor in the industry, with production of 370 million tons in 2010 (195 million tons in Indonesia and 175 million tons in Malaysia). Rubber plantations have also increased productivity and industrial yields in the last 10 years. Productivity nearly doubled between 2002 and 2009 (CMEA, 2011).

However, inadequate and uncoordinated horizontal policies across the plantation industry have resulted in severe structural problems. The palm oil industry has long been hampered by constraints arising from issues of forest destruction, environmental degradation, land use, land pricing and the tenure system, low wages, industrial practices and other social and environmental problems. The industry has also been characterized by disputes and discordant relations among smallholder producers, large producers and surrounding communities. Conflicts over land use and land grabbing have extended to the extent that they affect endangered species such as the orang-utan on Kalimantan Island. Such constraints are typical not only in the context of the palm oil industry but also in the rubber industry and in the pulp and paper industry (which has resulted in more serious environmental and social impacts).

Despite these constraints, pulp and paper production has been one of key drivers in the growth of the forestry industry. Since its establishment in the late 1980s, the pulp and paper industry has grown rapidly, pushing the country into the world's top ten producers. Between 1988 and 2010, pulp production capacity grew from 606,000 metric tons to 7.9 million metric tons per year, and paper industry processing capacity rose from 1.2 million to 12.2 million metric tons per year.

Indonesia's exports of pulp and paper products generated US\$ 5.7 billion in 2010, or around 1 per cent of the country's GDP. However, due to longstanding structural problems in the industry, combined with its heavy reliance on natural forests for timber and despite extensive timber plantation development programmes, industrial growth in the pulp and paper sector has been seen more as part of wider environmental problems (due to clear-cutting and conversion of natural forests to other uses) and communal problems (due to displacement of local communities) than in the context of efforts to secure a sustainable supply of raw materials through the development of pulplwood plantations.

The country's pulp mills have relied heavily on unsustainable timber and much of what is obtained is through the clear-cutting of natural forests. As of 2010, key pulp and paper producers in Riau, Sumatra, sourced more than half of their raw material from the process of conversion of natural forest. Although extensive timber plantation development programmes have been implemented over the years, the supply of timber available from these plantations remains insufficient. As a result, the industry has been associated with negative environmental impacts.

In Indonesia's rubber industry, the majority of production (approximately 90 per cent) is exported, with the remaining 10 per cent used in the domestic automotive sector and other manufacturing industries. Under the China–ASEAN Free Trade Agreement (ACFTA or CAFTA), the industry has positioned itself to serve the China market with its growing automobile industry. China took the lion's share of Indonesian exports in 2010 at 600,000 metric tons, followed by the United States, India, Japan and South Korea. Domestic demand for rubber is also rising with an average increase of 23.2 per cent per year since 2005, reaching 244,000 metric tons in 2010. With increasing car and motorcycle sales, Indonesia is expected to become a major consumer of rubber at an estimated 20 per cent of total domestic production over the next five years. However, according to the Chair of the Indonesian Rubber Council (as of September 2013), the industry is very much in need of improvement in transport infrastructure. Due to the inadequate transport infrastructure, export costs (US\$ 750 per container) are much higher than for the country's competitors, such as Thailand. Other than transport infrastructure, the industry also needs improvement in its logistical facilities.

2.5 Policy recommendations on upgrading and diversification

This section offers an assessment of upgrading and diversification endeavours in the three industries, framed as policy notes for stakeholders in the respective market. In so doing, it first maps out typical value chains in each industry, giving an overall description by relevant stakeholders of current endeavours towards value-addition activities. Secondly, it proposes how respective industrial value chain activities could manage upgrading and diversification, that is, by adopting UNCTAD GVC conceptual developmental paths. Finally, it reviews how each industry could anticipate having a feasible scheme to develop its value chains governance, by presenting each industry's upgrading and diversification, DVA and FVA components, type of value chains governance and anticipated development paths.

Typical value chains

In terms of upgrading, the country's coal and copper value chains are positioned largely in production and processing (CMEA, 2011). Value-addition activities and

diversification efforts are therefore focused more on how stakeholders in the industry transform mining and mineral commodities into refined products, how they organize the process efficiently, how new technologies are applied, and how they introduce new and sophisticated commodity or product lines. However, as the value chains get closer to the end-user (intermediate industries and final consumers), mining industries have also achieved significant performance in terms of how they move into new functions in the chains.

Comparable to the mining industry, the oil and gas industry's value-addition activities and diversification typically highlight upstream and midstream endeavours. In the case of Indonesia's oil and gas value chains, the upstream and midstream activities are conducted in parallel with the progression of collaboration schemes between domestic SOEs and MNCs. The production-sharing contracts (PSC) scheme which has been in place since the 1960s is the key feature of such collaboration, which eventually determines the levels, scope and acceleration of upgrading, diversification and other value-addition activities.

In upstream business strategies, activities are then focused not only on maintaining the existing PSC scheme and finding new domestic oil and gas fields, but also in competing in international exploration and production activities. Pertamina's midstream business activities have made the corporation one of the key regional players in the transportation of oil and gas, by investing heavily in large tankers, diversified commercial transportation and human resources. On the downstream side, considerable and intensive changes are even more pronounced as the domestic public witnesses the strong organizational and physical performance of its oil and gas stations nationwide.

As noted by CMEA (2011), in the last two decades, Indonesia's rubber, palm oil and pulp and paper industries – from their plantation to downstream activities – have become more concentrated on both process- and product-based, and functional and intersectoral, upgrading. Not only are new product lines, techniques and technologies applied in a range of industrial business activities, but new functions are also acquired within the downstream business activities. In both the palm oil and pulp and paper industries, downstream upgrading activities comprise investment in manufacturing industries and processing factories in line with the need for more exported value-added products, such as derivative oils (rather than crude palm oil) and a variety of paper products (rather than pulp).

The rubber industry demonstrates business diversification and new commercial functions. New production lines in Sumatra, for example, include downstream industries in tyres, gloves, footwear and other chemical products. It has even acquired new functions in the synthetic rubber industry. Apart from process and product

upgrading in the plantation, milling and refinery stages, new downstream diversification strategies have also been initiated in the biofuel and oleochemical industries despite their still low added value (compared with the milling and refinery industries). However, considering how the Malaysian industry has performed in the last 30 years, higher added values are certainly within reach of the Indonesian palm oil industry.

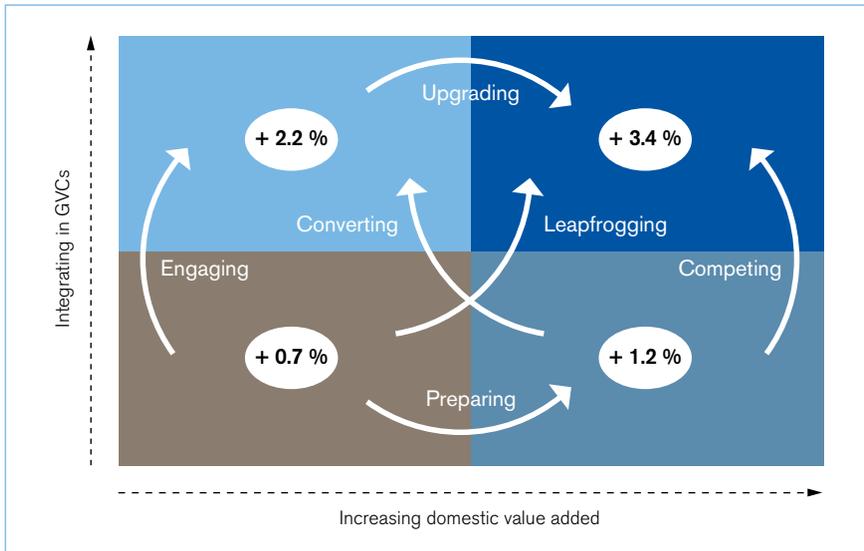
Development paths for upgrading and diversification

This study has elaborated on how upgrading and diversification endeavours in the three industries are applied and conducted by various players and stakeholders in a range of value chains in business and commercial activities. It will now describe how these endeavours could be seen as part of GVC development paths developed under the UNCTAD GVC and Development initiative (UNCTAD, 2013).

Based on a country's integration in GVCs and its DVA content, six possible conceptual development paths are identified: engaging, preparing, competing, converting, leapfrogging and upgrading (Figure 1).⁴

The six conceptual paths suggest how players in a GVC could move flexibly, not just in terms of “upgrading” (which indicates more integration into the FVA-driven GVC) but also on other possible routes, to the upper, right and left of the GVC quadrants. The three

Figure 1 GVC conceptual development paths



Source: UNCTAD, 2013.

industries under study have several compelling features in terms of how they relate to the six possible development paths, and which are relevant for sectoral or industrial policy.

On the “engaging” path, Indonesia’s mining industry – particularly copper – is a precise example of where value-addition activities could be essential steps towards the long-aspired renegotiation of working contracts. The major player, Freeport McMoRan, is in a position which demonstrates that the industry as a whole could engage further with its international GVCs. Upgrading and diversification of the mining industry is routed to the “leapfrogging” path by increasing its DVA component but, at the same time, increasing its FVA component. In the case of coal and copper, leapfrogging could be envisaged as part of Indonesia’s wider strategy on energy conservation, diversification and security.

Elaboration of oil and gas industry upgrading and diversification endeavours suggests that the six paths are possible routes to gaining more in the value chains. The “preparing” and “competing” paths have been in place for quite a while as the major player, Pertamina, initiated its new business strategy to be a global player in the industry. In the last ten years, Pertamina’s performance is comparable to that of its international counterparts, particularly in the fields of exploration and production (EP) and sales and marketing. Its “leapfrogging” and “converting” paths, however, depend on how the corporation – as both an SOE and emerging-market MNC – develops its strategic collaboration with other MNCs. Recent changes in upstream regulations will also affect how easily Pertamina, as an emerging market MNC, will be able to traverse its “engaging” and “upgrading” paths.

Last but not least, value-addition activities in the plantation industry, as it focuses more on process and product upgrading and diversification, are inclined to be oriented towards the “preparing” path (where added values originate domestically) rather than other paths which promise more FVA components. However, recent trends in palm oil (driven by Malaysia’s integrated and advanced palm oil industry) and pulp and paper (driven by rising demand from China’s pulp and paper industries) open up possibilities for upgrading and diversification endeavours which are more inclined towards the “engaging”, “leapfrogging”, “upgrading” and even “competing” paths in the industry. Major international players in both the palm oil and pulp and paper industries – such as Malaysia-based Sime Darby, Singapore-based Wilmar International, Indonesia-based Sinar Mas in the palm oil industry and APP (Asian Pulp and Paper) in the pulp and paper industry – could, and should, develop substantial roles in such endeavours.

Developing governance for value addition

Based on Humphrey and Schmitz’s (2000; 2002) typology, Table 2 summarizes the proposed schemes to develop value chains governance in the three industries examined here, presenting the upgrading and diversification endeavours applied by industry stakeholders, along with the DVA and FVA components of each industry, types of GVC governance and anticipated development paths.

Table 2 Value chains governance and development paths

Industry	Upgrading and diversification	DVA component	FVA component	Value chains governance	Anticipated development paths
Mining	Coal • Process- and product-based	Very high as mostly relied on raw resources, reserves	Small portion of FDI, but quite highly dependent on export market	Hierarchical (with high DVA component)	Leapfrogging (as part of the country's wider strategy on energy conservation, diversification and security)
	Copper • Process- and product-based	Still quite high as abundant resources available	Kontrak Karya/ working contracts scheme (Freeport as the major player)	Hierarchical (with quite high FVA component)	Engaging (by increasing its GVC participation) as well as leapfrogging (as part of metal-related industrial development strategy)
Oil and gas	Upstream • PSC scheme in EP • International EP	Upstream investment (based on new oil and gas rules and regulations in the post-BP Migas era)	SOE–MNC business relations: technology transfer, technical cooperation, competition in EP, distribution and final selling	Hierarchical (with possible future significant changes to captive, modular or relational aspects, particularly in downstream activities)	Preparing as well as competing (as the major player, Pertamina, initiated its new business strategy to be a global player in the industry)
	Midstream • Transportation and logistics (Pertamina)				Leapfrogging and converting (as Pertamina's performance is comparable to that of its international counterparts, particularly in the fields of EP and sales and marketing)
	Downstream • BP Migas roles (on subsidized fuels) • Pertamina business and commercial reform				The latter two paths, however, depend on how Pertamina – as both an SOE and emerging-market MNC – develops its strategic collaboration with other MNCs Engaging and upgrading (as the industry has been supported by recent changes in upstream regulations) This will also affect how easily Pertamina, as an emerging-market MNC, will be able to traverse the paths

Table 2 Value chains governance and development paths (continued)

	Upgrading and diversification	DVA component	FVA component	Value chains governance	Anticipated development paths
Plantation	Rubber • Process- and product-based • Limited new functions, intersectoral upgrading	Highly dependent on existing plantations	Not applicable (as majority of tenures and ownerships are of small holders and SOEs)	Hierarchical in upstream activities (with high DVA component); Market, modular, relational in downstream activities (where domestic players served as turn-key suppliers)	Preparing (as the industry focuses more on process and product upgrading and diversification) to be oriented towards paths where added values originate domestically, rather than those which promise more FVA components Possibilities for upgrading and diversification endeavours which are more inclined towards engaging, leapfrogging, upgrading and even competing paths in the industry (in line with recent trends in palm oil driven by Malaysia's integrated and advanced palm oil industry, and in pulp and paper driven by rising demand from China's pulp and paper industries)
	Palm oil • Process- and product-based • Limited functional upgrading	Domestic policy incentives in processing stages	New FDI plantation scheme, notably in connection with Malaysia's palm oil industry	Hierarchical in upstream activities (with high FVA component); Market, modular, relational in downstream activities	
	Pulp and paper • Process- and product-based • Limited functional upgrading	Highly dependent on existing plantations	Several FDI plantation schemes, notably in connection with China's pulp and paper industry	Hierarchical in upstream activities (with high DVA component); Market, modular, relational in downstream activities	Major international players in both industries – such as Malaysia-based Sime Darby, Singapore-based Wilmar International, Indonesia-based Sinar Mas in the palm oil industry and APP (Asian Pulp and Paper) in the pulp and paper industry – could, and should, develop substantial roles in such endeavours.

Source: Based on Humphrey and Schmitz (2000; 2002).

The coal industry, with its high DVA component (as it mostly relies on raw resources and existing reserves) and low FVA component (despite its being highly dependent on export markets), is to move towards a leapfrogging development path as a way to envisage being a crucial part of the country's larger strategy in energy conservation and security. Comparable to coal, copper's endeavours are also mainly based on product and process upgrading. However, the copper industry, with its quite significantly high FVA component (as foreign direct investment, or FDI, has been the major driver of its expansion), has the

capacity to engage in greater GVC participation by fostering further internationalization on the manufacturing side of the industry. It is under such a scheme that the export restriction initiative would be justified.

The oil and gas industry has been characterized by more varied and dynamic upgrading when compared with mining, with process- and product-based, as well as functional and intersectoral, upgrading. Upstream investment, which is based on new oil and gas regulations in the post-BP Migas era, has typified the DVA component of the industry, along with the industry's SOE–MNC business relations in technology transfer, technical cooperation, competition in EP, distribution and final selling (in both midstream and downstream activities). Hierarchical in its value chains governance, the industry is all set for the six development paths.

The country's plantation industry exhibits endeavours and initiatives by relevant stakeholders in process- and product-based upgrading, with limited new functional and intersectoral upgrading. In terms of its DVA component, the industry is highly dependent on existing plantations (particularly in the cases of rubber and pulp and paper). However, recent domestic policy incentives in the processing stages of the palm oil industry have also been the main feature of its DVA component. In terms of the industry's FVA component, a new FDI plantation scheme, notably in connection with Malaysia's palm oil industry and China's pulp and paper industry, has recently emerged as the main attribute of the industry.

The country's rubber and pulp and paper industries have hierarchical value chains governance in their upstream activities, with a high DVA component. Market, modular and relational value chain governance in downstream activities is applied where domestic players serve as turnkey suppliers in the industry. The palm oil industry, meanwhile, has hierarchical value chain governance in upstream activities, with a high FVA component, and it has market, modular and relational value chain governance in downstream activities. The three plantation industries anticipate the preparing development path as they identify possibilities for upgrading and diversification endeavours which are more inclined to engaging, leapfrogging, upgrading, and even competing in the context of recent trends in Malaysia's integrated and advanced palm oil industry and rising demand in China's pulp and paper industries.

2.6 Conclusions

The plantation industry faces structural problems, with inadequate and perhaps insufficiently coordinated horizontal policies.

After a careful review of each sector's potential, it would seem that the mining industry and, more specifically, the coal sector, have more potential than the other industries. However, it is also obvious from the analysis that more time and determination at the government level will be required in order to achieve the key objective of better connecting to GVCs.

Endnotes

- 1.** Initiated under the so-called MP3EI (Master Plan Percepatan dan Perluasan Pembangunan Ekonomi Indonesia/Master Plan for the Acceleration and Expansion of Indonesian Economic Development, 2011–2025), strategies of industrial “downstreaming” cover a wide array of key commodities, areas and policy frameworks, ranging from rubber, palm oil and infrastructure to investment regulations.
- 2.** Domestic value-added content of export (DVA) is domestic content of exported products, while foreign value-added content of export (FVA) is foreign content of exported products. The two measure a country’s GVC participation in world trade (UNCTAD, 2013).
- 3.** The study recognizes the need (as suggested by Teh, 2013) to distinguish horizontal policies in upgrading and diversification from targeted or industrial ones. Horizontal policies would include those from which benefits flow across the entire economy and not just to a specific set of firms or industries, such as trade facilitation, lowering transportation cost, investments in education, research and development, capital market development, etc. Industrial policy would refer to targeted interventions, that is, policies aimed at developing a specific industry or set of firms, such as production subsidies, export subsidies, export taxes to encourage downstream development, use of state enterprises, etc.
- 4.** Percentages in this chart reflect the median GDP per capita growth rates. As indicated by UNCTAD (2013) data for 123 developing countries, ranked by growth in GVC participation and domestic value-added share: high includes the top two quartiles of both rankings; low includes the bottom two; GDP per capita growth rates reported are median compound annual growth rates for countries in each quadrant.

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3 Integrating small and medium-sized enterprises into global trade flows: the case of China

*Lei Zhang and Wei Xia**

3.1 Introduction

In China, the term “small and medium-sized enterprises (SMEs)” refers to “different forms of enterprises under different ownerships that are established within the territory of the People’s Republic of China that meet the social needs and create more job opportunities, and comply with the industrial policies of the State”.¹ This definition is rather more complex than that in other countries, where the definition of SMEs tends to be based purely on their size.² It is nevertheless the case that, in China also, SMEs tend to be enterprises which have fewer employees, lower sales volume and lower gross assets. Most Chinese enterprises are SMEs. Indeed, they account for more than 98 per cent of industry and contribute to 60 per cent of China’s GDP, 75 per cent of its industrial value-added output and 50 per cent of its revenue (as of June, 2012).³ Chinese SMEs also provide for 75 per cent of China’s urban employment opportunities and absorb more than 50 per cent of the workers laid off from the state-owned enterprises. They employ more than 70 per cent of the new entrants to the labour market (Jianjun, 2006). Hence, Chinese SMEs play an important role in China’s economic development, due to their contribution to GDP and the employment they create, as well as their vigorous creative ability.

The diversified, networked and clustered division of the globe has greatly promoted the development of SMEs globally, and the internationalization of SMEs has been in the spotlight overall in the world economy. However, there is considerable room for Chinese SMEs to more fully exploit the economic opportunities provided through international trade. This will be illustrated by examining more closely the performance of SMEs established in Shanghai. Table 1 describes the new products developed by Shanghai’s large, medium-sized and small enterprises in 2011. In SMEs, the output

* The contents of this chapter are the sole responsibility of the authors and are not meant to represent the position or opinions of the WTO or its members.

Table 1 New products output by size of enterprise in Shanghai, 2011

Unit: 100 million RMB Yuan

Size of enterprise	New products output	New products sales revenue	New products export
Large	5,400.08	6,018.75	878.63
Medium	1,166.18	1,164.24	109.89
Small	575.40	588.75	44.12

Source: *Shanghai Statistical Yearbook 2012*, Shanghai Bureau of Statistics (<http://www.stats-sh.gov.cn/tjnj/tjnj2012.htm>).

of sales revenue generated by new products is lower when compared to large enterprises. The difference is particularly large when focusing on exports of new products. This suggests that Chinese SMEs are not well integrated into the dynamic segments of global trade flows.

Table 1 illustrates that most Chinese SMEs are not fully integrated into global and regional value chains, and their lack of innovative capacity may be one reason for this. Evidence suggests that multinational enterprises (MNEs) expect SME suppliers to be adaptable, agile and flexible. Notably, they expect SMEs to be able to develop new product lines and change product specifications (Krywulak and Kukushkin, 2009). Lack of innovative capacity may, therefore, make it difficult for SMEs to connect to global value chains. It may also imply that Chinese SMEs are trapped in “captured growth status” (Yongchun et al., 2013), which means that the main profits are captured by foreign enterprises. The discussion in the following sections will examine the possible reasons behind the relative lack of dynamism in Chinese SMEs and will discuss what can be done from an economic perspective to raise innovative capacity within the context of global competition.

3.2 Factors constraining innovative capacity in Chinese SMEs

According to available data from the Chinese Industrial Enterprises' Innovation Survey undertaken by the National Bureau of Statistics of China and published in 2006,⁴ the innovation performance of Chinese SMEs was not as good as the performance of large enterprises, across all aspects, including patent application, trademark registration, copyright registration, formation of national or industrial standards, internal protection of know-how and ownership of proprietary brands. Especially with regard to patent application, the percentage of SMEs which had ever applied for one or more patents is significantly lower than the percentage of large enterprises which had done so.

In China, patents are differentiated into patents referring to inventions, utility models⁵ and designs. Invention patents represented only 15.8 per cent of all patent applications by Chinese SMEs. In comparison, data on patent applications by foreign companies in China indicate that invention patents represent a large proportion (USITC, 2010). Chinese SMEs' innovation ability and core intellectual property (IP) thus appear to be limited, which is a disadvantage in international trade.

Internal constraints on small and medium-sized enterprises

Shortage of qualified staff

An important aspect determining innovative capacity is the availability of qualified personnel. SMEs tend to employ fewer scientific and technological personnel, and research and development (R&D) personnel,⁶ than do large enterprises, although SMEs active in technology-intensive sectors may be an exception to this rule. Table 2 shows the number of personnel involved in scientific and technological and R&D activities in different-sized enterprises in Shanghai in 2011.

One notable phenomenon is that the number of R&D personnel active in the private sector has increased since the structural reform of China's scientific and technological institutions, as many of those institutions have been transformed into small enterprises. It is nevertheless the case that Chinese SMEs employ only limited numbers of staff involved in scientific and technological activities and, among them, there are insufficient numbers with R&D talent and personnel with senior or medium technical titles.

Limited financial strength

SMEs own less capital than do large enterprises, and funding has become a serious bottleneck for the survival and development of Chinese SMEs. Commercial banks are reluctant to provide credits to SMEs due to the higher risk involved. Risks are

Table 2 Number of personnel involved in scientific and technological and R&D activities by size of enterprise in Shanghai, 2011

Unit: ten thousand

Size of enterprise	Personnel involved in scientific and technological activities	R&D personnel	
		Total	With senior or medium technical titles
Large	9.15	4.92	2.77
Medium	5.56	2.96	1.29
Small	4.08	2.15	1.11

Source: Shanghai Statistical Yearbook 2012, Shanghai Bureau of Statistics.

considered to be particularly high for SMEs active in technology-intensive sectors and it is therefore very difficult for SMEs to obtain funding for technological innovation from commercial banks.

Table 3 illustrates that, in 2011, SMEs were characterized by significantly lower expenditure on scientific and technological activities than in large enterprises, in particular in the area of new product exploration. SMEs' spending in this area represents only around 15 per cent of total spending on new product exploration, which is contradictory compared with the weight SMEs have in China's GDP.⁷

Table 4 illustrates that SMEs' expenditure for technical transformation, imports of technology and purchases of domestic technology is also markedly lower than that of large enterprises.

Innovation requires significant amounts of capital investment. However, Table 5 indicates that the Chinese Government offers less R&D funding to SMEs than to large enterprises.

Table 3 Scientific and technological expenditure by size of enterprise in Shanghai, 2011

Unit: 100 million RMB Yuan

Size of enterprise	Expenditure	
	Scientific and technological	New product exploration
Large	333.37	284.51
Medium	118.19	94.96
Small	88.45	68.04

Source: *Shanghai Statistical Yearbook 2012*, Shanghai Bureau of Statistics.

Table 4 Other technical expenditures by size of enterprise in Shanghai, 2011

Unit: 100 million RMB Yuan

Size of enterprise	Expenditure		
	Technical transformation	Technology import	Domestic technology purchase
Large	108.51	54.48	20.87
Medium	17.24	8.52	0.86
Small	12.73	2.27	0.18

Source: *Shanghai Statistical Yearbook 2012*, Shanghai Bureau of Statistics.

Table 5 Source of R&D expenditure by size of enterprise in Shanghai, 2011

Unit: 100 million RMB Yuan

Size of enterprise	Total R&D expenditure	Government funds	Equity funds	Foreign funds
Large	217.68	14.06	201.76	0.73
Medium	74.71	1.92	71.75	0.84
Small	51.32	2.21	47.87	0.58

Source: *Shanghai Statistical Yearbook 2012*, Shanghai Bureau of Statistics.

Intensity of research and development

In addition to referring to the absolute values of R&D budgets, it is useful to examine R&D intensity, as this makes it possible to evaluate the role of R&D taking into account a company's scale.⁸ Data on R&D intensity can, therefore, be used to measure an enterprise's technological innovation ability. A common measure for R&D intensity is the share of R&D spending in total sales. This measure can be considered to be a reflection of an enterprise's innovation consciousness, determination and economic capabilities. The measure also gives an indication as to how inputs (R&D budgets) evolve compared with outputs (sales).

Based on experience in developed and newly industrialized countries, R&D spending needs to represent a threshold share of 5 per cent of total sales in order for an enterprise to be a successful innovator in technology-intensive sectors. As far as R&D budgets of SMEs based in Shanghai are concerned, most scientific and technology-oriented SMEs spend less than 3 per cent of their budget on R&D. There is a group of only around 2,000 SMEs⁹ whose R&D spending represents 5 per cent or more of total spending (Shanghai Economic Committee, 2008). This suggests that most SMEs active in Shanghai can only carry out low- or medium-level innovation activities.

Weaknesses in the ability to utilize intellectual property rights

IP protection is intended to protect and encourage innovation. Yet it could be argued that, in China, the IP regulatory framework is designed for the benefit of large and financially strong enterprises rather than to benefit innovation activities in SMEs. This is a matter of concern given that SMEs need to be innovative and flexible in order to be active participants in the global value chain. As they are small players in a field dominated by large, mostly multinational, firms, it is important for their IP rights (IPRs) to be protected. Contractors often require suppliers to be fully transparent about the design and original plans of products (OECD, 2007). Without strong IP protection, SMEs run the risk of losing control over the plans and designs which they developed. The United Nations Conference on Trade and Development (UNCTAD, 2010) confirms that IP protection is a concern for SMEs in the creative industries of

cinema and software above all. In order for SMEs to be active players in a global environment of increasingly fierce competition, they therefore need to be able to acquire, master and skilfully use IP. Therefore, rather than giving preference to enterprises according to their scale, IP law and IP authorities should assist enterprises on the basis of their ability to innovate and effectively use IP.

IP can provide for exclusive rights, which can not only prevent others from using the fruits of innovation commercially without permission but can also be used by rights holders to fulfil their commercial goals, such as to enter new markets, become market leaders, promote the enterprise's reputation and image or start new market segments by targeting different consumer groups. IPRs can also be useful for enterprises which want to set up strategic cooperation with others, establish a franchising system, increase their market value in mergers and acquisitions, or simply obtain additional revenue by IP licensing and sales. Last but not least, IPRs can facilitate fundraising. They could also help to avoid wasting R&D investment by analysing the patent database as well as reviewing the latest technological developments.

Data on the number of patents held by SMEs, the respective share of patents for invention, utility models and designs, and both the patent grant rate and the implementation rate, all indicate that SMEs – in particular, science and technology SMEs – are aware of the importance of patents, and have often successfully applied for patents. Nevertheless, SMEs still have some disadvantages, such as the low quality of their patents, the relatively low patent grant rate and the very low patent commercialization rate. Indeed, the commercialization rate of outcomes of scientific activities was merely around 5 per cent (Zhongfa, 2013).

Traditionally, scientific and technology-oriented SMEs in Shanghai have had strong IP consciousness and shown a special interest in patents. Some of them possess their own patents and are in the process of applying for new patents. However, their view of the role of patents may be rather too simple, as they merely focus on obtaining IP protection by means of patent applications. They have not mastered the capacity of using and managing IP, and do not know how to defend and explore markets by means of IP. Those SMEs which have never experienced an IP dispute (which is a common situation among Shanghai's SMEs) are not really conscious of the potential of IP risk, and they do not know how to prevent and respond to it. Only if the patent is actually implemented can innovation lead to commercial success. The rate of patent implementation¹⁰ is, therefore, an important reflection of the use of IP. The specific investigation conducted by the Shanghai Bureau of Intellectual Property on Enterprises' Patent Implementation Status in 2006 indicates that the patent implementation rate of Shanghai's enterprises is relatively high, but the invention implementation rate is low. The implementation of technology is highest among

large enterprises (up to 87.9 per cent). The implementation rate is, however, lower for SMEs, at 81.2 per cent.¹¹

Overcoming internal constraints

SMEs can be roughly segmented into three groups:

- technology developers, which represent only between 1 and 3 per cent of all SMEs
- leading technology users, which represent 10 to 15 per cent of SMEs
- technology followers, representing between 80 per cent and 85 per cent of all SMEs (OECD, 2000b).

Due to several domestic constraints, the innovation ability of Chinese SMEs is limited. In the field of technological innovation, therefore, SMEs would need to draw support from the scientific and technological power outside the enterprises themselves in order to overcome the constraints of a lack of R&D talent, limited R&D funds and weaknesses in their ability to use IP.

In China, universities and scientific research institutions have produced a great number of scientific and technological achievements which need to be transformed. Therefore, increased cooperation in the area of technical innovation among SMEs, on the one hand, and universities and scientific research institutions, on the other, could be mutually beneficial. SMEs have a flexible structure and more easily accept innovation than do large enterprises. If an effective industry–study–research mechanism could be set up, SMEs' innovation activities and their effectiveness would be improved.

External constraints on small and medium-sized enterprises

Support of national policies and intellectual property institutions

Technological innovation needs government support in the form of public policy. Technological innovation policy is the combination of a country's public policies that aim at changing the speed, direction and scale of technological innovation. With the enforcement of IP policies and measures, the government contributes to creating a social and cultural environment that encourages innovation and cultivates a system favourable for SMEs' innovation and IP management. The government can also set up a platform of public services targeting and supporting SMEs' innovation activities. The government can create incentives to support the innovation process in scientific and technology-oriented SMEs. Last but not least, the system of IP law is among the most important arrangements in the institutional environment, since the IP institution is the most transparent and universal, as well as being coercive.

Although China has adopted several IP policies to promote SMEs' innovation,¹² the implementation of these policies has raised some problems. Firstly, the patent sponsorship policy¹³ is not well targeted; indeed, it tends to lean towards large enterprises. In addition, it does not make a distinction between scientific and technology-oriented SMEs applying for a patent for the first time, and those enterprises which have a rich experience in patent application. Large enterprises and specifically technology-oriented SMEs which possess abundant patents do not rely too much on patent sponsorship. Under the ongoing patent sponsorship policy, government cannot encourage enterprises to apply for patents and then proceed to promote the innovation. In some cases, policies to promote innovation in SMEs do not give significant results.

Secondly, these policies show a manifest lack of systemization and coherence. Most of China's SME patent policies target only one aspect of the process of innovation. The patent sponsorship policy aims to reduce or abolish patent application fees for enterprises; the patent technology exhibition and transaction platform, and the SMEs patent technology industrialization investment and financing platform, aim to provide industrialization services for SMEs; the rights protection support aims to help SMEs to protect their patents. None of these policies is able to provide for a systematic patent service throughout the whole innovation process. The Chinese Government should consider providing a single, comprehensive patent service that is easily accessible for SMEs and makes it easy for them to master the process of innovation.

Thirdly, China's scientific and technology-oriented SMEs' innovation policies are government oriented, and the government pushes them to follow the trajectory of construction of China's innovation system. For instance, the patent technology exhibition and transaction platform and patent week policy, which are the two most important policies in terms of exploration, can offer resources to only a limited number of enterprises. In China, IP is still a relatively new phenomenon, and its utilization by enterprises (especially SMEs) is challenging.

Weak innovation and intellectual property culture

"IP culture" refers to the IP institution that results from the human historical development process related to the protection of innovation; the public perception, attitude and evaluation of innovation itself as well as of the institutions which protect IP; and the interaction between the IP institutions and IP consciousness. As a result, the interaction between IP culture and IP institutions influences the public's IP behavioural pattern as well as its normative adjustment pattern.

IP consciousness, as an expression of IP culture, refers to a society's consistent perception, respect for and understanding of the essence of IP and its effects, as well as its support for IP protection. The social perception, attitude and evaluation of IP are important criteria for evaluating a country's IP culture. Respecting the

non-public property attribute of innovation, abiding by IPRs, and taking advantage of IPRs to spread information and encourage innovation, are essential conditions for constructing an invention-, creation- and innovation-friendly society within the context of a knowledge-based economy.

There are many factors within the external environment which affect innovation activities, such as the legislative environment, the level of competition in markets, the social service environment and the social innovation culture. Because of the particular characteristics of SMEs, the ability of SMEs to innovate suffers most from the absence of a supportive external environment. The support of relevant legislative institutions, especially the IP institution, can act as a powerful guarantee to enable SMEs to promote technical innovation extensively.

3.3 Policy recommendations and conclusions

R&D funding, the availability of R&D talent, technological ability, R&D intensity and the IP index all result from long-term investment and cannot easily and rapidly be addressed. All are typical factors constraining SMEs' involvement in international trade and their innovation activities, and these problems are widespread in SMEs all over the world.

Although Chinese SMEs face many similar constraints to those faced by SMEs elsewhere, they do tend to have strong foundations for innovation and are relatively well integrated into global trade flows. SMEs are flexible, and if the government can offer effective incentives, and provide for a better institutional environment, Chinese SMEs have strong potential for innovation.

Creating a single, comprehensive patent service for SMEs

When a policy is designed, it typically only targets one specific aspect of SMEs' innovation activities. Innovation-related government services therefore tend to be scattered and costly, which increases operational difficulties for SMEs which want to take advantage of the government's policy. As a result, application of these policies by SMEs is not efficient. The government should focus on providing a single, comprehensive patent service for the scientific and technology-oriented SMEs in order to help them master the establishment of patents in the innovation process.

Avoiding focusing only on quantity of patents

Because of China's ambition to be a strong innovator, patent quantity has become an important index to assessing innovation and IP abilities. Many local governments, for instance, pursue patent quantities as an important goal. However, SMEs are a

highly diversified group. Differences in industry, scale and commercial environment account for differences in SMEs' innovative abilities and lead to different innovation models. The government should take these differences into account and consider applying different IP policies to different types of SMEs.

Revising the patent sponsorship policy

Local governments in China have set up sponsorship institutions for patent applications. Unfortunately, the specific conditions and methods of sponsorship have not been clarified. As a consequence, the policy has so far had little effect on SMEs' patent applications. The government should strengthen its encouragement for and introduction to patent fees sponsorship by focusing on SMEs applying for a patent for the first time. The government could require other SMEs to pay only part of the fees and thereby encourage them to apply for a patent. Apart from sponsorship, the government could also offer specific patent guidance, including basic knowledge on patent application and commercial strategy in respect of patents.

Strengthening the ability of SMEs to use and manage intellectual property rights

The government should consider providing public services to improve the ability of SMEs to utilize and manage IP, and this should be a prime policy objective in supporting technological innovation by SMEs. This is in line with the approach taken elsewhere, as governments in different countries provide significant support to SMEs, mainly focusing on providing public services for SMEs and helping them improve their competitive abilities (notably by utilizing IP to increase their market share). SMEs based in Shanghai, in particular scientific and technology-oriented enterprises, have a certain level of IP consciousness, and they have recognized the importance of patents for their activities. However, Shanghai's SMEs still have a rather simple understanding of IP, and they do not have the ability to fully take advantage of and manage it. The creation, utilization, management and protection of IP are essential indicators when it comes to evaluating the ability of SMEs to take advantage of the IP institution to protect their innovation activities.

Strengthening support for fund-raising for innovation activities

The government could consider setting up innovation networks within which SMEs could identify suitable partners for cooperation. Such networks should also provide information services regarding new products and new policy measures. They could help inventors, invention sponsors and SMEs to advertise at a favourable price, or even at no cost, so that technological achievement could be transformed into productivity.

Strengthening industry–university–research institution cooperative innovation relationships

The government should strengthen cooperation among SMEs, universities and research institutions in the area of innovation. While government efforts towards transforming innovation into products with market application should focus on SMEs, the government should also find ways to strengthen cooperation among SMEs, universities and research institutions. It might consider the establishment of an R&D centre, which would benefit industry-university-research cooperation in the long run and, in turn, lay the technical foundation for the long-term development of SMEs.

Strengthening the intellectual property institution

Since its accession to the WTO, China's IP regulatory framework is deemed to be in conformity with the TRIPS standards.¹⁴ However, standards regarding international IP protection and enforcement institutions tend to increase over time. In this context, the government should consider emphasizing that China is a developing country, and reaffirm the balance between private and public rights and developed and developing countries.

Cultivating the intellectual property culture

The Bureau of Intellectual Property should consider holding seminars on IP institutions, enterprises' innovation consciousness and IP protection consciousness, especially for innovative SMEs. These seminars could be tailored to the demands of different industries. The Bureau of Intellectual Property should also offer training courses to meet the specific needs of SMEs, especially the needs of those dealing with IP in innovative enterprises. For technicians in manufacturing and high-technology SMEs, the training should focus on the institution of patents, the patent literature search and analysis of patent rights requirements. For other SMEs, training should focus on the introduction of a utility model, appearance design and trademark application. For those SMEs with concerns about the protection of business secrets, training should focus on instituting protection of business secrets.

Strengthening the ability of the innovation support institutions regarding intellectual property

The government should pay attention to cultivating and improving the ability of innovation support institutions, such as science and technology parks and incubators, to deal with IP. For instance, the government should require innovation support institutions to hire employees who know how to manage and utilize IP and provide IP services to innovative enterprises. The provision of IP services should become a hallmark of science and technology parks, incubators and other innovation support institutions.

Finally, the government should encourage science and technology parks, incubators and other innovation support institutions to take part in innovation activities directly. This implies that these bodies should collect from universities and research institutes the convertible fruits of technological innovation, identify SMEs which have the will to implement their conversion, and take part in such projects directly as fund-raisers, coordinators and managers. Science and technology parks, incubators and other innovation support institutions are different from other start-up hubs, and they should not only provide a home for innovation activities, but also become key innovation actors.

Endnotes

1. Law of the People's Republic of China on Promotion of Small and Medium-sized Enterprises, Article 2.
2. Most OECD countries consider SMEs to be firms with fewer than 250 employees. Some countries set the limit at 200 employees. The United States considers SMEs to include firms with fewer than 500 employees (OECD, 2000a).
3. See: <http://finance.sina.com.cn/hy/20120426/100211929864.shtml>.
4. See: http://www.stats.gov.cn/tjsj/qtsj/2006cxdc/t20080222_402464453.htm.
5. According to Chinese patent law, a utility model is similar to the patent, but usually has a shorter term and less stringent patentability requirements. It is usually called a "petty patent" or "small patent".
6. R&D personnel are a sub-sample of scientific and technological personnel.
7. SMEs contributed close to 60 per cent of China's GDP in 2006 (see Introduction).
8. Normally, R&D intensity means the ratio of a firm's expenditures on research and development to the firm's sales (see Cohen, Levin and Mowery, 1987). In China, the statistics are not categorized by different scales of enterprise; for the purpose of this chapter, we made some adaptation.
9. 2000 SMEs represents 5 per cent of all enterprises in Shanghai.
10. Patent implementation includes commercialization by oneself and licensing to others.
11. See: http://202.123.110.5/gzdt/2006-04/14/content_253909.htm.
12. See: <http://english.sipo.gov.cn/laws/>.
13. The patent sponsorship policy is meant to encourage enterprises to apply for patents by giving them the patent application fees.
14. The WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), negotiated in the 1986–1994 Uruguay Round, introduced intellectual property rules into the multilateral trading system for the first time.

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II

The role of SPS and other non-tariff measures in connecting to global markets

4 Barriers to trade: the case of Kenya¹

*Tabitha Kiriti Nganga**

4.1 Introduction

International trade is the exchange of capital, goods and services across international borders or territories. Even though the WTO advocates trade opening, many WTO members do not liberalize every sector of the economy and, instead, maintain certain barriers to trade. Many of these barriers take the form of non-tariff barriers (NTBs), i.e. discriminatory non-tariff measures (NTMs) imposed by governments to favour domestic over foreign suppliers (Nicita and Gourdon, 2013).² Barriers can also take the form of procedural obstacles, i.e. obstacles related to the process of application of an NTM rather than the measure itself.

The United Nations Conference on Trade and Development (UNCTAD) (2010) describes NTMs as policy measures other than ordinary customs tariffs that can potentially have an economic effect on international trade in goods, changing quantities traded, prices, or both. The classification of NTMs includes import measures such as sanitary and phytosanitary (SPS) measures and technical barriers to trade (TBTs), and export-related measures.³ The process of applying NTMs can also hamper trade among trading partners in different ways.⁴

This chapter investigates barriers to trade in the form of procedural obstacles in Kenya and examines how those obstacles affect traders who may be either Kenyans or other traders carrying goods in transit within the East African Community (EAC), which comprises Burundi, Kenya, Rwanda, Tanzania and Uganda.

Using the survey method, this study investigates the procedural obstacles that businesspeople in Kenya experience. Traders responding to surveys can identify not only formal policy itself but also whether the policy was arbitrary, inconsistent,

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discriminatory, inefficient, non-transparent, expensive, or involved outright obstruction or legal barriers. The specific objectives of this chapter are to:

- document the procedural obstacles in Kenya
- use the survey method to analyse how these obstacles impact on trade, and
- recommend policies that will lead to better informed policy and foster dialogue on harmonization, streamlining and reform, at both national and regional levels.

To achieve the first objective, the study relied on official documents and especially *Kenya Law Reports* (<http://www.kenyalaw.org>). Appendix Table 1 contains the relevant information: the rules and regulations that can be classified as NTMs, their sources and agencies that are supposed to enforce them.⁵

To achieve the second objective, data were collected from official documents and interviews with 18 public officials and 13 private agencies to indicate why these rules and regulations could be considered to be NTMs. This was conducted through a perception-based, firm-level survey of exporters/importers and truckers on the rules and regulations that they consider to be NTMs that could be hindering the free flow of trade in Kenya and in the EAC region generally.

4.2 Non-tariff barriers in the East African Community

Cooperation in trade opening and development is one of the fundamental pillars of the EAC.⁶ For this purpose, by the Treaty for the Establishment of the East African Community of 1999, the partner states agreed to establish among themselves a customs union, a common market – subsequently a monetary union – and, ultimately, a political federation, the goal being to liberalize and promote cross-border trade among them.⁷ According to Article 3 of the Protocol on the Establishment of the East African Community Customs Union (2004), its objectives are to:

- further liberalize intra-regional trade in goods, on the basis of mutually beneficial trade agreements among the partner states
- promote efficiency in production within the EAC
- enhance domestic, cross-border and foreign investment in the EAC
- promote economic development and diversification in industrialization in the EAC.

The main trade policy instruments of the EAC Customs Union are contained in that Protocol, the EAC Customs Management Act 2004 and the EAC Customs Management Regulations 2006. Together, these provide for the implementation of a number of measures including, but not limited to, transitional measures and the gradual elimination of internal tariffs, establishment of a common external tariff

(CET), introduction of EAC rules of origin (ROO) and other trade-related aspects and legal and institutional arrangements, a customs valuation system and harmonized customs laws, procedures and documentation.

According to the *Second East African Community Development Strategy (2001-2005)* (2006), major impediments to trade in the region are related to procedural obstacles in the application of NTMs leading to administrative and bureaucratic inefficiencies. Another category of barriers relates to NTMs in the form of import measures, mainly SPS and TBT. When these standards and requirements are imposed unilaterally to protect local industry they can have a severe restrictive impact on trade. Consequently, the partner states agreed to take measures, including introducing regulations that would ensure that products accepted in one partner state are also accepted in the markets of the others.

The regional bureaus of standards were urged to speed up the harmonization of the remaining standards as East African standards. Hence, Article 13 of the Protocol on the Establishment of the East African Community Customs Union provides for the removal of all the existing NTMs to the importation into their respective territories of goods originating in other partner states, and thereafter not to impose any new NTMs. The partner states also agreed to put in place a mechanism for monitoring the removal of NTMs (Article 13 [2]).

Nevertheless, trade in the EAC is hampered by procedural obstacles imposed by individual countries. Although the Customs Union has made some progress in its implementation, there are indications that, in spite of the commitments made by the partner states to remove NTBs, they remain a serious obstacle to trade within the region. They continue to increase the cost of doing business in the region and have negatively impacted on trade and cooperation.

4.3 Survey findings: private firms and agencies

For the purpose of this study, we first interviewed people in private agencies to get their views on what they considered to be non-tariff barriers to trade.⁸

Non-tariff barriers to trade

What private firms considered to be NTBs were a combination of import measures and procedural obstacles. These were:

- delays in clearance of goods at the port of Mombasa due to lengthy clearance processes
- non-recognition of certificates of origin

- a lack of harmonized import/export documentation procedures
- the requirement for transit fees and bonds
- verification and classification of goods
- varying procedures for issuance of certification marks, inspection and testing by the different bureaus of standards in the region
- restrictions/bans on imports/exports to and from certain countries in the EAC, even though trade is supposed to be free in the region
- the imposition of import quotas
- testing requirements on certain products from some countries and not others (discrimination)
- cumbersome testing procedures for certain imports
- administrative levies
- corrupt practices.

Respondents also said that many institutions were involved in approving imports, and varied certification and testing procedures and inspection of certificates of conformity to international standards.

Respondents repeatedly referred to problems related to the transport of trade goods. Notably, they referred to problems related to the varying application of axle load specifications for trucks transiting through Kenya and to costs incurred because of the presence of several weighbridges between the port of Mombasa and Malaba/Busia and Namanga.⁹ They also complained of numerous police roadblocks, road toll charges, lengthy classification and valuation of import processes, different border opening times and lengthy procedures for issuing work permits.

Non-tariff barriers and their impact on business

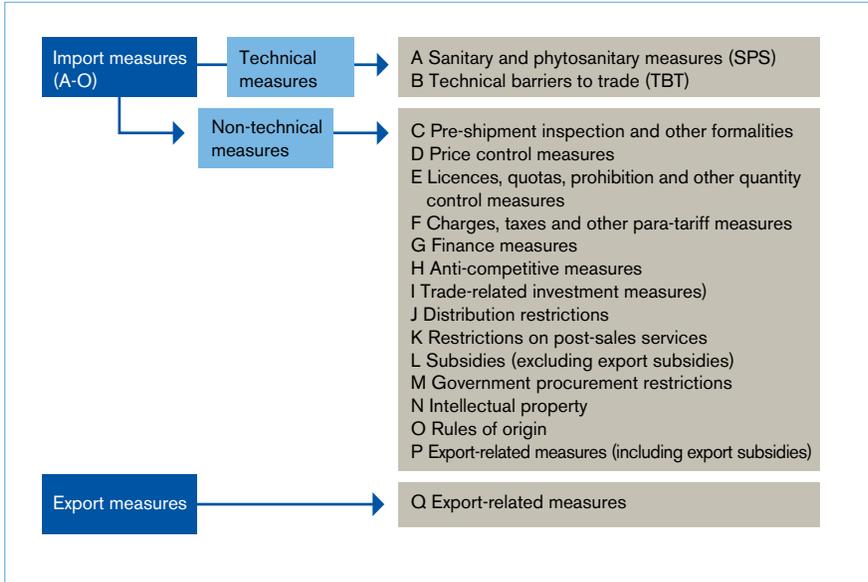
In evaluating the impact of NTBs on business we distinguished three categories among the NTMs and procedural barriers reported in Figures 1 and 2:

- restrictive application of NTMs
- procedural obstacles related to ROO, and
- procedural obstacles related to the clearance of export goods documentation.

As a fourth category, we distinguished obstacles related to transit traffic and trucking. These obstacles are typically not considered NTBs as they are not discriminatory; nevertheless, they can have significantly negative impacts on trade.

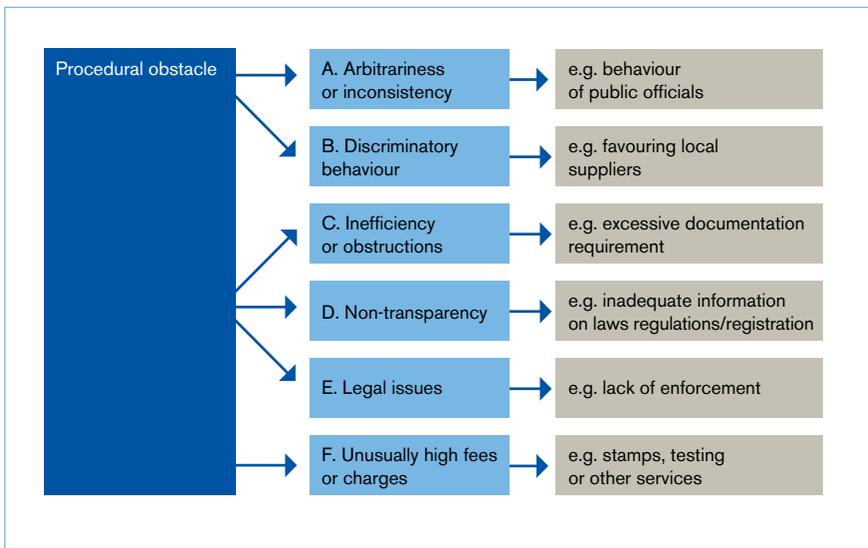
The impact of these four categories on business was categorized from very severe to no impact at all, as measured by percentage of respondents. However, respondents were not able to quantify the impact of the NTMs on their business.

Figure 1 Classification of NTMs



Source: UNCTAD (<http://ntb.unctad.org>).

Figure 2 Procedural obstacles classification



Source: UNCTAD (<http://ntb.unctad.org>).

Restrictive application of non-tariff measures

On the extent of severity of NTMs, the study found that product export/import bans, discriminatory sourcing and trade monopolies had a very severe impact on business in Kenya. All respondents reported that product export and import bans had a severe impact on their business. A large majority (83.3 per cent) considered discriminatory sourcing as having a very severe impact on their business; only 16 per cent reported this as having no impact. Two-thirds (66.7 per cent) of respondents said that trade monopolies had a very severe impact on their business, while 33.3 per cent said that they had no impact.

These categories were followed in terms of severity by distribution constraints and technical quality standards, and import and export permits and licences. Distributional constraints and technical quality standards were cited by 83.3 per cent of respondents as having a severe impact on their business. Two-thirds (66.7 per cent) of respondents regarded import and export permits and licences as having a severe impact on their business, with 33.3 per cent reporting these as having no impact.

Fifty per cent reported SPS measures as having a severe impact on their business.

Sixty-six per cent of respondents reported non-automatic licensing as having no impact on their business.

Procedural obstacles related to rules of origin

For the purposes of this study, procedural obstacles related to ROO were classified as non-acceptance of certificate of origin, arbitrary product classification and corrupt practices. Non-acceptance of certificates of origin was reported by 56 per cent of respondents as having a severe impact on their business, and by 43.8 per cent as having no impact. More than two-thirds (71.7 per cent) reported arbitrary product classification as having a severe impact on their business; only 28.3 per cent reported this as having no impact. As for corrupt practices, 85.7 per cent of respondents reported that these have a severe impact on their business.

Hence, in terms of ROO and their impact on business in Kenya, corrupt practices were considered to have a very severe impact on business, followed by arbitrary product classification.

Procedural obstacles related to the clearance of export of goods documentation

The documentation for the clearance of export of goods was comprised of administrative levies, arbitrary or multiple documentation, lengthy classification and

valuation of the export processes, and corrupt practices. Fifty per cent of respondents reported administrative levies as having a severe impact on their business and an equal proportion reported this as having no impact. All respondents reported that arbitrary or multiple documentation procedures had a severe impact on their business. Furthermore, respondents reported that lengthy classification (83.3 per cent), lengthy clearance processes and valuation of export processes (83.3 per cent), and corrupt practices (83.3 per cent) had all severely impacted on their business.

Corruption, reported by 83.3 per cent of respondents as having a severe impact on their business, acts as a form of tax, hence reducing respondents' profits, increasing the cost of production or hindering the movement of their goods, mainly from the port of Mombasa, to the location where production or sale takes place.

Transit traffic and trucking

This category consists of:

- uncompetitive port entry taxes and charges
- inefficient operations
- variable weighbridges
- road toll charges
- variable border opening times
- variable documentation requirements
- police roadblocks
- corrupt practices related to roadblocks.

All respondents reported that uncompetitive port entry taxes and charges had severe impact on their business. Two-thirds (66.7 per cent) reported inefficient port operations as having severe impact on their business, while 33 per cent reported this to have no impact.

Weighbridges are a common feature in Kenya between the port of Mombasa and the border towns. They are supposed to ensure that vehicles carry only the weight recommended in their tare and gross weight specifications. Most respondents (83.3 per cent) said that variable weighbridges had severe impact on their business. All respondents reported road toll charges had severe impact on their business.

It is not uncommon to find long queues of transit trucks at the Malaba/Busia border stretching for more than a kilometre, waiting to be cleared to enter Uganda. This is mainly precipitated by different border opening times. Variable border opening times were reported by 83.3 per cent of respondents as having a severe impact on their business, while 16.7 per cent said that they had no impact.

All respondents said that variable documentation requirements, numerous police roadblocks and corrupt practices had severely impacted on their business.

Ranking of barriers to trade

When asked to rank which measures had the most negative impact on their business, the respondents ranked the restrictive application of NTMs first, followed by procedural obstacles related to ROO, procedural obstacles related to the clearance of export of goods documentation, and transit traffic and trucking issues.

Changes in the impact of non-tariff barriers on business over time

The average non-official payment per shipment was Ksh. 1 million, 100 per cent higher than in 2009 when the first version of this survey was conducted. Just as in 2009, it was found that 50 per cent of this amount was usually given to customs officials, 30 per cent to port officials and 20 per cent to police officers. The annual value of waste due to breakage or spoilage in transit had also more than doubled, from Ksh. 600,000 to Ksh. 1.3 million. Of this, 45 per cent was attributed to delays in customs/issuance of permits, 40 per cent to quarantine delays and 20 per cent to border transit delays.

The study also found that the average waiting time for a business licence for an export/import business was two weeks, down from three weeks in 2009. The waiting period for foreigners looking for a work permit had not changed; it took one week, on average, to get a work permit, just as in 2009.

The average number of ungazetted roadblocks between the port of Mombasa and the border towns of Malaba/Busia or Namanga remained at 12 and the truckers spent, on average, an hour at each of the roadblocks. They also paid Ksh. 5,000, on average, in non-official fees to the police officers at each roadblock. The truckers said that it takes three or four days, on average, to pass through customs at the Malaba/Busia border crossing, but it took two days to cross the Namanga border to Tanzania. The truckers also claimed to pass through three weighbridges between Mombasa and the border towns and spent five hours, on average, at each weighbridge, but this was worse at the Mlolongo (near Nairobi) and Mariakani (near Mombasa) weighbridges.

4.4 Survey findings: public agencies

The public agencies included in this study are those mainly involved in coordination of the various trade-related activities that fall under their mandate. These agencies

are supposed to implement the rules and regulations that are considered to be NTMs (see Table 1 – Appendix). They are also the agencies supposed to ensure that NTMs are not discriminatory or not applied in a discriminatory way. In other words, they are supposed to ensure that NTMs do not represent NTBs.

Interviewees in these agencies did not consider justified the claim by respondents in the private agencies that documentation requirements were arbitrary. However, most of those interviewed in the public agencies agreed that the regulatory authorities had not harmonized test certificates and procedures because different regulatory authorities were responsible for different procedures. They contended that the documentation required for the various imported products is clarified on various websites and therefore the traders were expected to familiarize themselves with them. They also denied the claim from private sector respondents that there were non-official payments to police and customs officials.

Eighty per cent of the public agency respondents said that the aim of the rigorous regulations enforced by customs officials was mainly the generation of revenue. However, 90 per cent denied that the pre-shipment verification of conformity (PVOC) programme was a hindrance to trade. Instead, they argued that those measures were applied to protect domestic consumers and facilitate trade by ensuring that all products which meet the quality requirements are cleared first.

About 50 per cent of public agency respondents agreed that there were discriminatory applications of SPS measures such as bans issued on certain products from some countries and not others. Thirty per cent said that the SPS certificates accompanying goods from the exporter's country were, in most cases, not mutually recognized, resulting in arbitrary documentation requirements because the regulators involved had not signed the mutual recognition agreements.

Eighty per cent of these respondents said that high transit fees, roadblocks, axle load requirements, gross vehicle mass, weighbridges and so on are the result of both multiple overlapping laws and structures and the need to raise revenue. All the respondents also argued that the roadblocks, axle load rules and weighbridges were necessary because of security issues and to prevent vehicles from overloading and spoiling the roads, or even offloading and diverting some or all of the transit goods into the local market.

Respondents denied that delays in clearance of goods at customs and delays in exporting are the result of customs departments' staff having a poor understanding of the ROO. Instead, 80 per cent of respondents argued that such delays were due to a lack of institutional capacity, poor staffing levels, poor infrastructure and insufficient human resources.

All respondents agreed that multiple documentation requirements by different administrative structures was a consequence of lack of harmonization, but denied that the cumbersome inspection procedures and non-acceptance of certificates of origin were aimed at protecting local industry.

4.5 Conclusions and recommendations

It is clear that, although the EAC is committed to the removal of non-tariff barriers, the NTMs that still exist in Kenya are not transparent, are discriminative, are not scientifically based and generally act as barriers to trade. NTMs have led to an increase in the cost of doing business as attested by the findings, mainly from the private agencies. However, the public agencies do not consider what the private agencies call NTBs to be real barriers to trade because, in their view, they are more concerned with implementing government policy.

This study has shown that restrictive application of NTMs, followed by the application of ROO, procedural obstacles to the clearance of export of goods documentation, and transit traffic and trucking issues, in that order, have severe impacts on business in Kenya. Notably, delays at ports and weighbridges, and non-official payments to port officials and police officials have led to heavy losses for private businesses.

The experience in many countries is that, as tariffs are reduced, non-tariff barriers to trade increase since they are one way in which governments can collect revenue. If the implementation of the Protocol on the Establishment of the East African Community Customs Union is to progress, and if intra-trade in the EAC region is to be improved, however, it is important that NTBs be eliminated or reduced.

It is important to reduce transaction costs to trade. To reduce delays in clearance and to improve operations at the ports of Mombasa, Malaba/Busia and Namanga in handling both imports and exports, there is a need to increase port efficiency, and this responsibility falls under the Kenya Ports Authority. This would imply, for instance, the improvement of ICT and energy infrastructure. This would entail computerizing all operations and retraining staff at these ports and also improving energy infrastructure, since, with computerization, there is need for a constant flow of power as power failures can also lead to delays in clearance and inefficiency.

In order to facilitate the easy movement of goods from Mombasa to their destination, road infrastructure needs to be improved. The numerous weighbridges should be removed, since trucks can be weighed at the ports of entry and exit; hence, there is no need to weigh the sealed trucks between the ports. This would mean coming up with an innovative method of sealing the trucks and computerizing the information

on the types and amount of goods that the trucks are carrying at the port of entry, and this could be verified at the point of exit. This would require the Ministries of Energy, Infrastructure and Internal Security to work together to achieve this.

The EAC partner states should also consider improving the railway network throughout the region to reduce the heavy reliance on the already dilapidated road network. Transit trucks have been found to contribute to the perennial and heavy traffic jams along the Mombasa road.

There is a need to seal the loopholes that allow for corrupt practices to thrive not only at the entry and exit points but also in the interior, which has led to Kenya's bad record in Transparency International's Corruption Perceptions Index.¹⁰ This would entail the Kenya Ethics and Anti-Corruption Commission dismantling the corruption cartels at the ports.

As this study has shown, EAC partner states have different bureaus of standards. Engaging mutual recognition agreements and accreditation processes is important in order for different regulators to accept each other's conformity assessment procedures. This would require the Kenyan Ministry of Industrialization to liaise with the corresponding ministries in the partner states. Partner states, including Kenya, should consider harmonizing not only the documentation procedures with their trading partners, and reducing the lengthy clearance procedures that frustrate trade, but also road transport policy, and adopting a common regulatory regime for road transport aimed at raising quality standards and improving safety.

Finally, private business needs to familiarize itself with the rules and regulations set up for various products under the laws of Kenya and other partner states regarding conformity with required SPS standards and the various documents required by each country for entry and exit of different types of goods. Increased familiarity with these rules and regulations would contribute to a reduction in the waiting period for business permits.

Appendix

Table 1 Rules and regulations which can be classified as NTMs, their sources and agencies

Rules and regulations	NTM source	Ministry/department/agency
Certificate of origin	East African Customs Union Protocol 2007	Kenya Revenue Authority, Kenya Bureau of Standards, Ministry of Finance
Prohibition of trade practices to repress competition	Restrictive Trade Practices, Monopolies and Price Control Act (Cap. 504)	Ministry of Finance
Plant import permit (PIP) phytosanitary certificate requirements	Plant Protection Act (Cap. 324) Agricultural Produce Act (Export Import – (Cap. 319 and Cap. 320)	KEPHIS/KEBS Ministry of Agriculture
Fish movement permit	Fisheries Act (Cap. 378)	Petroleum oils (2709)
Ban on beef and beef products from Uganda and USA	Food Safety Department of Veterinary Services (DVS)	Department of Veterinary Services
Vehicle importation Age limit Left-hand-drive vehicles Roadworthiness	KS 15 15:2000 quality standard Traffic Act (Cap. 403)	Kenya Bureau of Standards, Ministry of Transport
Intellectual property rights	The Industrial Property Act (Cap. 509)	Kenya Industrial Property Institute, Ministry of Trade
Anti-piracy security device	Copyright Act (Cap. 130)	State Law Office
Metrology	Trade Descriptions Act 2004	Department of Weights and Measures, Ministry of Trade
Trademark and brand registration	Trademarks Act (Cap. 506)	Ministry of Trade
Import permits on meat, dairy, poultry and their products	Dairy Industry Act (Cap. 336) Meat Control Act (Cap. 356) Animal Diseases Act (Cap. 364)	Kenya Dairy Board, KEBS, DVS, Kenya Port Authority Health officials
Import ban on Ugandan day-old chicks	Animal Diseases Act (Cap. 364)	DVS, Ministry of Livestock Development, Ministry of Agriculture
Varying inspection requirements and testing	Public Health Act (Cap. 242) Radiation Protection Act (Cap.243) (in the case of irradiated foods) Food, Drugs and Chemical Substances Act (Cap. 254)	Ministry of Health, Ministry of Health, KEBS
Pesticide contaminant regulations	Pest Control and Products Act (Cap. 346)	PCPB, Ministry of Agriculture, KEBS, KEPHIS
Seed certification	Seed and Plant Varieties Act (Cap. 326) Bio-safety Act 2009	KEPHIS, Ministry of Agriculture

Table 1 Rules and regulations which can be classified as NTMs, their sources and agencies (continued)

Rules and regulations	NTM source	Ministry/department/agency
Orange certificate of the International Seed Testing Association	Plant Protection Act (Cap. 324)	KEPHIS, Ministry of Agriculture
Food additives regulations	Food, Drugs and Chemical Substances Act (Cap. 254) KS 660 (Guidelines to the safe use of food additives)	Ministry of Health, KEBS
Import Standardization Mark (ISM)	Standards Act (Cap. 496), section 10, Certificate of Conformity	KEBS, Ministry of Industrialization
Best before date regulation	Food, Drugs and Chemical Substances Act (Cap. 254)	KEBS, Ministry of Industrialization
Medicine import permits and certificate of registration	Kenya National Drug Policy of 2006 Pharmacy and Poisons Act (Cap. 244) The Industrial Property Act (Cap. 509)	Ministry of Health, Ministry of Trade
Import permits, Certificate of Analysis of GMOs	Bio-safety Act 2009	KEPHIS, Ministry of Agriculture
Import licence	The Customs and Excise Act (Cap. 472)	Ministry of Trade, Kenya Revenue Authority
Axle load specifications	Legal Notice No. 118 of the Traffic Act (Cap. 403)	Ministry of Transport
Weighbridges	Traffic Act (Cap. 403)	Ministry of Transport, Ministry of Roads, Kenya Revenue Authority
Gross vehicle mass	Traffic Act (Cap. 403)	Ministry of Transport, Ministry of Roads, Kenya Revenue Authority
Transit licences/bonds/fees for goods	Traffic Act (Cap. 403)	Kenya Ports Authority, Kenya Revenue Authority, Ministry of Transport
Police roadblocks	Traffic Act (Cap. 403)	Ministry of Transport, Ministry of Internal Security
Truck entrance fees and short grace periods	Traffic Act (Cap. 403)	Kenya Ports Authority, Kenya Revenue Authority, Ministry of Transport
Permits for refuelling	Kenyan Citizenship and Immigration Act (Cap. 172)	Kenya Revenue Authority, Ministry of Finance
Multiple police roadblocks and mobile control along the transit routes	Traffic Act (Cap. 403)	Ministry of Transport, Ministry of Internal Security

Table 1 Rules and regulations which can be classified as NTMs, their sources and agencies (continued)

Rules and regulations	NTM source	Ministry/department/agency
Horticulture export permit	Horticulture Produce Export Act (Cap. 319)	Horticultural Crops Development Authority (HCDA)
Horticulture phytosanitary certificate for exports	Horticulture Produce Export Act (Cap. 319)	KEPHIS, HCDA
Horticulture certificate of conformity to traceability of produce, hygiene, maximum residual levels, good agricultural practices and proper post-harvest handling procedures	Pest Control and Products Act (Cap. 346) Food, Drugs and Chemical Substances Act (Cap. 254) KS 660 (Guidelines to the safe use of food additives)	Ministry of Agriculture, HCDA, PCPB, KEBS, KEPHIS, Ministry of Health
Export permit for mineral-based products	Mining Act (Cap. 306)	Commissioner of Mines and Geology
Administrative complexity of formalities in release and clearance of goods	The Customs and Excise Act (Cap. 472) Kenya Ports Authority Act (Cap. 391)	Kenya Ports Authority, Ministry of Roads, Ministry of Transport, Kenya Revenue Authority
Work permits	Kenya Citizenship and Immigration Act (Cap. 172)	Ministry of Immigration and Registration of Persons, Ministry of Labour
Port charges	The Customs and Excise Act (Cap. 472) Kenya Ports Authority Act (Cap. 391)	Kenya Revenue Authority, Kenya Port Authority
Labelling requirements	Food Drugs and Chemical Substances Act (Cap. 254) Pharmacy and Poisons Act (Cap. 244) Standards Act (Cap. 496)	KEBS, Ministry of Health
Translation of documents	The Registration of Documents Act (Cap. 285)	Ministry of Education (Commission for Higher Education), KRA, Ministry of Finance, Ministry of Trade
Preference given to Kenyans in the tendering process up to Ksh. 50 million in respect of goods or services and up to Ksh. 200 million for works	Public Procurements and Disposal Act 2005	Ministry of Finance

Source: Kenya Law Reports (<http://www.kenyalaw.org>).

Endnotes

1. This chapter is a revised version of Kiriti Nganga, T. W. (2012). The data for this chapter was collected in December 2012 while the data for the original paper was collected in 2009.
2. See also WTO (2012) on the distinction between non-tariff barriers and non-tariff measures.
3. See Appendix Figure 1.
4. As reflected in the classification of procedural obstacles in Appendix Figure 2.
5. This study was conducted in December 2012 before the number of ministries was reduced from 42 to 18 in April 2013.
6. Treaty for the Establishment of the East African Community (1999), Article 74.
7. Treaty for the Establishment of the East African Community (1999), Article 5.
8. We were not able to interview state firms that are involved in business to see whether they also face the same obstacles and how they impact on their business.
9. These are the border towns that connect Kenya and Uganda and facilitate transit of goods to Burundi, Congo and Rwanda.
10. Kenya was ranked 139/176 with a score of 27/100 in 2012.

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5 SPS standards and international competitiveness in Africa: the case of Senegal

*Ahmadou Aly Mbaye and Adama Gueye**

5.1 Introduction

Despite a steady decline in its share of GDP and exports, the agricultural sector continues to play an important role in African economies, and in Senegal in particular, where it employs approximately 60 per cent of the labour force. It accounts for a quarter of national public investment, but contributed only 6 per cent to GDP between 2000 and 2009 (Ministère de l'Economie et des Finances du Sénégal, 2011). Horticulture is one of the promising sectors, as can be observed not only from a rapid growth strategy but also from many national agricultural development strategies, because of the vast range of products included and the high level of income it generates for producers, especially in urban and suburban areas. In addition, Senegal has both a favourable climate and a good geographical position for the export of tropical off-season products. These factors have enabled the country to increase the production and export of fruit and vegetables significantly. Horticultural production has experienced a boom over the last ten years, increasing from about 150,000 to 228,000 metric tons between 1992 and 2000 and to 429,000 metric tons in 2007, an increase of 5.5 per cent per year. In 2008, the production of vegetables (excluding potatoes and fresh tomatoes) recorded a growth rate of 8 per cent and the production of fruit experienced a growth rate of 81 per cent. Accordingly, exports have increased from 6,175 metric tons in 1995 to 9,000 metric tons in 2000 and 31,000 metric tons in 2009, an increase of about 5.5 per cent per year. The main target markets for exports are neighbouring countries and the European Union (Ndoye-Niane, 2004; Senegal, National Agency of Statistics and Demography, 2006–2010).

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However, for horticulture as well as for other agricultural products, the main constraint on exports remains the non-compliance with quality standards, including sanitary and phytosanitary (SPS) standards (Mbaye, 2005). The aflatoxin contamination in peanuts, excess levels of pesticide residues in fruit and vegetables, calibration problems and treatment for gum arabic are obstacles to exports of Senegal's agricultural products. In addition to price competitiveness, quality standards are a challenge for agriculture in Senegal. Unsustainable production practices, which often result from low levels of training and information available to producers, continue to prevail on a large scale in the agricultural sector in Senegal. According to available data in the horticultural sector in the suburban area of Dakar, only 27 per cent of producers are aware of sustainable practices in horticultural production (Gueye, 2009).

The horticultural industry is particularly threatened by a considerable loss of performance due to the high levels of pest contamination. As a result, even when all the agro-climatic conditions are met, a good harvest is not guaranteed. In response to this, the over-use of pesticides often remains the first option to eliminate parasites. A wide range of pesticides is being used to fight against pests and diseases in the Niayes area. Some pesticides (methamidophos, dicofol, dimethoate, malathion, Tamaron, batik, dursban and sulphur) are known for their high efficiency over a large range of different kinds of pests. Other ranges of pesticides are also effective, but their scope is generally more limited, not exceeding one or two pests. Whatever their nature, the over-use of pesticides today is a real threat to the quality of fresh fruit and vegetables, and a real danger to public health. Pesticides are often applied just before harvest and prescribed doses are rarely maintained. This explains why pesticide residues are often found in fresh fruit and vegetables in abnormal doses (Cissé and Fall, 2001).

This chapter seeks to assess the impact of pesticide use on the international competitiveness of the horticultural products of Senegal, using the Ricardian theory of comparative advantage. The model will be adjusted to capture quality as a determinant of export. The chapter is organized as follows: Section 5.2 reviews the SPS standards governing world trade in horticultural products. Section 5.3 presents a review of the literature on the concepts of price competitiveness and quality competitiveness. The conceptual framework of the research is presented in Section 5.4, followed by the results of the model in Section 5.5.

5.2 SPS and trade of Senegalese horticultural products

In recent years, the public health implications of certain diseases of animal or vegetable origin were widely publicized following the spread of some important epidemic and epizootic diseases, such as bovine spongiform encephalopathy (BSE) and certain diseases related to the H1N1 virus.

The application of the SPS measures has resulted in an increasing need and interest by governments to regulate international trade in ways to protect the health and well-being of the consumer. Originally, the application of standards was limited to homogenized products marketed but it has gradually been transformed into rules to protect the health of consumers. In order to maintain or increase their market shares, many private companies have gradually developed strategies to meet consumer demand and have increased the differentiation of their products. Through this set of requirements that directly affect the production process, many companies were able to gain significant sales niches in global trade.

The WTO does not provide for quality standards (SPS) per se, but refers to existing international standards. Its members are encouraged to ensure the application of certain standards of quality, which include those related to the International Plant Protection Convention (IPPC) for plant protection, the World Organisation for Animal Health (OIE) and Codex Alimentarius for food security. The latter organization was founded in 1963 by the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO). It sets standards, guidelines and codes of practice to protect the health of consumers and to ensure best practices in food trade. It should be noted, however, that there is no body for the international harmonization of the implementation of these standards and thus they are subject to quite different regulations in different countries. On the European market, which is the main destination for Senegalese products, three organizations are involved in the design and implementation of European legislation: the United Nations Economic Commission for Europe (UNECE); the European Union (EU), which, through its Parliament and Commission defines recommendations, directives and regulations which are Commission rules; and the Organisation for Economic Co-operation and Development (OECD), which ratifies the UNECE texts and publishes explanatory brochures on regulatory texts for the bodies (European Union, 2001).

The issue of pesticide residues has become a hot topic over the past several years in Europe. Many guidelines have been established in connection with the definition of maximum residue limits (MRLs) allowed. European legislation has set limits on pesticide content depending on the type of product: fruit and vegetables, cereals, food of animal origin and others. MRLs are not yet fixed at the same level in different countries, as each country is free to change national legislation guidelines. It was not until 2005 that MRLs were harmonized for all member countries and all food products.

In Senegal, a study supervised by the Senegalese Agricultural Research Institute (ISRA) and another study by Fondation CERES-Locustox (CLX) (2008) on the issue of pesticide residues on horticultural products in the Niayes area revealed significant discrepancies between MRLs and the levels of residues of chemical pesticides found in vegetables grown in the Dakar urban periphery (see Table 1).

Table 1 Comparison of MRLs and the levels of contamination observed in horticultural production in the area of Les Niayes (standard unit measurement)

Pesticide	Cabbages		Eggplant		Lettuce		Tomato		Onions	
	Residues	LMR	Residues	LMR	Residues	LMR	Residues	LMR	Residues	LMR
Deltamethrine	0.2	0.1							0.13	0.1
Dicofol	0.04	0.02	0.18	0.02	0.07	0.02			0.03	0.02
Methamidophos	0.06	0.01	0.06	0.01	0.14	0.1	0.06	0.01	0.07	0.01
Manèbé	5.12	1	3.63	2	9.10	5				

Source: ISRA, Codex Alimentarius.

The Fondation CERES-Locustox (2008) study revealed the presence of five organophosphorus pesticides and eight organochlorine pesticides on vegetables in the market. Among these were cited pesticides such as dieldrin, DDT (dichlorodiphenyltrichloroethane), aldrin and heptachlor, which are on the list of “the banned twelve” of the Stockholm Convention on Persistent Organic Pollutants (POPs). Other pesticides commonly used in locust control have also been found in samples analysing vegetables: ethyl chlorpyrifos, malathion and fenitrothion.

In terms of public interventions, there is also a real deficiency in government agencies responsible for the implementation of SPS standards in agricultural and agro-food activities. Despite the existence of an important legal mechanism that regulates the use of pesticides and the implications for some donors in bringing about relevant regulatory procedures, Senegalese horticultural products still face barriers to SPS standards for market access in the EU (Gueye, 2009). Alternative methods of prevention and fighting against parasites were tested through several development projects. These methods apply both to the adoption of sustainable production routes and the use of biological pesticides, but they are mostly ineffective and also very expensive. Moreover, the inputs necessary for their implementation are not always available in the domestic market.

5.3 Price competitiveness versus quality competitiveness: a brief survey of the literature

Despite the preponderance of analyses of international competitiveness based on price and production costs, the issue of quality emerges increasingly as an anchor point in determining the performance of countries in terms of exports and market share (Henson et al., 2002). Due to the consideration of quality as a strategy for product differentiation, the international market for agricultural products is becoming

more and more like a monopolistic form of competition, whereby product differentiation gives way to niche markets for producers. The strategy, for a company, is to provide a product that is distinct from that of its competitors. Differentiation can also be the result of a marketing and advertising campaign targeting consumer preferences (subjective differentiation) (Lancaster, 1979).

The implementation of this differentiation is related to the existence of a real value chain in which different actors are linked by flows of goods and information. Diemer (2001) noted that the main objective of the farmer is primarily to market products likely to generate a positive margin. These margins reflect price competitiveness (productivity, exchange rate) or competitiveness not related to price (innovation, quality and organization).

Since Akerlof (1970), economists tend to predict that, when quality is mastered, the low-quality products tend to crowd out the market areas of high quality. Thus, if we consider the decision of a consumer to buy a product, when they are not sure of its quality, they will not pay more than the expected quality.

Fleckinger (2007) studies “experience goods” which are goods consumed by the consumers themselves or by experts. One speaks of an “experience good” when the consumer buys in a repetitive way: after experiencing the poor quality of the product, the consumer will make a decision and then replace the product with another product or will make a decision not to buy the product any longer. However, this requires, first, that the consumer’s relationship with the producer is a long-term one and, secondly, that the producer’s firm is identified with every purchase.

The latter condition fails if there is a lack of traceability, if the consumer has a limited memory, or if the frequency of purchases is low. In the case of limited information, the public signal becomes an important remedy. This signal can be provided by experts or by a certification by buyers who come from different types of consumer networks. There are two distinct classes of “experience goods”. In the first class, the consumer knows the producer. In the second class, the consumer does not know the producer and it will be very costly for the consumer to identify the producer. Agricultural products correspond to the second class. When goods are imported, identifying the producer of a particular good can be very expensive for the consumer, who tends to impute the collective reputation of such types of goods. Rouvière and Soubeyran (2008) give two aspects of collective reputation:

- the producers are still under the influence of the behaviour of others amongst them
- the collective reputation can be underpinned by a bonus system that would encourage good practices in some industries.

Tirole (1996) considers the collective reputation to be the aggregate of individual reputations. According to Winfree and McCluskey (2005), collective reputation is a collective property of the companies involved. In markets with collective reputation it is difficult to maintain high quality production. Akerlof (1970), in his famous article on "lemons", interprets this as a characterization of the danger of the collective reputation in the market for used cars.

5.4 How to predict the level of exports subject to quality limitation: a conceptual framework

The Ricardian model focuses on labour productivity and labour costs as determinants of comparative advantage. Relative unit labour cost (c) of sector i for country j , with respect to country k , is defined (Golub and Hsieh, 2000; Mbaye and Golub, 2007) as:

$$c_{ijk} = a_{ij}W_{ij}/a_{ik}W_{ik}e_{jk} \quad (1)$$

Where $(1/a)$ is the marginal productivity of labour, w is the wage rate and e is the bilateral exchange rate between the two countries. According to the basic Ricardian model, country j will specialize in the production of good i for which $c_{ijk} < 1$, and country k in the production of good i for which $c_{ijk} > 1$. Using this analytical framework, Mbaye and Golub (2007) study the competitiveness of Senegalese industry using two indicators: relative unit labour cost (RULC) and the relative producer price (RPP). This article is an extension of their 2002 study on the measurement of competitiveness based on RULCs. The RPP indicator they use is measured as follows:

$$PC_i = \frac{eP_{ij}}{P_{ik}} \quad (2)$$

P_i is the producer price of sectors in country j and k respectively. Mbaye and Golub (2007) conclude that the two measures of competitiveness are strongly correlated. Using their specification of exports, adjusting prices for quality and log-linearizing yields:

$$\log(EXAG_{it}) = \alpha \log(CA) + \beta \log(WDEM) + \log(QUALI) + \varepsilon_{it} \quad (3)$$

EXAG is the real agricultural export and CA is the index of price competitiveness, measured alternatively as ULC (unit labour costs) and PP (producer prices). WDEM_{*i*} is the global demand for good i . Finally, QUALI is an index of quality.

For each horticultural speculation considered, and for each country, ULC indices and PP indices are computed. The level of world aggregated imports was used for each speculation as a proxy of global aggregate demand for each product.

The model was estimated using ordinary least squares (OLS) and the results are presented in Table 2. A potential problem is that, when quality is low, exports are dramatically discouraged and can even turn out to be nil when exported goods fail to meet international standards. Hence, the export variable is censored and OLS regressions are likely to be biased. To address this issue, the Tobit two-stage estimation technique (Heckman, 1979) with a two-stage regression is used. First, the probability is estimated of having a non-nil level of exports:

$$z_i^* = w_i \gamma + \mu_i \text{ (selection equation) (4)}$$

where z_i^* is the probability of having a positive level of exports in a binary setting.

The second stage regression is done using the following equation:

$$y_i = x_i \beta + \varepsilon_i \text{ (substantive equation) (5)}$$

with y_i observable only when the level of exports is different from zero.

The Heckman two-stage procedure consists of first estimating regression parameters using a maximum likelihood Probit model (selection equation), and then estimating a substantive equation by OLS. Once the selection equation is estimated, the residuals from this equation are used to form a new variable called the Inverse Mills Ratio (IMR - λ). For each observation, λ is the instantaneous probability for this observation to be excluded from the sample. When it is assumed that the error term is distributed according to the standard normal distribution, λ is measured as the ratio of the standard normal probability density function to the cumulative density function. Each individual in the sample receives an individual IMR, based on the residual observed for that individual in the selection equation. The IMR is included as an explanatory variable in the substantive equation to correct for the bias associated with censoring non-positive observations in equation (2) (Heckman, 1979, 1998). When the dependant variable in the substantive equation is continuous, as in our case, the Heckman method provides consistent estimates. But a major limitation of this methodology is its great sensitivity to the quality of selection model specification. If the model is not well specified, and the variables in the selection model do not correctly predict level of exports according to quality limitation or to other factors, then the method may have limited power to detect bias. The results of this procedure are presented in Table 3.

Table 2 Estimation results obtained from Equation 3

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Export	Export	Ln (Export)	Ln (Export) share	Market share	Market share	Ln (Market share)	Ln (Market share)	Growth Rate EXP	Growth Rate EXP	Growth Rate EXP	Growth Rate EXP	Growth Rate EXP	LMR
Producer price	-41.8039 [*] (21.594)				-0.0000 ^{**} (0.000)				-0.0025 (0.011)					
Demand	0.0459 ^{**} (0.005)	0.0470 ^{**} (0.005)			-0.0000 ^{**} (0.000)				0.0000 (0.000)	0.0000 (0.000)				
Premium	35,341.1438 ^{**} (14,537.662)	35,933.0092 ^{**} (14,769.338)			-0.0023 (0.006)				-6.3597 (7.046)	-6.9479 (6.929)				
Unit cost of labour		-54,966.7049 (56,468.092)			-0.0668 ^{**} (0.024)				16.9004 (23.854)					
Log (Producer price)			-0.3080 [*] (0.158)				-0.2447 (0.173)							
log (Demand)			0.3658 ^{**} (0.093)	0.4476 ^{**} (0.109)			-0.7314 ^{**} (0.102)	-0.6231 ^{**} (0.118)						
Log (Premium)			0.1986 ^{**} (0.061)	0.1868 ^{**} (0.061)			0.1949 ^{**} (0.067)	0.1863 ^{**} (0.066)						
Log (Cost of labour unit)				0.0465 (0.094)				0.1033 (0.103)						
Constant	-3,368.2925 (48,078.935)	-17,823.1397 (71,028.717)	5.3785 ^{**} (2.017)	2.6574 (1.687)	0.0760 (0.030)	0.0696 (0.042)	6.1785 ^{**} (2.151)	3.6695 ^{**} (1.774)	6.7280 (10.595)	4.4690 (9.105)	-23.2144 (63.372)	-80.4988 (47.207)	4.9308 ^{**} (2.143)	-6.3941 ^{**} (1.514)
Observations	340	340	340	340	340	340	340	340	323	323	323	323	340	340
Number of countries	6	6	6	6	6	6	6	6	6	6	6	6	6	6

Source: Authors' calculations based on econometric research.

Note: One asterisk indicates significance at 10 per cent; two asterisks, significance at 5 per cent; and three asterisks, significance at 1 per cent.

Table 3 The Heckman two-stage estimation of exports

		Coef.	Std. Error	z-Stat	P-value
Selection equation:	Dependant variable = log(export/VA)				
	log(cost of unit labor)	1.103	0.533	2.07	0.038
	log(demand)	0.822	1.370	0.60	0.549
	log(premium)	0.767	1.631	0.47	0.638
	constant	-2.098	3.256	-0.64	0.440
Substantive equation:	Dependant variable = log(export)				
	log(cost of unit labor)	0.137	0.099	1.38	0.168
	log(demand)	0.410	0.148	2.78	0.005
	constant	-3.289	1.770	-1.86	0.063
	Mills Inverse Ratio	0.818	1.606	0.51	0.579
	Wald chi2	9.09			
	Prob > chi2	0.03			
	Observations	459			
	Censures observations	19			

Source: Authors' calculations based on econometric research.

5.5 The results of the analysis

The data used in this study are mainly from the FAO database. Data on production, prices, exports and global demand are from the United Nations Commodity Trade Statistics database (UN Comtrade), data on exports are from the United Nations Statistical Division database (UNdata), data on agricultural value added, intermediate consumption, production, producer price index and employment are from the World Bank, and data on wages are from the International Labour Organization (ILO). These databases are very limited because of series that are often incomplete, especially for African countries. Data were cross-checked as much as possible and extrapolation methods were used to complete the series.

The analysis focuses on three main products exported by Senegal: mangos, green beans and tomatoes. Senegal's main competitors for these products are Burkina Faso, Kenya, Mexico, Morocco and South Africa. A premium on quality is observed if a country receives more compared with the price set in the international market (Aiginger, 2001). This premium was estimated as the ratio between the unit price of a given product and its world price. If the ratio is greater than 1, it means that the country has benefited from a quality premium.

Table 2 gives the estimation results obtained from Equation 3 above, with different specifications. Exports are introduced alternatively in log or in share of value added. Competitiveness indices are significant with the expected sign, as well as the variable representing premium quality. This shows that, in addition to cost constraints and price, variables related to quality are just as crucial for exports. Using the Heckman two-stage methodology does not alter these conclusions. The use of such methodology is made relevant by the fact that failure to comply with SPS standards may result in lowering or even impeding exports. That is the case for many products in African countries. Work by Mbaye (2005) shows that exports of confectionery groundnut by Senegal are significantly limited by the high levels of contamination of Senegalese products by aflatoxin. Of 60 thousand metric tons of confectionery groundnut produced, less than a thousand metric tons actually pass the SPS standards barriers to enter the European markets. The study further reveals that most of this share is in fact destined for bird feeding instead of human consumption. Likewise, pineapple juice produced in Benin, Togo and other West African countries is hardly exported at all. Taking into account these zero export levels means that this variable is censored, and using the Tobit method leads to the confirmation of the results obtained with the baseline regressions. That is, while real exchange rate variables have an important explanatory power on exports, quality variables are also critical in determining a country's international competitiveness.

The results of the baseline regression are displayed in Table 3. The Wald statistic is 9.09 for the baseline regression, so the hypothesis that all the regression coefficients are zero is rejected. The selection equation was estimated using the whole set of observations, including those which have a positive level of exports and those which do not. For the second stage regression, only the observations from countries that have a positive level of exports were used. The results indicate that, for the selection equation, the exchange rate variable is significant while the world demand variable is not.

5.6 Conclusions and policy recommendations

This chapter has focused on quality competitiveness as opposed to price competitiveness. Using the Ricardian comparative advantage framework adjusted with a quality index, significant estimates for both sets of variables were observed. These results are also robust to several alternative specifications. The methodology was used on horticultural products, namely mangos, green beans and tomatoes, and the sample countries were Burkina Faso, Kenya, Mexico, Morocco, Senegal and South Africa. Since observance of SPS standards is critical for exports of such goods, exports can be impeded by failure to meet such standards. To take into account this censored variable in some instances which might bias the estimates when OLS are used, the study resorted to the Heckman two-stage estimation

technique which confirmed the same significant relationships. This indicates that quality is at least as critical as price variables in determining competitiveness and exports. Hence, quality management should be given due attention in domestic trade policies as well as in the Aid for Trade mechanism.

Clearly, Senegal has great potential to boost its horticultural production and exports if the quality issue is properly addressed. According to FAO (1966), it is highly possible for developing countries to diminish their levels of pesticide residue contamination dramatically by sticking to some good practices which have been developed through research. For example, by mixing biopesticides and chemical ones, producers may be in a better position to meet most SPS requirements from importing countries. Furthermore, studies on the pesticides industry in Senegal (Cissé and Fall, 2001) reveal that most hazardous pesticides used in the country come from artisanal production or imports of counterfeit pesticides. Hence, the Government should develop its capabilities in investigating and cracking down on such activities.

In Senegal, a special unit within the Ministry of Agriculture, the Directorate of Plant Protection (Direction de la protection des végétaux, DPV) is in charge of quality inspection of horticultural production prior to its exportation. But it is under-funded and under-equipped, and thus has difficulties fulfilling its mission. Support from both the Government and donors could bring to DPV the necessary expertise and instruments to carry out effective inspection for items destined for both domestic consumption and export.

In order to address the SPS challenges facing horticultural exports, beyond mitigating the uncontrolled use of pesticides, an appropriate policy of packaging of goods is also needed. Products are, in general, sent abroad without proper packaging, which further deteriorates their quality. Given the highly perishable character of these products, a system of storage at the airport is needed to ensure that they are not damaged during transportation to external markets. Such a facility was set up at the airport in Dakar in 2012 but, regrettably, its limited capacity poses a real constraint for the booming horticultural exports.

While these adjustments are needed on the supply side of fruit and vegetable exports, efforts are also needed on the demand side. Most importing countries set their SPS standards at very high levels, which are often difficult to meet by exporting developing countries. Hence, rather than protecting consumers against health hazards, the reality seems to point in the direction of SPS standards acting as non-tariff barriers.

To conclude, both importing and exporting countries should work together to ensure that WTO rules are fully observed so as to guarantee consumer health and protection while, at the same time, avoiding restrictions in trade.

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6 Can developing countries use SPS standards to gain access to markets? The case of Mercosur¹

*Valentina Delich and Miguel Lengyel**

6.1 Introduction

The role of sanitary and phytosanitary (SPS) standards in agri-business has changed over the past decade, from being a technical instrument to avoid the use of food safety, animal and plant health measures for protectionist purposes to being a competitive instrument in differentiated product markets (Reardon et al., 2001). The change from mass markets to differentiated and niche markets for consumers with higher purchasing power triggered this shift towards SPS measures as a strategic tool for developing and differentiating markets, gaining market access, coordinating the quality and safety of the food system and defining market niches for those products. On the demand side, high-income consumers with varied and sophisticated tastes have buttressed this change and, on the supply side, so have production, processing and distribution technologies that allow for product differentiation and market extension and segmentation (Reardon et al., 2001).

Governments in emerging markets face a dilemma with respect to SPS standards: if they set “inclusive” standards for local firms, they do not incentivize the adjustment of SPS standards to the more dynamic source of demand (the global market); on the other hand, if governments create or accept higher, more “exclusive” standards, they risk allowing only a few firms to access the global market. An additional challenge comes from the fact that the privatization of standards will likely continue simply because it gives competitive advantages in an increasingly contested market (Reardon et al., 2001).

* The contents of this chapter are the sole responsibility of the authors and are not meant to represent the position or opinions of the WTO or its members.

Against this backdrop, how has Mercosur (Mercado Común del Sur or Southern Common Market) dealt with this challenge? Has it been a working platform for helping member countries to strengthen their standard-setting capacity? If so, what have been the main dynamics? This chapter addresses these questions by exploring two main issues: first, the key strategies of regulative integration in the SPS area of Mercosur and, secondly, the “SPS standards dynamics” in terms of two selected products, apples and rice.

6.2 Mercosur institutional architecture: creation and dynamics of SPS norms

Mercosur's Common Market Council (CMC) is charged with giving political direction to the integration project, while its executive organ is the Common Market Group (CMG) which, under its aegis, has created technical support groups: sub-working groups (SGTs, according to its Spanish acronym) and technical committees (CTs). In addition, when the customs union was established in 1994, authorities decided to create the Mercosur Trade Commission (MTC) to deal with issues concerning the customs union's implementation. Three organs have the power to take binding decisions, i.e. to create norms: the CMC, CMG and MTC. Most SPS norms are “resolutions” dictated by the CMG.

The legislative process in Mercosur has three stages: the elaboration/negotiation of the norm within technical groups, the approval of the project as a regional norm by the CMG or CMC (depending on norm content), and the incorporation of the norm into the domestic legal system by an administrative or legislative act (depending on the requirements of the domestic juridical system). Mercosur has regulated in a detailed way the process of norm building and approval at the regional level (CMC Decision 20/02), has mandated norm internalization by the domestic legal system (Ouro Preto Protocol) and has established that regional norms are not operative until internalized by all members. However, crucially, it has not created specific mechanisms or instances to monitor jointly how members implement regional norms at the domestic level. In addition to being a problem for Mercosur's transparency and the information at its disposal in making informed decisions, this lack of a monitoring mechanism makes the gathering of information on the impact of the regional regime on members more difficult.

Although three organs are entitled to create norms (CMC, CMG and MTC), most norms are the result of work by the technical bodies. There has not been a case where, for instance, the CMG has changed the technical content of an SPS norm. Also, in practice (at least in respect of SPS norms), some stages foreseen by Decision 20/02 are not complied with, in order to speed up the decision-making process.

This occurs particularly with the domestic consultation process that, in practice, takes place only for a few days (shorter than was foreseen). Although this could give the impression that Mercosur's norms creation process is detached from national institutional structures and influences, that is not the case. On the contrary, specific instances of national consultation are not crucial because Mercosur delegates are national officers whose main work is at the national level within national structures. Each regional officer is, basically, a national officer who participates in a regional process. Thus, national officers directly impact on and participate in the process of creation of the regional norms since those officers are part of national ministries, secretariats, health protection services – in sum, all agencies that carry forward national SPS policies.

It is worth noting that there is no such thing as a Mercosur SPS policy; the mandate is meant not to obstruct trade unjustifiably, and to harmonize norms if required.

The need to strengthen Mercosur's institutional architecture, in particular its norm creation and implementation mechanisms, has been widely documented both by scholars and in official Mercosur documents.² The main problem remains the gap between created norms and internalized norms (or, to put it slightly differently, between created and implemented commitments).

With regard to SPS policy at Mercosur level, at least three Mercosur members (Argentina, Brazil and Uruguay) have reasonably good SPS services; as they are very efficient global food and agricultural exporters, they are usually reluctant to set apart their national practices and standards. In addition, it is worthwhile stressing that in the SPS field, particularly in relation to SPS rules or disciplines (as opposed to standards), the WTO has been, and is, very influential on the Mercosur SPS norm framework and on Mercosur members. Accordingly, in this chapter we will first review Mercosur dynamics at the regional level with regard to national policies, tackling the issue of standards, then move on to the impact and role of the WTO SPS Agreement on and with regard to Mercosur, tackling the issue of rules.

The 1991 Treaty of Asunción (Mercosur's founding treaty) foresees the creation of a common market, establishing that members should achieve free circulation of goods, services and factors of production. Free circulation of goods, a central pillar of the economic integration process, would be achieved by the elimination of both tariff and non-tariff barriers or equivalent restrictions. The Treaty considers "restrictions" (or non-tariff barriers) to mean any administrative, financial, foreign exchange or other measures by which a state party unilaterally prevents or impedes reciprocal trade (art. 2, Annex I).³ Such a wide definition (elimination of all restrictions) was subsequently fine-tuned to recognize some types of trade restriction which are not prohibited but would need some kind of harmonization in order to facilitate trade. This would be the case for SPS measures.

In the SPS field, Mercosur went from a full to a narrow harmonization process. In effect, in the early Mercosur, the harmonization strategy included the elaboration of a "Mercosur Code". The idea was to harmonize every one of the operative SPS norms in each Mercosur member state and in Mercosur overall. This is why some authors have interpreted Mercosur SPS policy as being of a "European type" (Berlinksy, 2002). Other authors have seen the explanation of such "interventionism" in Mercosur's legal tradition, namely, continental law, and have exemplified this deep and detailed regulation policy preference with the case of dairy (Duina, 2006). However, harmonization in dairy was at that time, as it still is today, a very successful and exceptional case in Mercosur, in terms of both the booming of the sector due to Mercosur's creation (resulting in an enlarged market and emerging scale economies) and the harmonization of norms at Mercosur level, driven by a small group of national and multinational firms.⁴

Mercosur's SPS full harmonization policy was revised because of the technical complexity required to carry it forward, and a "default" strategy replaced it: countries need only harmonize those regulations that are strictly necessary to facilitate intra-bloc trade. The need to harmonize may arise, then, from the volume of trade at stake or due to other difficulties; therefore, there is no longer any ex-ante harmonization but ex-post, ad hoc harmonization linked to export prospects or concrete operations. This move has been reinforced, as noted by several Mercosur officers interviewed, by the fact that Mercosur member countries are very reluctant to harmonize norms because they consider current national practices and standards to be successful.⁵ Therefore, the SPS harmonization process is limited to just what is needed to keep intra-Mercosur trade flowing. As Brazil is the main destination of intra-bloc trade, it acts as an importer and attempts to use its local legislation as regional legislation. In a sense, the object under these conditions is to "mercosurize" Brazilian legislation.

At this point, it seems that this is more about national influence and control over Mercosur's movements than about Mercosur, as a distinct entity, tailoring national standards and practices or even providing a space for mutual learning. However, Mercosur's conflicts/needs are only one source of Mercosur SPS norms. Indeed, as cogently pointed out by some authors (Leavy and Saez, 2010), some international organizations influence Mercosur's SPS standards as well as Mercosur members' standards a great deal. Just to take a telling case, Mercosur's Animal Health Technical Committee works in permanent contact with the World Organisation for Animal Health (OIE), to such an extent that in terrestrial animal illness the Committee usually limits itself to established OIE standards. The Committee's norm production has developed towards unifying standards for intra-bloc trade and imports from third parties using OIE standards; however, as not all countries have the same sanitary status, it is not always possible to refer to the OIE standards. In this case, when the OIE standard would impede intra-Mercosur trade, Mercosur members create an

“escape clause” at the Mercosur level by which countries may allow imports to proceed even if they do not meet OIE standards.

The public sector it is not the only sector pressed to adopt OIE standards. The private sector in developing countries is heavily influenced, if not determined, by OIE standards if it wants to get into export markets.

On top of all this, there is still the issue of “rules, principles or SPS disciplines”. In effect, in the case of standards, national dynamics are dominant in terms of Mercosur SPS policies and the influence of international standard bodies such as the OIE and the Codex Alimentarius as well as of private standards (that come into the picture as destination market access conditions) is soaring. However, in the case of SPS disciplines, the WTO stands out as a decisive, almost unique, actor.

In 1995, a few years after the creation of Mercosur, the WTO (and the SPS Agreement) took centre stage. Mercosur, as a customs union, was notified to the WTO as a regional agreement under Article XXIV of the General Agreement on Tariffs and Trade (GATT) and thus it is not a WTO member. All Mercosur members are individually WTO members and so they have also individually signed the SPS Agreement; however, Mercosur has made the SPS Agreement a Mercosur norm. In effect, Decision CMC 6/96 is the SPS Agreement.

From the raft of consequences which arose from signing the SPS Agreement, one stands out for this chapter: the Agreement challenged the regional project insofar as it has provided a minimum set of more articulated and deeper rules than those available in the regional instance as well as a forum to debate, negotiate and eventually solve conflicts on SPS matters.

When the SPS Agreement came into force (1995), Mercosur did not have any SPS norm covering principles, as the SPS Agreement does. It is true that it had Decision 6/93, but that simply replicated the SPS draft agreement (as it had been in 1993). Later on, in 1996, Mercosur adopted (through CMC Decision 6/96, which replaced Decision 6/93) the WTO SPS Agreement as the Mercosur norm, replacing the draft version. Since the SPS Agreement has been in force, dialogue over a lot of SPS issues has moved to the multilateral forum and many conflicts have been brought into the WTO dispute settlement system. In addition, as the SPS Agreement works as the “floor”, the minimum regulatory standard every WTO member must respect, current SPS negotiations at bilateral or regional level have become characterized as WTO-plus or WTO-compatible or WTO standards, etc.⁶ Thus, the SPS Agreement has given Mercosur a common and shared legal framework, opened a new space for debating and negotiating SPS issues, and offered a dispute settlement forum.

6.3 SPS public policies and private standards

There are certainly many paths and sources for the creation of a regional (public) SPS standard. Since this chapter has a regional focus, some regional norms appear similar, even identical, to national standards, others incorporate internationally adopted standards, and still other standards result from harmonization to fix intra-bloc trade problems. As discussed in the previous section, Mercosur is not in fact the locus of the creation or deep revamping of norms. Rather, the upgrading of quality and safety standards is basically market driven, either by industry or export market destination. What is the role that private standards play in this scenario and how do they interact with public policy responses?

Many private SPS standards affect trade, notably in developed-country markets. Basically, there are companies' private voluntary standards (PVS), national collective PVS and international collective PVS. Examples of the first are Tesco's "Nature's Choice" and Carrefour's "Filière Qualité". Examples of national collective systems are the British Retail Consortium Global Standard, the Label Rouge and the Food and Drink Federation. Examples of international collective systems are EuropGAP, ISO 22000 and ISO 22005 (WTO, 2007).

The WTO has highlighted the diversity of systems, the tendency to harmonize them within a sector (along the production chain) and the way the distinction between voluntary private and public norms tends to disappear whenever the former becomes widely accepted and required for market access (WTO, 2007). According to the WTO (2007), governments have two concerns associated with private norms: their content in terms of the lack of scientific justification and the internal capacity of developing countries to comply with them. In Argentina, while some producers and firms emphasize the benefits of private standards in terms of market access, improved production or company management, new and greater environmental consciousness, product differentiation, and better prices and traceability, others highlight increasing costs and requirements, a lack of harmonization of different standards, a lack of resources to carry standards forward and, sometimes, a lack of product differentiation (Alonso and Idigoras, 2011).

By means of a questionnaire put to its members, the WTO has found that the most affected products are fresh ones – fruit, vegetables and meat – while the main affected markets are Australia, Canada, the European Union (EU), Japan and the United States (WTO, G/SPS/GEN/932). As seen from the standpoint of Argentina's export basket, the development of the EU's private standards affects products such as fruit, soy, oils and meat, while US standards affect products such as concentrated apple juice.

In Argentina, policy responses to the development and consolidation of private standards have not been homogeneous. While the Government has not, so far, implemented an across-the-board policy related to quality private standards at the domestic level, it has sometimes associated itself with their development by incorporating them in some products or circumstances (for instance, while hazard analysis and critical control points [HACCP] is still voluntary within the domestic market, it is mandatory for exporters). In other cases it has created specific programmes for working with the private sector (for instance, the Fundación Pro Arroz programme discussed below). It must be noted that the private sector's response to the increasing number and importance of private standards and certification is also heterogeneous, depending on the structure of the sector and the culture of innovation, size or capacity of firms.

This section does not attempt to provide a detailed account of PVS affecting the production, marketing and export of selected products but to shed light on the public action (policy responses) to deal with SPS standards in export markets. It will do so by considering two questions: How is it that Argentina was a leading exporter of apples two decades ago and that now 50 per cent of its production goes into the processing industry because quality is not high enough for the apples to be sold fresh? How was it possible for rice production in the Entre Ríos province to move within 10 years from a low-quality, commodity-oriented, inward-looking pattern into a high-quality, increasingly sophisticated niche-market, export-oriented strategy?

Fresh fruit: the case of apples

In the case of fresh fruit, the general prevailing pattern is that there is neither an articulated public policy nor a private-public initiative to deal with standards. The argument in favour of policy intervention is at best ambiguous, as there are arguments against intervention on the grounds that the state promotion or adoption of current PVS would validate private sector standards without scientific justification and just for the sake of serving more valuable consumption niches.

To make things more complicated, private standards are not only proliferating, but the hierarchy between them and public standards is not unambiguous (for instance, some private standards are higher than public ones, as is the case in the Maximum Limit of Residues Standard), and firm choices vary across the broad gamut of available options. In this complex and dynamic setting, Argentinian producers agree on the problem of the lack of standards harmonization and on the fact that initiatives to address it – such as the Agricultural Good Practices Handbooks – usually provide such low standards that they do not facilitate exports. In addition, there are private standards that have to be carried forward by the state (as is the case in the management of empty pesticide packages) because PVS mandate an official

system for such management (which does not exist in Argentina) or for the management of the registry of pesticides, that is also public and sometimes outdated (Alonso and Idigoras, 2011).

More particularly, apples and pears, together with lemons, are the products with the greatest economic relevance within the fruit sector. While apples and pears are produced in the south of Argentina (through 3,000 producers, 300 packaging companies and 250 cold storage firms), lemons are produced mostly in a tiny province, Tucuman, in the northwest, through a highly integrated and concentrated form of production. Argentina is now the second highest global exporter of pears, and is also rapidly gaining ground for lemons, while for apples it has fallen from second to ninth place in global exports over the last two decades.

There are six important apple producers in the world in terms of exports (Argentina, Australia, Brazil, Chile, New Zealand and South Africa), which harvest 4.8 million tons per year. Today, Argentina's share is 20 per cent of the total production of these six big producers, but two decades ago its share was 37 per cent (see "La producción argentina de manzanas ...", 2010). Furthermore, 50 per cent of Argentina's apples go to the processing industry (for concentrated juice), 21 per cent are exported and 29 per cent are sold in the domestic market. Apples sold to the processing industry are discarded apples, which do not meet quality standards to be sold as fresh. The processing industry makes products such as concentrated juices, cider and marmalade out of these apples. The main export destinations for Argentina's apples are Brazil, the EU, Russia (see "La producción argentina de manzanas ...", 2010) and the United States. But while the EU absorbs 46 per cent of fresh apples, 95 per cent of concentrated juice goes to the United States. In terms of the amount of discarded production, Argentina leads by far with 50 per cent going to the concentrated juice industry.

Why has Argentina been losing global market share? Basically, producers did not renew their varieties and maintained a focus on Delicious, a variety that has been displaced by other varieties in the international market. Developing new and younger varieties would have required long-term investment. Crucially, Carpopapsa, a plague affecting apple production in the region, appeared 10 years ago. In a way, Argentina "dragged her feet" on this issue: competing markets such as South Africa and New Zealand started programmes of genetic improvement, restricting the use of some varieties in order to stimulate diversification. Several countries imitated New Zealand's experience of differentiating instead of homogenizing varieties, adding to this strategy the formation of exclusive alliances with distributors. In this way, they coordinated and limited the supply of some varieties (such as Pink Lady or Cameo). The key factor driving this strategic move has been the development and institutionalization of collaboration along the production chain, so that – as in New

Zealand – all main aspects concerning production, harvesting and marketing are coordinated through government regulatory committees (Preiss and Diaz, 2003).

To sum up, Argentina led apple production and exports in the 1980s in South America, then consistently lost weight (and market share) due to increasing costs, lack of coordination in exporting, a decline in quality and exchange rate overvaluation during a period of almost ten years. As some authors have rightly pointed out, “countries that have generated competitive capacities in apples, and specially New Zealand, show that those firms, sectors, regions or nations that can learn faster and better become competitive because their knowledge is scarce and cannot be easily replicated or transferred through formal channels to other firms, regions or competitors. Thus, actually, the more general and deep way to assess the logic of the most advanced forms of economic competition is learning” (Preiss and Diaz, 2003).

Rice

During the 1990s Argentinian rice production went from hope to despair in a few years. It temporarily boomed in the first half of the decade, largely driven by exports to Brazil within the framework of the newly born Mercosur; the creation of the regional market also served to attract some foreign direct investment in the context of an economic policy of abrupt economic liberalization and deregulation. This phase of fast growth gradually disappeared, however, in the second part of the decade; within the context of a fixed exchange rate regime with a grossly overvalued local currency, small producers found it more and more difficult to serve external markets (where most of local production was destined, given the low level of rice consumption in the country), while larger national and foreign producers chose a specialization strategy combining the export of paddy rice with the import of parboiled rice.

The situation became even more difficult by the end of the decade as a result, first, of the 1997 Asian crisis, and then of Brazil's devaluation of its currency in 1999. One structural condition that made these trends particularly stressful was the prevailing production pattern in the country based on low-quality, low-resistance commodity rice, heavily dependent on price competition.

In the particular case of the Entre Ríos province, one of the largest rice producers in the country, levels of production, land sowed and employment had fallen sharply by 2000. However, the situation had a dramatic turnaround ten years later. At the macro level, in the 1989-90 and 1990-91 campaigns, 16 varieties of low-quality rice were sown in Entre Ríos for a total output of 350,000 tons of paddy rice, with average yields of 4,500 kg/ha. In 2011, however, the province had become the leading high-quality rice producer in Argentina with a volume of 712,000 tons (41 per cent of total national production), although it ranks second after the province of Corrientes

in terms of area sown. This means that it is also the most productive province, with about 7.15 tons/ha compared with the 6.67 tons/ha of Corrientes. In addition, Entre Ríos accounts for about 70 per cent of the capacity for industrialization of rice production throughout the country.

Between 2004 and 2011 three new varieties of rice seed were developed with stunning market success. In addition, improvements in the management of rice farming by a large number of producers also contributed to the successful shifting of gears and upgrading of Entre Ríos' rice production model. Local rice producers almost doubled exports in the last five-year period and diversified export markets, reducing their "Brazil dependency" and even capturing, with one of their varieties, Puita INTA CL, a large share of field sown in Brazil in just a few years (from 0 per cent in the 2007-2008 campaign to 50 per cent in the 2009-2010 campaign).

The key factor explaining this impressive performance improvement was the shift in the production model by Entre Ríos' rice producers (mostly small and medium-sized firms). In a nutshell, this shift involved moving away from the prevailing but declining commodity production model, heavily dependent on the Brazilian market, to a strategy based on high-quality, high-performance seed varieties to serve increasingly diversified market niches. The underpinning of this shift was, in turn, continuous technological upgrading and innovation in both seed production and farming management.

These developments in Entre Ríos' rice production could not be understood, however, without the simultaneous development of an institutional exoskeleton in the province, Fundación Pro-Arroz (FPA), geared to promote rice, articulate the rice production chain, and improve the value-added, quality and efficiency of local rice production. Created in 1994, FPA is a public-private organization that includes all components of the production chain, is representative and has a participatory decision-making system (consensus rule). It is a network (led by Instituto Nacional de Tecnología Agropecuaria [INTA]) of different but complementary capabilities to search for, develop and diffuse new technological options and innovations.

The crux of FPA's work consists of the very effective provision of public goods for inducing and enabling producers to continuously adopt improved seed varieties and upgrade farming management practices instead of traditional protection or market intervention measures. These public goods are tailored to address knowledge, resource, regulatory or infrastructure bottlenecks or constraints which producers would find extremely difficult, if not impossible, to overcome by themselves, especially if working alone. The most relevant of these public goods are, on the one hand, the technical expertise and systematic research and development efforts to "design" new rice seed varieties as production conditions (agronomic, technical) or

market requirements (tastes, quality, health, ecology) shift; on the other, the search for new market opportunities and the generation of the required conditions to meet them (quality and phytosanitary standards, product specifications and the like).⁷

More specifically with regard to SPS regulations, FPA's work straddles three fronts. At the level of rice production, FPA has concluded the elaboration of a good practice guide (GPG) including criteria and guidelines mainly for the management of herbicides, the use of fertilizers, and soil analysis and treatment. This GPG is voluntary but intended to become a central component of a certification system in the near future. At the level of rice mills, FPA is providing technical assistance to support the efforts of firms to improve their production processes in order to certify quality through the ISO norms. Finally, with regard to exports, FPA is supporting firms to increasingly differentiate their products on phytosanitary grounds, stressing in particular the low use of herbicides as a central distinguishing trait. An additional FPA contribution, on a destination market basis, is to support the practice of some exporting firms to work together with potential or actual clients in the implementation of informal traceability schemes along the whole production chain.

6.4 Some reflections from the regional policy perspective and conclusions

Mercosur as an integration project is more than a free trade agreement or a customs union. It is a wider political project that is solidly rooted in the political discourse of our societies. However, the regional instance is not the source of unified and consistent regulatory regimes in key policy areas. The field of SPS policy is, as shown in this chapter, just a case in point: standards in this domain are defined at the national level, largely driven by export market requirements, both public and private, while rules or disciplines come overwhelmingly from the WTO (both from the SPS Agreement and through dispute settlement).

It is fair to say that Mercosur SPS policy is still defined at the national level and standards and practices are brought and powerfully defended by national officers in Mercosur meetings. National delegates composing Mercosur organs are reluctant to change their national standards and procedures. Basically, the situation in Mercosur is that the most dynamic source of standard creation is not harmonization policies or sanitary crisis but market circumstances: public and private requirements at export destinations. In addition, as intra-bloc trade is directed mainly to Brazil, Mercosur's core activity seems to be to ensure compatibility of national legislations with Brazil's. As for standards needed for Mercosur to access external partners, national officers do not use Mercosur examples to share or coordinate information to lower transaction costs or as a learning opportunity.

Traditional forms of SPS policy intervention, such as specific, punctual programmes to fight diseases, do not tackle the challenge of developing new varieties, which is increasingly praised and valued in international markets. They fall short of bringing positive pay-offs in terms of competitiveness and development impact. On the other hand, successful policy interventions deeply anchored in public–private cooperation, as exemplified in the case of rice, seem to require complex regulatory mechanisms and institutional coordination arrangements that buttress continuous improvement whose construction cannot be taken for granted.

In short, when focusing on national experiences, Argentina's apple trajectory shows clearly the failure of public policies to articulate, within the private sector, knowledge generation and its dissemination. In contrast, the case of rice in the province of Entre Ríos gives crucial insights into the network architecture and its institutional underpinnings necessary for sustained innovation. The rice example can be considered a model case for public policy design since its results were so beneficial for all stakeholders, but it seems this is not easy to replicate in other sectors.

Endnotes

1. Mercosur (Mercado Común del Sur, "Common Market of the Southern Cone") is an economic integration project inaugurated in 1991 by the Treaty of Asunción between Argentina, Brazil, Paraguay and Uruguay. The Plurinational State of Bolivia and the Bolivarian Republic of Venezuela have since acceded to the group. Chile, Colombia, Ecuador, Guyana, Peru and Suriname currently have the status of Associate States. See: <http://www.mercosur.int/>; http://www.sice.oas.org/trade/mrcsr/treatyasun_e.asp
2. See, for instance Bouzas, R. and Fanelli, J. M. (2001), *Mercosur: integración y crecimiento*, Buenos Aires, Fundación OSDE; Peña, C. and R. Rozemberg (2005), "MERCOSUR ¿Una experiencia de desarrollo institucional sustentable?", *Revista de Comercio Exterior e Integración*, marzo: 45-62, available at: <http://cei.mrecic.gov.ar/revista/02/parte%203-2.pdf>; Czar de Zalduendo, S. (2003), "La institucionalización en los acuerdos regionales: el caso del MERCOSUR" en Basevi, G. et al., *Efectos reales de la integración regional en la Unión Europea y el MERCOSUR*, Buenos Aires, Universidad de Bologna: 109; Dreyzin de Klor, A. and D. P. Fernández Arroyo, "Avances y fracasos de los esquemas subregionales latinoamericanos: el caso del MERCOSUR" en *Suplemento mensual de Derecho Internacional Privado y de la Integración*, Diario Jurídico el Dial: www.eldial.com, Ed Albremática; FESUR (2004), *Desafíos institucionales para el MERCOSUR: las relaciones entre estados, instituciones comunes y organizaciones de la sociedad*, available at: http://www.redmercosur.net/encuentro2004/ouro_preto_10_anos_despues/Desafios_institucionales_MERCOSUR.pdf.
3. The only exceptions are measures of the type envisaged in Article 50 of the Montevideo Treaty of 1980, the foundational treaty of the Asociación Latinoamericana de Integración (ALADI). ALADI is an umbrella group used in Latin America to make preferential arrangements among its members without the obligation of including substantial trade (as per Article XXIV of the GATT) and without a most-favoured nation (MFN) clause. All Mercosur members are ALADI members.

4. For very detailed studies on the dairy case, see Berlinsky (2002) and Nofal and Wilkinson (1999).
5. As a counter example of a soft harmonization, the successful negotiation of the Laboratorial Good Practices Guide could be noted.
6. See, for instance, free trade/economic association agreements signed by the EU with Mediterranean or African, Caribbean and Pacific Group of States (ACP) partners; the "Chapter SPS" states that the compromise is to respect and enforce WTO standards.
7. Other important cases include the satellite geo-referencing of water wells to build the matrix for the electrification of rice irrigation in the whole province – a critical input to drastically reduce production costs, stockpile infrastructure as the growing number of rice varieties and types demands increasing capacity of seed selection and classification, and develop new human resource skills in rice sowing in order to meet the increasingly specialized knowledge this activity is demanding.

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III

The rule of law and connecting to global markets

7 Integrating into the multilateral trading system and global value chains: the case of Russia

*Sergei F. Sutyurin, Alexandra G. Koval and Olga Y. Trofimenko**

7.1 Introduction

For most countries, foreign trade makes a critical contribution to the national economy, and the Russian Federation is no exception to this. Over the last five years the world economy has been strongly affected by the global economic crisis, which also seriously affected the Russian economy in general and its foreign trade in particular.

In recent decades, high levels of volatility in foreign trade flows have been experienced, which substantially exceeded the fluctuations of other macroeconomic indicators such as GDP and industrial production, as confirmed by national and global statistics. According to the WTO, “world trade responds strongly to variations in global economic activity ... Income elasticity – how much trade responds to change in income – has been between 1.5 and 2 over the last decade” (WTO, 2008).

When the economy is on the rise, the dynamics that this engenders lead to new market and trade opportunities, as well as to incentives for companies to expand their export and import operations. During periods of disturbance, evidently the pendulum swings in the opposite direction. When economic growth declines, foreign trade faces problems, and this is what could be observed at the very beginning of the current millennium. A contraction of the world GDP growth rate from 4.1 per cent in 2000 to 1.5 per cent in 2001 was accompanied by a corresponding contraction of world merchandise export growth from 10.7 per cent to -0.5 per cent (WTO, 2008). The situation is even worse and more threatening when there is a real recession, as is currently being witnessed. In 2009, the international community experienced a 2.2 per cent reduction of world gross product (UNCTAD, 2011). World merchandise exports contracted by 12 per cent in volume and 23 per cent in value terms (WTO, 2010). Under these circumstances, it is

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no coincidence that, given the first serious signs of a global economic contraction, world leaders at the September 2008 G20 summit clearly expressed their common concern at a possible reduction in international trade flows and the possibility of a new wave of protectionism. Most recently, the G20, meeting in St Petersburg in September 2013, again expressed its concern about continued protectionism.

It is well known that, in a world characterized by poor economic performance, there may be pressure on national authorities to conduct more protectionist trade policies. Even though the scope of the latter covers much broader issues than foreign trade per se, as it also includes domestic policies, the foreign trade aspect comes to mind first when one analyses the role of a country in international economic relations.

7.2 Main developments in Russia's foreign trade: a general overview

One can sensibly argue that foreign trade is an important element of the Russian economy. In recent years it has generated, on average, more than 20 per cent of total consolidated budget revenues. From a global perspective, Russia was among the 20 major trading nations in 2011. It occupied the ninth position among leading exporters and the 17th among leading importers of goods, with a 4.7 per cent share in the global merchandise trade, and the 22nd position in trade in exports and the 15th position in trade in imports for commercial services (WTO, 2012). Taking into consideration the historical background of the country, that it is a huge territory located in the north, the size of its population and the general level of its economic development, the importance of these rankings should not be underestimated. Table 1 shows that, in relative terms, Russia is more open than Brazil, India and the United States. Even in comparison with China, a gap exists if measured in current US dollars.

Table 1 Foreign trade quotas for selected countries in 2008, 2010 and 2011 (per cent)

Country	Merchandise (X + M)/GDP					
	(current US\$)			(PPP US\$)		
	2008	2010	2011	2008	2010	2011
Brazil	24	18.8	19.9	19	18.1	21.4
China	66	50.1	49.8	32	29.5	31.2
Germany	73	70.6	76.4	91	76.1	84.6
India	39	31.6	41.5	14	13.0	16.9
Japan	32	26.6	28.6	36	33.8	38.3
Russian Federation	48	43.8	45.0	33	23.1	27.9
United States	24	22.3	24.8	24	22.3	24.8

Source: WTO, *Trade profiles, 2008; 2011; 2012*
<http://stat.wto.org/CountryProfile/WSDBCountryPFHome.aspx?Language=E>

At the same time, the perception of the Russian economy as being very open could be challenged, as this perception is mainly based upon functional openness (actual involvement of the country in various forms of international economic cooperation). It does not take into consideration so-called “institutional openness”, which refers to restrictions on trade and capital mobility (import barriers, tariff rates, taxes on international trade as a share of current revenue, etc.). In other words, a country with higher tariff levels is less open.

Table 2 provides information on some of the changes in the key economic indicators for Russia over the last five years.

One can clearly observe in Table 2 the strong impact of the 2008-2009 economic crisis, which resulted in a decline in GDP, industrial production and investments, as well as a higher rate of unemployment. The only positive news is that the inflation rate, which had been at double-digit level, came down.

The dramatic contraction of foreign trade was, therefore, logical. At the same time, it is noted that foreign trade data are calculated on the basis of actual current value of contracts. This means that the data for 2009 were strongly influenced by a sharp reduction in world oil prices. In particular, the export price for Russian oil in January 2009 was down to US\$ 291.6 per ton in comparison with US\$ 887.4 per ton in July

Table 2 Selected Russian macroeconomic indicators, 2008-2012

	2008	2009	2010	2011	2012
GDP (% in comparison with the previous year)	105.2	92.2	104.5	104.3	103.4
Industrial production (% in comparison with the previous year)	100.6	90.7	108.2	104.7	102.6
Unemployment (% by the end of the year)	6.2	8.3	7.3	6.5	5.5
Foreign trade turnover (US\$ million)	763.5	495.2	649.2	845.8	1287.0
Foreign trade turnover (% in comparison with the previous year)	132.1	64.9	131.1	130.3	152.2
Fixed investments (% in comparison with the previous year)	109.9	84.3	106.0	108.3	106.6
Inflation (CPI %)	13.3	8.8	8.8	6.1	6.6

Source: Federal State Statistics Service (Rosstat) (www.gks.ru).

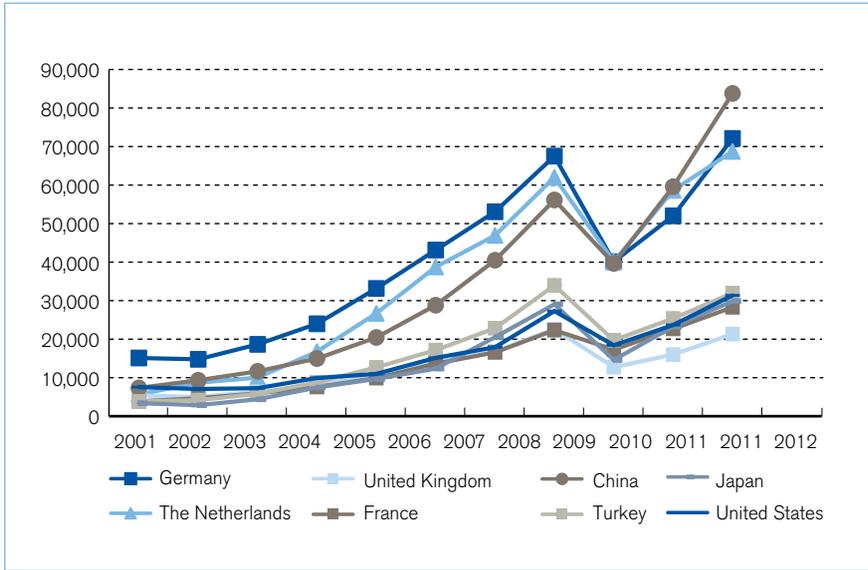
2008 (Rosstat). Other commodity prices followed a similar trend, thus affecting Russian export statistics. It seems reasonable to argue, therefore, that, for several commodity groups, the dramatic reduction of exports in 2009 compensated for the impressive expansion experienced in some earlier years, for example 2008. With respect to Russian imports, exchange rate fluctuations also played an important role and pushed the statistical data down, especially as payments in trade between Russia and its key trading partner – the European Union – are mainly made in euros. The Russian foreign trade statistics, however, are calculated in US dollars. During 2009, the euro lost 5.2 per cent of its value, on average, against the US dollar.¹ In the same period, the Russian ruble depreciated against both the US dollar and the euro (21.7 per cent and 17.5 per cent respectively in 2009),² thus making imported goods less attractive for Russian consumers. Despite the fact that, according to official statistics, real income in 2009 increased 1.9 per cent over the previous year, overall demand for foreign goods and services contracted.

As for the structural dimension, the period under review did not bring any substantial changes but rather, secured the same patterns and trends that had prevailed in the second half of the 1990s. Russian exports were, and continue to be, strongly dominated by mineral products, accounting for some 70 per cent of exports in most recent years, while the share of machines and transport units has fluctuated around 5 per cent. On the import side, machines and transport units constituted approximately half of total imports, followed by chemicals, and food and agricultural raw materials (with the exception of textile raw materials), each accounting for 14 per cent to 19 per cent of the total (Rosstat).

A relatively small share of Russia's foreign trade (some 15 per cent) is with countries in the Commonwealth of Independent States (CIS). This is mainly due to the collapse of the Soviet Union, which led to the breakdown of the former strong economic links between the Soviet republics. Attempts to achieve reintegration among these states have failed to generate any substantial changes in their respective trade flows.

With respect to non-CIS countries, the European Union is Russia's main trading partner. It is observed that, since 2010, China has also strengthened its position, now accounting for over 10 per cent of Russia's foreign trade. Imports from China accounted for nearly 17 per cent of imports in 2012. Russia's largest export market was the Netherlands (15 per cent). Figure 1 depicts the development of Russian trade with its major non-CIS trading partners.

Figure 1 Russian merchandise trade with major trading partners (in US\$ million)



Source: Federal State Statistics Service (Rosstat).

As for the 2009 decline, the overall reduction of Russia's trade with its 15 main trading partners was around -37.7 per cent, on average (-22.8 per cent in the case of France and -49.8 per cent in the case of Japan). Trade with France and China was better than with the other trading partners. Trade with France was supported by intensive political interaction. Trade with China benefited from the fact that China managed to secure impressive economic growth in 2009 (Russian Federation, Rosstat).

7.3 Trade diversification and linking to value chains

The question of how foreign trade has impacted on economic development in Russia is a hard one to tackle. There are both positive and negative elements to consider. During the period under review, Russia experienced a significant and constant merchandise trade surplus, which (despite a trade in services deficit) resulted in a current account surplus. Even during the 2009 crisis, in contrast to some gloomy prognoses, merchandise exports equalled US\$ 304 billion, in comparison with US\$ 191.9 billion of merchandise imports (see Table 3).

Table 3 Russian foreign trade, 2009

Merchandise exports (US\$ billion)	304.0
Merchandise imports (US\$ billion)	191.9
Visible trade balance (US\$ billion)	112.1
Merchandise exports, 2009 over 2008 in value (%)	64.5
Merchandise exports, 2009 over 2008 in volume (%)	97.0
Merchandise imports, 2009 over 2008 in value (%)	65.7
Merchandise imports, 2009 over 2008 in volume (%)	63.3

Source: Federal State Statistics Service (Rosstat).

In addition, a relatively modest contraction in the volume of 2009 exports meant that, despite external shocks, relevant industries managed to maintain their production levels. Thus, they constituted something like “stability islands” and, at least partially, directed stability impulses towards the rest of the economic system.

Finally, foreign trade is necessary to satisfy domestic demand, which cannot be met by domestic producers.

Unfortunately, there are also some examples of failures and challenges. On the one hand, Russia experienced an impressive merchandise trade surplus. In 2001 and 2004-2005, this was just slightly less than the total value of merchandise imports. On the other hand, a relatively unfavourable domestic investment climate did not provide enough incentives for exporters to invest domestically. Instead, they preferred to accumulate their capital in more comfortable jurisdictions. Most of the experts sensibly argued that so-called “capital flight” has presented a serious problem for the Russian economy.

Similarly, short-term balancing of specific markets with foreign goods and services over a longer timeframe might result in the gradual crowding-out of domestic economic agents. This type of concern appears to be considerably more relevant in the case of food security. The latter is perceived all around the globe as being a key issue for national economic development.

It is noted that, during the economic crisis, Russia experienced a more dramatic reduction in its foreign trade value than did other key players. In 2009, it held the 13th position among the leading exporters, compared with ninth position in 2008. At the same time, Russia’s terms of trade deteriorated substantially (see Table 3). With respect to the geographical composition of Russian foreign trade, the most serious challenge is presented by a low level of commercial exchange with other former Soviet republics. This is regrettable as, in addition to obvious geopolitical reasons,

there are certain economic grounds for intensifying trade with them in a “win-win” scenario. There are long historical traditions between these countries, relatively small language barriers and complementarities in national economic structures, as well as geographical proximity – all of which are preconditions conducive for trade.

At the same time, one could argue that Russian foreign trade is heavily biased in favour of the mineral resources industrial structure of its exports, which appears to be the number one concern regarding foreign trade. It is directly associated with the threat of the so-called “Dutch disease” and “natural resource curse”. In this regard, Russia differs dramatically from most other developed economies. Several indicators, such as the diversification³ and concentration⁴ indices, illustrate this difference, as shown in Table 4.

The data clearly show that Russia’s diversification index is 3.6 times higher than the average for developed countries. The gap for the concentration index is still larger – 6.8 times.

While assessing Russia’s foreign trade, one has to pay attention to such indicators as domestic value added embodied in exports, and domestic value added embodied in foreign final demand. The latest figures available in the OECD/WTO database of trade in value-added (TiVA) estimate the first parameter for Russia at the level of US\$ 308,530.2 million in 2009 and the second at US\$ 305,654.1 million (OECD, 2013). At the same time, the entire export of the country, according to the same source, amounted to US\$ 331,374.8 million.⁵ This means that the bulk of the products that were exported from Russia did not participate in value chains. This is no surprise, taking into consideration the structure of Russia’s foreign trade. The foreign value-added share of gross exports for Russia was 9.58 per cent in 2005, 9.02 per cent in 2008 and 7.2 per cent in 2009 (OECD, 2013).

Regardless of the very modest participation of Russian companies in international value chains, Russian business units are not totally isolated from the process. Thus, car assembly plants located in Russia (which, in many cases, belong to the

Table 4 Diversification and concentration indices, selected years, 2000-2012

	2000	2005	2008	2011	2012
Russian Federation diversification index	0.656	0.661	0.630	0.640	0.576
Russian Federation concentration index	0.282	0.352	0.364	0.407	0.386
Developed countries diversification index	0.133	0.160	0.169	0.177	0.189
Developed countries concentration index	0.071	0.066	0.063	0.060	0.066

Source: UNCTAD (<http://unctadstat.unctad.org>).

subsidiaries of leading multinational corporations) obtain a substantial amount of their components as inputs from abroad. Due to the low level of car exports from Russia, one might argue that such operations do not influence the above-mentioned indicators. At the same time, it is quite possible that, in the very near future, a certain volume of automobiles assembled in Russia will find customers in the CIS countries. In particular, Autovaz – a leading Russian car manufacturing company that uses imported spare parts – has announced its ambition to expand abroad. On the basis of a marketing strategy developed by Renault specialists, Autovaz plans to conquer the markets of both CIS and non-CIS countries.

Examples of participation in value chains can also be found in other consumer goods, for example chewing gum. Factories located in Russia obtain raw materials – a special polymer base – from Turkey, and final products are both sold on the domestic market and exported to many CIS countries.

A company from the Republic of Korea, Dongwha Holdings, gives us another interesting case of engaging Russia in value chains. The company buys paper (which was most probably manufactured from Russian wood) in Finland and uses it to produce craft paper domestically. The craft paper is then exported to Russia, where it is used to produce hot-compressed plywood. This product then goes back to the Republic of Korea, where the company uses it to make form works to build skyscrapers. A large number of high buildings in Seoul were constructed using such plywood.

In spite of the above-mentioned examples, participation by Russian companies in international value chains remains very low. This is connected, first of all, with the low competitiveness of domestic companies. Another reason is the absence of the necessary quality certificates in a majority of Russian business entities. Foreign companies do not buy goods from producers that cannot guarantee their high quality. Activities aimed at obtaining certificates per se might help to increase competitiveness.

The high share of natural resources in Russia's exports make its foreign trade, and ultimately its economy (including its budget revenues), extremely vulnerable to fluctuations in external factors, which are beyond the control of the national authorities. The volatility of world oil prices, discussed earlier, is perhaps the most obvious among them, but not the only one. Russia's exports of natural gas in 2011 amounted to US\$ 63.8 billion. This was about 12.4 per cent of total merchandise exports (Rosstat). Such a high figure clearly confirms the country's vulnerability, not only with respect to possible changes in prices for this commodity, but also to any technological innovations and shifts in other countries' policies with regard to trade in gas. Some major concerns for Russia include:

- the significant growth in consumption of liquefied natural gas (LNG); Russia's industrial giant, Gazprom, with its traditional focus on the use of pipeline gas, would lose its position in the market
- the so-called "shale gas revolution", which potentially generates new suppliers of the product, including its former net importers
- the new energy policy of the European Union with regard to supply and distribution of this source of energy; without entering into a debate on the legitimacy of such measures, they could lead to the dilution of Gazprom's position on the European Union market.

Obviously, Russia's leadership is fully aware of the situation and is considering ways to address it, including by encouraging diversification of production and diminishing the country's dependence on the export of a few products. Several large-scale campaigns and projects have been launched to promote modernization and a shift to what is referred to as an "innovation-based" economy. Regrettably, the results have not yet materialized, as it takes time for substantial measures to lead to substantial changes. In addition, the pressures that were generated by the global economic crisis⁶ unfortunately did not bring about much change in the level of Russia's oil and gas dependence.

7.4 How could Russia's accession to the WTO address these concerns?

From the discussion so far, it is obvious that Russia has to put more effort into diversifying its exports and the economy in general. It should strengthen the competitiveness of domestic goods and services rather than remaining dependent on the production of oil, natural gas and metals. How to achieve that objective is the main challenge. It requires sound support policies which encourage manufacturing and processing industries to enhance their competitiveness on international markets. Above all else, the effect of the enhanced competitiveness of Russian products could also generate additional demand in CIS countries and stimulate expansion of trade with them.

Before the accession of Russia to the WTO, the country was not bound by its rules, and could design and implement its trade and industrial policies largely without restrictions and without infringing any of its current WTO membership-related obligations and commitments. Now, as a member, Russia is bound by its multilateral obligations and, legally, has no room for applying discriminatory policies.

The question is whether Russia's business entities are ready and prepared to compete on an equal footing with outside producers and competitors.⁷ While

accession to the WTO is likely to lead to an adjustment process which will benefit the consumer (both households and companies), providing them with a larger choice of goods and services of high quality and at better prices, domestic industry and enterprises may pay a heavy price, as they may not be able to compete with the foreign products. The domestic consumer may have a preference for the latter for a variety of reasons. Indeed, price reduction on imported goods and services can occur not only through the reduction of duties as such, but also as a consequence of other effects of liberalization. It is noted here that the maximum amount of customs fees has been reduced by a factor of 3.3 since Russia's accession to the WTO.

In order to assess the impact on the competitiveness of Russian companies following trade liberalization, one should bear in mind some important other elements, one of which is that the Russian negotiators for accession to the WTO managed to secure, for a transitional period, a reasonable level of protection for many sensitive sectors, in particular with respect to the liberalization of trade in goods. The reduction of tariffs will be phased in only gradually. For example, the length of the implementation period of tariff reductions for different products varies from no time at all to seven years. For a number of goods (about 5,600 tariff lines), duties will be reduced in stages: initial and final bound rates and term of the transition period have been established (for automobiles and some types of airplanes). The final bound rates were imposed to approximately one-third of the tariff lines on the day of the accession (e.g. fibres, books and skins). Market access for other products will be liberalized gradually. For example, the import duty on ethylene glycol at the date of accession was set at 10 per cent. It was reduced to 9.3 per cent in 2013 and will be reduced to 8.5 per cent in 2014, 7.8 per cent in 2015, 7 per cent in 2016, 6.3 per cent in 2017 and, from 2018, it will be set at 5.5 per cent. It is assumed that domestic companies will properly use the available time by focusing on the modernization of production and improvement of product quality.

A rather significant reduction of import duties does not, however, automatically imply or guarantee a reduction in price for the consumer and, if this does happen, it may even be insignificant. In particular, the reduction of duties on food and consumer products might be used by intermediaries of various retailing chains as a means of increasing their profits, rather than transferring the benefit to the consumer.

Also, in considering the possible challenges resulting from WTO membership with regard to the competitiveness of Russian business entities, one has to bear in mind that, under the new conditions, subsidizing rules are very stringent. This is true for the subsidies provided by both the federal and regional authorities. The scope for this type of support to domestic industries is strictly limited, which implies that the national producers, in many cases, have to compete on a level playing field with foreign companies in order to stay in business.

At the same time, it is important to note that the competitiveness of Russian producers could improve within the new competitive environment. This is primarily because of lower prices being generated by the above-mentioned liberalization of tariff and non-tariff measures. This might affect intermediate products utilized by Russian manufacturers in the production of the final goods. As was noted earlier, about half of the commercial imports into Russia consist of machinery, equipment and vehicles, which shows that many Russian industrial companies depend heavily on imported components and equipment. As imports lead to exports, this may be beneficial for the industry *per se*. It is likely to encourage the domestic producers to specialize further and contribute to the international value-added chain. The growth of competition might stimulate Russian companies to increase their competitiveness using new managerial techniques, new production methods, certifications, etc. Attempts to create an innovation-based economy (with the right approach) should lead to the production of goods and services that could be in demand internationally. It may also contribute to further diversification of production and decrease the reliance on commodity exports.

One can anticipate, and even expect, some positive changes in the relative priorities of national economic entities, which will need to assess the various options to improve their competitiveness. Before the WTO accession, Russian business units could rely heavily on various forms of state support (import duties, subsidies, standards and technical barriers to trade, licensing, etc.). Being able, in many instances, to lobby successfully in favour of these protective trade policy instruments, Russian manufacturers – rationally enough – did not pay much attention to alternative methods to make themselves more competitive (e.g. introduction of new technological solutions, staff skills improvement, organizational development, etc.). As a result of the WTO accession, the relative utility of such intra-company measures aimed to improve competitiveness increases, and for the rationally acting economic entity, this strategy might become preferable.

As a member of the WTO, Russia must not only adhere to the rather strict set of rules and disciplines, but it also has specific rights, which it can use. In particular, Russian companies have every reason to demand from their foreign partners the same treatment, in line with binding international non-discrimination principles and norms, with respect to products originating from Russia. If this is not the case, the country could use the dispute settlement mechanism to mitigate possible trade conflicts.

It is also noted that, in the medium term, some positive outcomes might result from the fact that Russia has reserved the right not to participate in the Agreement on Government Procurement for at least four years. For several sectors in the national economy (in particular, car manufacturing,⁸ the apparel industry and agriculture), state procurements for public purposes, explicitly excluding foreign suppliers, could

create an opportunity window for domestic business units to prepare for the full-scale, competitive WTO-based environment.

According to the majority of experts, one of the positive results of Russia's accession to the WTO could be an increase in foreign direct investment (FDI). This might be the result of the general improvement of the business and institutional environment in Russia in general, and the investment climate in particular. It might also result from the increase in transparency and predictability, as well as from the country's obligations regarding the liberalization of trade in services. Additional commitments taken by Russia in the field of intellectual property rights (IPRs) protection also matter. Concerns about the vulnerability of IPRs in Russia were mentioned in numerous surveys of foreign investors as being one of the major constraints on investment flows into the country. All in all, it is known that FDI has the potential to generate a wide range of both direct and indirect, positive effects. In particular, it might lead to growth in competitiveness, not only for individual companies directly involved in the investment process, but also for entire industries, and even for clusters of the national economy. Directly connected with this, the aforementioned Russian companies might increase their involvement in international supply chains.

7.5 Conclusions

While it is noted that Russia's foreign trade has demonstrated a certain degree of progress, significant challenges remain, especially in the aftermath of the country's accession to the WTO. Sound trade policies should complement other policies, including fiscal and/or monetary policies, with a view to improving the existing industrial and geographical structure of foreign trade as well as securing its contribution to the general sustainable development of the country in the future. This is a rather complex undertaking that will take time and requires the right policy mix. A key question is how domestic industry will adjust to foreign competition. Which sectors will indeed prove to be competitive and which ones are at risk? What policies can be designed by the Russian federal authorities to provide support, without infringing the WTO rules? What levels of protection are required? These are some of the key questions that will need to be tackled by the policy-makers.

Endnotes

1. European Central Bank. ECB reference exchange rate, US dollar/euro. See: http://sdw.ecb.europa.eu/quickview.do?node=2018794&SERIES_KEY=120.EXR.A.USD.EUR.SP00.A&
2. Central Bank of the Russian Federation. See: http://www.cbr.ru/currency_base/monthly.aspx
3. The diversification index, that ranges from 0 to 1, reveals the extent of the differences between the structure of trade of the country or country group and the world average. An index value closer to 1 indicates a greater difference from the world average.

4. The concentration index, or Herfindahl-Hirschmann index, is a measure of the degree of market concentration. An index value that is close to 1 indicates a very concentrated market or (as in the case of Russia) the industrial structure of foreign trade being strongly dominated by a limited number of product groups. On the other hand, values closer to 0 reflect a more equal distribution of market shares among exporters or importers or (as in the case of Russia) a more multifarious foreign trade structure.
5. Rosstat estimates Russia's exports at just US\$ 301,667 million in 2009.
6. Milton Friedman was probably not totally wrong in arguing that "only a crisis – actual or perceived – produces real change. When that crisis occurs, the actions that are taken depend on the ideas that are lying around. That, I believe, is our basic function: to develop alternatives to existing policies, to keep them alive and available until politically impossible becomes politically inevitable" (Friedman (1962).
7. For more detailed discussion of this issue, see: Sutyryn, S. F. and O. Y. Trofimenko (2013), *Russia's accession to the WTO: Possible impact on competitiveness of domestic companies*, Turku, Centrum Balticum, Baltic Sea Policy Briefing No. 2/2013.
8. According to one of the proposals, all Russian civil servants should use only domestically produced cars while working.

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8 The role of international economic law in addressing climate change

*Bradly J. Condon and Tapen Sinha**

8.1 Introduction

Low- and middle-income countries face supply-side constraints such as technical capacities, adequate hard infrastructure capacities, human capital (above all know-how), access to adequate credit, and access to environmental goods and services that affect their capacity to address climate change and other environmental issues. This chapter discusses how the existing framework of international economic law may constrain the ability of low- or middle-income countries to overcome such supply-side constraints in order to address their, or their trading partners', environmental concerns regarding climate change and be included in global value chains. We will consider what should be done from a legal perspective, what might be achieved, and the likely implications of international economic law for acquiring and implementing environmentally friendly technologies and financing climate change mitigation and adaptation.

8.2 Acquiring and implementing environmentally friendly technologies

Providers of relevant technologies: industrialized vs. emerging economies

Traditionally, debates regarding climate change and financial and technology flows have been framed as North-South. However, this has changed, with the emergence of new low-carbon technology companies in developing countries, such as China and India, which could diffuse clean technology nationally and internationally. In addition, the financial crisis has limited the financial capacity of major developed countries, notably the European Union, Japan and the United States. Moreover,

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investment banks (such as the World Bank) can help to mobilize capital for low-carbon technology, making their own investments and structuring investments for classes of investors with different risk–reward profiles and return expectations (World Bank, 2009; 2010; 2013). This paradigm shift in financial and technology flows should inform debates regarding both climate finance and technology transfer.

National and international climate change response efforts have followed separate mitigation and adaptation paths, with a major focus on mitigation. However, some climate change impacts are unavoidable now, so adaptation efforts have begun. Nevertheless, the technological and financial capacity of countries to adapt to climate change differs significantly, as does their vulnerability to the effects of climate change (WTO and UNEP, 2009). Their greenhouse gas (GHG) emissions also differ greatly (WTO, 2013). These differences between countries are part of the reason for incorporating the principle of common but differentiated responsibilities into the United Nations Framework Convention on Climate Change (UNFCCC) (Stone, 2004).

Dividing the world into developed and developing countries, and using that categorization as a basis for addressing climate change, whether through adaptation or mitigation, is simplistic. Policy responses that depend on the maturity of financial markets or the robustness of national regulatory institutions may not work in all countries. Differences in levels of economic development influence the design of global solutions at both the negotiation stage and the implementation stage. The financial and technological endowments of countries are not frozen in time. It makes more sense to assign responsibility on a scale, based on objective criteria that are in accordance with the governing principles of international environmental law, and to determine responsibility for the cost of mitigation and adaptation on this basis.

Foreign investment is an important source of capital, technology and know-how. Governments need to strike a balance between regulation that discourages foreign investment and foreign investment protection that discourages regulation. If countries implement international agreements or domestic climate change policies in a way that violates the rights of foreign investors, they may have to pay compensation to the foreign investors. This risk can create disincentives to regulation, particularly in countries where the government officials responsible are unsure of the scope of their obligations to foreign investors. It is thus very important to understand the scope of these obligations when designing and implementing climate change regulation.

At the same time, foreign investment is an important source of knowledge and technology diffusion, together with trade in goods and services (Hoekman and Javorcik, 2006). Thus, it is important to create adequate incentives for foreign

investors to transfer best practices and technologies that can address climate change adaptation and mitigation. This means that governments must provide adequate protection to foreign investors, through international investment agreements and intellectual property rights (IPRs). If foreign investors' rights are watered down in an effort to enhance access to technology, the effect could be to create disincentives to transfer technology and best practices through foreign investment (although IP policies do need to vary with the technology). In addition, international investment agreements can lower regulatory and political risks for foreign investors, and thus lower the cost of and create incentives for foreign investment in clean energy or carbon mitigation technologies (Boute, 2012; UNCTAD, 2010).

Intellectual property rights and technology transfer

IPRs may have a negative impact on innovation, competition and affordable access for some technologies (Boldrin and Levine, 2005; Condon and Sinha, 2005). However, it is not possible to analyse the subject of IPRs and international technology transfer in a generalized manner. In the case of clean energy technologies, which serve to mitigate climate change, the availability of competing technologies will diminish the impact of IPRs on their cost. In the case of new plant varieties, in contrast, the technology has no or few substitutes and the IPRs are concentrated in the hands of relatively few firms. For this technology, IPRs will increase costs due to monopoly pricing power. New plant varieties represent an important technology that developing countries, in particular, will need in order to adapt to the effects of climate change (Condon and Sinha, 2013; IPCC, 2001). The applicable IP laws and the technology transfer issues are, therefore, different for biotechnologies such as plant varieties, where IPRs may create barriers to access that are similar to those in the pharmaceutical sector (Condon, 2013; Louwaars et al., 2009; Strauss, 2009).

For clean energy technologies, the focus of the debate should not be on IPRs. First, achieving reforms to the international IP regime is likely to prove difficult. Secondly, IPRs do not represent the main obstacle to innovation, competition and affordable access for clean energy technologies (Barton, 2007). For example, the fact that the United States has applied countervailing duties on imports of solar panels from China indicates that IPRs are not a sufficient barrier to competition in this sector. Otherwise, countervailing duties would not be necessary to protect the United States solar panel industry from Chinese competition.

With respect to clean energy technologies, the debate over IPRs and the technology transfer from developed to developing countries is misplaced. This type of North-South debate distracts from the real issues: creating incentives for and removing

obstacles to clean energy development and dissemination. For example, fossil fuel subsidies need to be reallocated to clean energy technologies. Developing countries' fossil fuel subsidies are four times greater than the UNFCCC financing they seek for climate change mitigation and adaptation. The World Bank is prepared to provide technical assistance to developing countries to change these policies. Moreover, developing countries, and China in particular, are becoming an important source of clean energy technology. Dissemination of clean energy technologies can be facilitated by removing barriers to foreign investment and international trade in clean energy technology and related services. For these reasons, the analysis of clean energy technology transfer should focus on these issues, rather than an out-dated North-South debate over IPRs.

Financing new technologies: multilateral institutions and private investors

Multilateral cooperation and financing will continue to be an essential element in climate finance. The WTO will have to adapt subsidies rules, via judicial interpretations on a case-by-case basis, or via a negotiated response to agreements reached in other multilateral organizations. The increasing number of actors in climate finance activities will require more coordination and adaptation of roles among institutions such as the World Bank and the Green Climate Fund. The activities of these institutions will have to be coordinated with those of the private sector participants as well.

To stabilize GHG emissions would require a significant reduction of emissions in both the developed and developing world. This requires large-scale investment in energy infrastructure and other large-scale mitigation projects. Multilateral funding channels may be the best option for such large-scale financing in developing countries. However, private, bilateral and multilateral funding sources are not mutually exclusive. For example, the World Bank can play a role in creating incentives for private-sector investment, by investing in pilot projects and lowering political risk for private investors.

International investment agreements also play a role in reducing political risk for foreign investors, but should strike the right balance between the rights of foreign investors and the right of governments to regulate in the public interest. In relation to environmental regulation, there are some important differences between international trade agreements and international investment agreements. In particular, only governments have access to the dispute settlement system of the WTO (and comparable dispute settlement systems in free trade agreements). This can filter out challenges to some measures. In contrast, private investors can file claims directly against host governments under international investment

agreements. Private investors may be less likely to question the wisdom of challenging governments' right to regulate than are governments themselves. Moreover, the majority of international investment agreements do not contain references to environmental concerns. This highlights the importance of determining the extent to which environmental regulation is subject to the disciplines contained in these agreements.

International investment agreements do not eliminate a state's right to regulate in the public interest. Legitimate environmental measures should not be subject to international investment agreements, since they would not qualify as measures "relating to" investments. A key issue is the legitimacy of the disputed environmental measure. One way to define legitimacy is by asking whether the measure serves the public interest or a private interest. Of course, a measure can simultaneously serve both public and private interests. The real question here is whether the evidence demonstrates bad faith, protectionist intent or intent to harm foreign investors on the part of the legislator or the judiciary. The majority of state practice is consistent with the view that international investment agreements do not negate the right to regulate climate change.

Moreover, customary international law does not require a state to maintain a stable legal and business environment for investments. The customary international law standard does not prevent a public authority from changing the regulatory environment to take account of new policies and needs, even if some of those changes may have far-reaching consequences and effects, and even if they impose significant additional burdens on an investor. It does not provide a guarantee against regulatory change or entitle an investor to expect no material changes to the regulatory framework within which an investment is made. Governments can change, and policies and rules can change. The rules of customary international law only protect against egregious behaviour and do not require a legal and business environment to be set in concrete.

The minimum standard of treatment of foreign investors under customary international law has to be interpreted in accordance with evolving customary international environmental law. The obligation to avoid activities causing significant damage to the environment of another state is likely to encompass regulations to address climate change. Thus, legitimate climate change regulation would not be inconsistent with the minimum standard of treatment. To conclude otherwise would create a conflict between customary international investment law and customary international environmental law.

The general body of precedent usually does not treat regulatory action as amounting to expropriation, because expropriations tend to involve the deprivation of ownership

rights, and regulations a lesser interference. Under customary international law, where economic injury results from bona fide regulation within the police powers of a state, compensation is not required. Thus, as a general matter, states are not liable to compensate foreign investors for economic loss incurred as a result of a non-discriminatory action to protect the public interest. Once an expropriation has taken place, compensation is due even if it is for an environmental purpose. However, not all government regulatory activity that makes it difficult or impossible for an investor to carry out a particular business is an expropriation. Given the economic and environmental consequences of climate change, it seems that bona fide climate change regulation should take precedence over investors' rights, though the correct balance likely will have to be decided on a case-by-case basis. It is also important to protect foreign investors from unfair or arbitrary treatment by governments who are motivated by short-term political interests rather than long-term environmental risks. For this reason, we emphasise that we are referring to bona fide climate change regulation.

Striking the right balance between the regulatory risks that investors face and the litigation risk that governments face is not the same for all markets. Larger markets can have a greater degree of regulatory risk and still attract foreign investors. In contrast, smaller, less economically attractive markets may need to strike a balance that reduces regulatory risk to a greater degree, in order to attract foreign investment. Larger markets are also a greater source of GHG emissions, so the balance should favour climate change regulations over compensation to foreign investors, in order to limit the risk of regulatory chill and to enhance the right to regulate. Science-based regulatory decisions should withstand scrutiny, even if the science was preliminary, when there is sufficient scientific evidence of the potentially serious environmental effects to support the regulation. There is sufficient scientific evidence of the potentially serious effects of climate change to justify climate change regulation, even if it also has the effect of diminishing the value of some foreign investments.

International investment law has the potential to have a chilling effect on climate change regulation, by raising issues regarding the risk that climate change regulation will expose host states to claims from foreign investors. Legitimate climate change regulation should not trigger liability to compensate foreign investors. However, this may not eliminate the chilling effect, since it is costly for states to defend against such claims even if they do not succeed. Awards of costs against investors who file such claims may discourage such claims, but this may not be sufficient to overcome the chilling effect in the short term. Moreover, the lack of a system of precedents for tribunals permits tribunals to reach different conclusions on similar issues, which increases the uncertainty regarding the outcome of litigation. Nevertheless, there is room in international investment law to strike an appropriate balance between the

right to regulate climate change and right of foreign investors to seek compensation for arbitrary and discriminatory governmental actions. Striking the right balance will facilitate the mobilization of foreign investment as a source of climate finance and technology dissemination.

8.3 Encouraging the production and consumption of environmentally-friendly goods taking into account UNFCCC and WTO agreements

WTO members are free to eliminate trade barriers unilaterally, as long as the most-favoured nation (MFN) rule is observed, and bilaterally, regionally or plurilaterally, as long as they comply with the exceptions for regional trade agreements in the General Agreement on Tariffs and Trade (GATT) Article XXIV and the General Agreement on Trade in Services (GATS) Article V. In the case of climate change, however, the regime is less developed and there is greater uncertainty regarding the WTO compatibility of unilateral and regional approaches to mitigation and adaptation. It might be useful to add explicit provisions to the UNFCCC, to reduce the uncertainty regarding the consistency of unilateral, bilateral and plurilateral approaches to climate change regulation. Unilateral, bilateral and plurilateral approaches can complement multilateral approaches by pushing other countries to follow suit multilaterally. The UNFCCC already incorporates the language of GATT Article XX regarding arbitrary or unjustifiable discrimination between countries, but this is insufficient to address this issue.

Regulatory capture creates risks that unilateral measures will serve as disguised restrictions on international trade rather than legitimate efforts to combat climate change (Condon and Sinha, 2013; de Lima-Campos, 2012; WTO, 2013; Yandle, 1989). For this reason, unilateral measures should be designed and applied in accordance with GATT Article XX, to minimize the risk of unilateral measures that constitute arbitrary or unjustifiable discrimination or disguised restrictions on international trade. In this regard, it is helpful that this same language has been incorporated into international environmental law and the UNFCCC. The political and economic context that has led to multilateral negotiation paralysis means that unilateralism may represent the future of climate change regulation, at least in the short to medium term. However, this does not mean that we cannot use the multilateral consensus that has been achieved so far to regulate the use of unilateral measures.

The ongoing implementation of climate change policies could raise several issues in WTO law. GATT Article XX will play an important part in determining the WTO consistency of climate change measures. The scope of paragraphs (b) and (g) in GATT Article XX still needs to be defined in many aspects, as does the relationship

between these two paragraphs. Multilateral environmental agreements on climate change will probably be relevant to determining the consistency of climate change measures with GATT Article XX and the provisions of the Agreement on Technical Barriers to Trade (TBT Agreement). However, it is unlikely that GATT Article XX will be applied to the Agreement on Subsidies and Countervailing Measures (SCM Agreement), the Agreement on Agriculture or the TBT Agreement (Condon, 2009). Its application to provisions in other multilateral agreements on trade in goods as per Annex 1A of the Agreement Establishing the WTO (WTO Agreement) will have to be analysed on a case-by-case basis.

If processing and production methods are relevant to determining the issue of “like products” in GATT Articles I and III, the SCM Agreement, the Agreement on Implementation of Article VI of the GATT 1994 (Anti-dumping Agreement) and the TBT Agreement, then this may provide an alternative analytical approach to determine the WTO consistency of climate change measures. Again, this will have to be analysed on a case-by-case basis in light of specific climate change measures. However, if environmental subsidies are designed so that they are not specific to certain enterprises, they will not be subject to multilateral action under Part III or unilateral action under Part V of the SCM Agreement. If the subsidies apply to agricultural products, they will have to comply with the commitments of members under the Agreement on Agriculture. In the case of export subsidies, compliance with the Agreement on Agriculture may shield subsidies on agricultural products from action under the SCM Agreement Article 3.1(a). However, opinion differs on this issue. In the case of subsidies contingent on the use of domestic products, it will be necessary to comply with the SCM Agreement and the Agreement on Agriculture (Condon, 2009), as well as GATT Article III and the Agreement on Trade-Related Investment Measures (TRIMS).

With respect to WTO non-discrimination obligations, “less favourable treatment” requires a determination of whether the contested measure modifies the conditions of competition to the detriment of imported products. However, the existence of such a detrimental effect is not sufficient to demonstrate less favourable treatment if the detrimental impact on imports stems exclusively from a legitimate regulatory distinction, provided that it is even handed. Thus, the “legitimate regulatory distinction” test serves as a defence to allegations of WTO-inconsistent discrimination, where risks are addressed in an even-handed way, for example where distinctions in treatment are based on evidence that the risks are different in different situations and therefore the different situations need to be addressed in different ways to achieve the ultimate policy goal (Condon and Sinha, 2013). With respect to climate change, emissions from different fuels could be subject to different taxes where the different emissions pose different risks, for example due to the nature and quantity of GHG emissions for each fuel or the GHG emissions from

their production processes. Different treatment of products, based on their processing and production methods, also might not constitute less favourable treatment, for example due to differences in their carbon footprint. The difficulty is that carbon footprints may be difficult to measure and the design of carbon labelling programmes runs the risk of being distorted to benefit domestic industry lobbies. De facto discrimination, which creates incentives for private actors to choose domestic inputs over imported ones, could be incorporated into some element of the design of a regime of carbon taxes and border tax adjustments, for example where the taxes themselves do not discriminate but the reporting or filing requirements are more burdensome for the imported products.

8.4 Encouraging the use of environmentally-friendly processes by foreign establishments

Countries also need to remove barriers to trade in clean energy technologies, rather than erect such barriers. WTO law does not require countries to apply countervailing duties; it merely permits this practice as long as it is done in accordance with the requirements of the SCM Agreement. Dissemination of clean energy technologies can also be facilitated by removing barriers to foreign investment and international trade in services.

International investment agreements could prove problematic, not because of the substance but due to the lack of predictability in the outcomes of arbitrations. The language of international investment agreements is sufficiently flexible to accommodate climate change regulation. While international investment tribunals do not create precedent that is binding upon other tribunals, this jurisprudence does influence other tribunals. However, the approach of different international investment arbitrators to similar issues can vary considerably, which creates a degree of uncertainty regarding the outcome of international investment litigation. This introduces an element of litigation risk to the process of climate change regulation that affects foreign investors, including regulation that encourages the use of environmentally friendly processes by foreign establishments.

8.5 Conclusions and possible approaches to take to future trade and investment negotiations

International economic law has an important role to play in the regulation of climate change, in particular with respect to technology diffusion and unilateral, bilateral, regional and plurilateral responses to multilateral negotiation failure. It has not been possible to reach multilateral agreements with respect to climate change finance,

IPRs for plant varieties, a multilateral investment agreement, or international trade in environmental goods and services. Multilateral progress in all of these areas would facilitate technology diffusion and diminish the need for unilateral action.

Unilateral measures may be taken to address local or global concerns and may be used to create incentives for multilateral action. They may be consistent with international obligations or not, depending on the circumstances of each case. Unilateral measures can serve as catalysts for multilateral action on climate change, by prompting the affected economic actors to pressure their governments to seek a solution, through litigation or negotiation. Climate change agreements should either comply with or prompt modifications to international economic law and global models of economic governance.

Existing international economic law places limitations on the right of national and sub-national governments to regulate to address climate change. Given the current difficulty in reaching multilateral agreements, for the most part countries will have to develop climate change policy and law within the constraints of the existing legal, economic and financial framework. The shifting fortunes of developed and emerging economies have altered the dynamics of global governance (Jara, 2012). The ensuing multilateral negotiation paralysis means that unilateral action will be necessary to create incentives to address climate change. However, the risk of regulatory capture needs to be addressed to ensure that these unilateral measures are consistent with international law and are economically viable.

It is important to identify policy issues and options and ways to overcome negotiation obstacles. One proposal, with respect to WTO negotiations, is to make negotiations less ambitious, by abandoning the rule that “nothing is agreed until everything is agreed”, and to abandon decision-making by consensus. There are precedents for this approach at the WTO, in which a limited number of members agreed to liberalize specific sectors once enough members were on board to cover 90 per cent of trade in the sector. The MFN rule extends concessions to all WTO members and the resulting agreement is left open for other members to join. The same approach to environmental goods and services would reduce barriers to technology diffusion for climate change. A similar approach could be taken with respect to GHG emissions, by seeking agreement among the countries that account for the overwhelming majority of emissions, and by leaving it open for other countries to join. However, even this approach may be difficult to achieve in a reasonable period of time.

At the end of the day, multilateral climate change regulation will likely prove insufficient to tackle climate change effectively. This gives WTO members an argument to adopt unilateral technical regulations, since the international standards, if any exist, may prove to be ineffective, in light of the growing scientific evidence of

the urgency of addressing climate change. Multilateral negotiation paralysis, and the dramatic changes in the economic growth, technological capacity and GHG emissions of developing countries since 1992, has made the UNFCCC approach out-dated and ineffective to address climate change adaptation and mitigation. Moreover, new evidence indicates that the climate is changing faster than expected (NCADAC, 2013). While multilateral approaches may be preferable in theory, unilateral, bilateral, regional and plurilateral approaches may be required in practice. In order to meet these different approaches to stricter international mitigation requirements and to address their own adaptation needs, low- and middle-income countries will have to overcome supply-side constraints in a manner that meets their obligations in various areas of international economic law.

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9 The facilitation of trade by the rule of law: the cases of Singapore and ASEAN

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9.1 Introduction

Geography is unkind. This could be a result of historical accident, wars or colonial boundaries but the results are the same. The classical definition of the factors of production is land, labour and capital.¹ It is a fact of life that some countries have a limited supply of all three.

Soon after independence in the 1960s, this truth was evident to a small nation with a land area of 582 square kilometres, a population of 1.6 million, a literacy rate of 53 per cent, an unemployment rate of 13.5 per cent and a GDP per capita of US\$ 511 per annum.² The situation looked even bleaker because of the significant racial and social unrest, the complete lack of natural resources, limited agriculture and insufficient water supply. Government revenues were low and, because of the economic over-reliance on entrepot trade, revenue could not be raised by increasing customs duties. Few would have predicted survival, much less economic progress.

However, geography is not destiny. Fifty years later, that country has a GDP per capita of US\$ 52,051 per annum, a population of 5.3 million, a literacy rate of 96 per cent, an unemployment rate of 2 per cent and, through land reclamations, a land area of 723 square kilometres.³ This is Singapore today. How did Singapore achieve this?

One clue lies in the data on the contribution of merchandise trade to the GDP of this country. While this contribution has fluctuated from 367.7 per cent just before the recent financial crisis began in 2008, to 265.6 per cent in the depths of the crisis in 2009, the merchandise trade contribution to GDP has been well over 250 per cent for a very long time.⁴ Geography had bestowed one blessing on this country, in that it was fairly centrally located and had a deep sea port. This helped the growth of its entrepot trade but other, nearby ports could easily have competed in this regard if

* The contents of this chapter are the sole responsibility of the authors and are not meant to represent the position or opinions of the WTO or its members.

Singapore had only relied on its strategic location. From its colonial foundation, Singapore had the advantage of an essentially free trade port but this, by definition, does not bring in tax revenue because the imposition of any tariffs would undermine its trade. Thus, something else had to be done to capture other sources of revenue and encourage the relocation of industrial activities so as to provide more jobs than the trans-shipment of goods alone could provide.

After independence, this country adopted a three-pronged strategy to maximize its one advantage, its location. First, existing advantages were enhanced to facilitate entrepot trade, the expansion of the marine sector and the building of large oil refineries, while attendant services, such as logistics, transportation and tourism, were also developed. Secondly, new capabilities were created by incentivizing the use of technology and establishing procedures to review and reduce regulation and taxes. Finally, complementary policies were enabled by training bureaucrats to be strategically pro-enterprise and efficient, as well as developing education and labour policies in consultation with industry. Yet, despite the well-thought-out strategy and the impressive coordination between the various actors, these efforts would not have borne fruit without one necessary (though not, of itself, sufficient) trade reform – strengthening the rule of law.

9.2 The rule of law

Nobel Prize-winning economist F. A. Hayek, commenting on the value of the rule of law to economic development, said that individuals (including corporations) would be able to make wise investments and future plans with some confidence of a profitable return on investment if “under the Rule of Law the government is prevented from stultifying individual efforts by ad hoc action [so that] [w]ithin the known rules of the game the individual is free to pursue his personal ends and desires, certain that the powers of government will not be used deliberately to frustrate his efforts” (Hayek, 1994). Hayek contrasted the rule of law with arbitrary government but did not provide a specific definition of it.

There are many definitions of the rule of law, and there is much debate about its core elements. The World Justice Project (WJP) definition of the rule of law is probably one of the most persuasive when considering how a system may be created in order to avoid arbitrary governance.⁵ The WJP suggests that the rule of law is a system in which four universal principles are upheld:

- The government and its officials and agents as well as individuals and private entities are accountable under the law.

- The laws are clear, publicized, stable and just, are applied evenly, and protect fundamental rights, including the security of persons and property.
- The process by which the laws are enacted, administered and enforced is accessible, fair and efficient.
- Justice is delivered [in a] timely [manner] by competent, ethical, and independent representatives and neutrals who are of sufficient number, have adequate resources, and reflect the makeup of the communities they serve.

Singapore scores well on perceived absence of corruption, order and security, regulatory enforcement, civil justice and criminal justice. There may be room for improvement with regard to limited government powers, fundamental rights and open government. Arguably, there may be an over-reliance on the presence of a pro-business and long-time incumbent government as an assurance for investors that there is a firm commitment to the rule of law despite the relatively lower levels of perceived checks and balances to the actions of the government.⁶

In any event, its high rankings in regional terms, even for those areas coupled with the strong scores in other areas, makes Singapore an attractive base and hub for the region. With limited endowments of the factors of production and a small domestic market, Singapore has managed to use the rule of law to facilitate its trade and increase its connectivity to the region. This was critical in order to attract foreign multinational corporations (MNCs) to invest in Singapore, set up factories and provide jobs for the local population. With severe supply-side constraints, Singapore attracted investors by assuring them of their legal rights. This led to Singapore's growth as a hub for production and trade facilitation in the region.

Table 1 World Justice Project scores and rankings for Singapore

Factors	Scores	Global rankings	Regional rankings	Income group rankings
Limited government powers	0.73	21/97	4/14	19/29
Absence of corruption	0.91	7/97	2/14	7/29
Order and security	0.93	1/97	1/14	1/29
Fundamental rights	0.73	26/97	5/14	23/29
Open government	0.67	19/97	6/14	18/29
Regulatory enforcement	0.80	10/97	4/14	10/29
Civil justice	0.79	4/97	1/14	4/29
Criminal justice	0.87	3/97	1/14	3/29

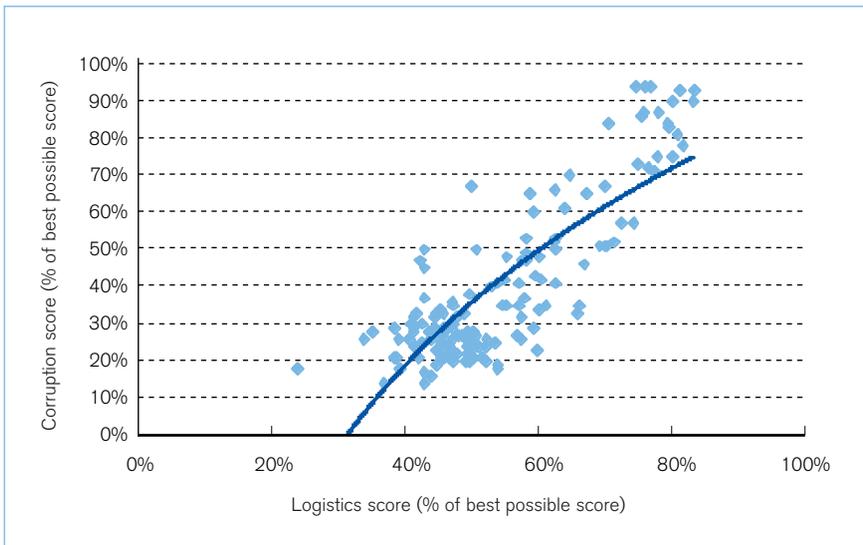
Source: World Justice Project (<http://worldjusticeproject.org/country/singapore>).

9.3 The domestic facilitation of trade by the rule of law

But what is the most important rule-of-law factor for economic development through trade facilitation? Ikenson has charted the relationship between the perception of corruption and logistics performance. As Figure 1 shows, he concluded that, “There appears to be a fairly strong relationship between levels of corruption (as measured in Transparency International’s Corruption Perceptions Index [CPI] ⁷) and logistics performance (as measured in the [Logistics Performance Index] ⁸). Countries where the perception of corruption is lower are more likely to perform better on logistics perceptions; and countries where corruption is more pronounced appear to have greater frictions in their logistics environments” (Ikenson, 2008).

While both indices are based on perception, there seems a fairly strong correlation between the perception of high levels of corruption and the perception of less effective logistic performance. This is not to say that the absence of corruption is the only important factor of the rule of law. It is not. However, when one looks at Table 2, also compiled by Ikenson (2008), the effects on the financial calculus can be clearly

Figure 1 Relationship between perceived corruption and logistics performance



Source: World Bank and Turku School of Economics (Finland), Logistics Performance Index, <http://info.worldbank.org/etools/tradesurvey/mode1b.asp>, and Transparency International, Corruption Perceptions Index, <http://www.transparency.org/>.

Note: Each point is a country’s set of scores for both indices.

Table 2 Various trade facilitation metrics by region or country, 2008

Region or Economy	Documents for export (number)	Time for export (days)	Cost to export (US\$ per container)	Documents for import (number)	Time for import (days)	Cost to import (US\$ per container)
East Asia and Pacific	6.9	24.5	885	7.5	25.8	1,015
Eastern Europe and Central Asia	7.0	29.3	1,393	8.3	30.8	1,551
Latin America and Caribbean	6.7	22.6	1,096	7.7	24.0	1,208
Middle East and North Africa	7.1	24.8	992	8.0	28.7	1,129
OECD	4.5	9.8	905	5.0	10.4	986
South Asia	8.6	32.5	1,180	9.1	32.1	1,418
Sub-Saharan Africa	8.1	35.6	1,660	9.0	43.7	1,986
All countries	7.0	26.1	1,230	7.8	29.7	1,412
United States	4.0	6.0	960	5.0	5.0	1,160
Singapore (best)	4.0	5.0	416	4.0	3.0	367
Kazakhstan (worst)	12.0	89.0	2,730	14.0	76.0	2,780

Source: International Finance Corporation and the World Bank, *Doing Business*, "Trading Across Borders" (<http://www.doingbusiness.org/ExploreTopics/TradingAcrossBorders/>).

seen. A businessperson, when trying to decide where to ship goods to and from, will have three main costs to consider – the financial, time and transactional costs – for each container he or she ships. The lower these costs are, the more attractive a port or hub will be. Singapore makes the businessperson's decision relatively easy. This is the moral of the Singapore story – if you lower the costs for business through the rule of law, traders (and investors) find you more attractive.

Many developing countries today face significant supply-side constraints such as inadequate infrastructure, unavailability of a skilled workforce and insufficient capital for businesses to expand. These problems require a large investment of time and financial resources to address and often do not produce the hoped-for results. One reason for this is that attempting to address these concerns without first addressing the need for improvement in the rule of law is akin to trying to fill a sieve – all the

money, effort and time leaks out. For example, improving trade facilitation may require some coordination but the steps that need to be taken are relatively straightforward – apply international procedures, reduce paperwork, incorporate more technology and keep looking for ways to be more efficient. Many countries have received grants and expert advice and have embarked on projects to do just that, and indeed many have implemented various strategies in this regard. The World Bank reports that in 2006 it took, on average, 26 days to export and 30.4 days to import a standardized cargo of goods by ocean transport (with every official procedure recorded but actual time on the ocean excluded), whereas it now takes, on average, 22.2 days to export and 25 days to import (World Bank, 2013). There has been some improvement but it still takes a lot of time in some countries. The resistance to change can in part be attributed to vested interests and corruption, as every form that is made obsolete represents the reduction of an opportunity for customs officials to engage in rent-seeking behaviour. This underscores the importance of the rule of law for maximizing both trade and investment opportunities.

It is submitted, therefore, that the rule of law has the potential to assist supply-side-constrained countries by granting them a comparative advantage and a strong basis to attract investment in order to supplement areas in which they are, by reasons of geography or history, found to be lacking.

9.4 Regional trade facilitation by the rule of law: the case of ASEAN

Moving from the situation of a single country to the developmental needs of a region, in this case the South East Asian region, similar supply-side constraints for most of the regional economies can be seen. Some countries may have been blessed with natural resources and others with populations large enough for the domestic market to develop significant contributions to development, but all (perhaps with the exception of current-day Singapore) have limited capital. Moving from the particular to the more general, could the rule of law also alleviate the supply-side constraints of countries in this region?

The forum for economic activity in the region is now the Association of South East Asian Nations (ASEAN). ASEAN was established on 8 August 1967 in Bangkok, Thailand, with the signing of the Bangkok Declaration⁹ by Indonesia, Malaysia, the Philippines, Singapore and Thailand. Brunei Darussalam joined on 8 January 1984, Viet Nam on 28 July 1995, Lao People's Democratic Republic and Myanmar on 23 July 1997, and Cambodia on 30 April 1999, making up what are today the ten member states of ASEAN.

ASEAN was conceived as a political enterprise aimed at building trust among the largely post-colonial regional states, which were wary of each other. ASEAN did this well through the “ASEAN Way” of cooperation and dispute resolution in which members do not interfere with the internal affairs of other members and decision-making (as well as dispute resolution) is done only by consensus. While this has enabled ASEAN to reduce regional conflicts (albeit as a relatively “informal” organization), ASEAN has often been criticized for its “ASEAN Way” and its seeming adherence to the principle of non-interference. Many commentators suggest that this adherence to non-interference and consensus undermines the rule of law and ASEAN’s seriousness to integrate (Goh, 2003).¹⁰

However, the adoption of the ASEAN Charter in 2007 and its ratification by all ten ASEAN states in 2008 marked the beginning of a new self-understanding for ASEAN. The Charter declares that member states will act in accordance with the rule of law, international law and ASEAN rules. The law was for the first time laid as a foundation for ASEAN integration. At the same time, the ASEAN member states also issued a Declaration on the ASEAN Economic Community (AEC) Blueprint¹¹ which adopted the AEC Blueprint¹² for the implementation of the AEC by 2015. The Declaration states that “[t]he AEC Blueprint will transform ASEAN into a single market¹³ and production base, a highly competitive economic region, a region of equitable economic development, and a region fully integrated into the global economy” (note 6, para 1). Article 1(5) of the Charter sets out the purposes of ASEAN, one of which is “to create a single market¹⁴ and production base”. ASEAN declared that it was going to integrate economically and that one major strategy for that integration would be the rule of law.

The integration of ASEAN will be challenging. The combined population of ASEAN, at approximately 600 million,¹⁵ may compare favourably with that of the European Union (EU), at 500 million.¹⁶ However, even with the financial crisis in Europe, in 2011 the combined GDP of ASEAN was only US\$ 2.3 trillion¹⁷ compared with the EU’s US\$ 17 trillion.¹⁸ Thus, any impressionistic understanding of ASEAN integration revolving around a marketplace for ASEAN goods will have to be moderated by the short-term reality that the consumers in ASEAN at the moment are not wealthy enough to buy many of the goods ASEAN produces. Intra-ASEAN trade, which, on average, comprises only one-quarter of total annual ASEAN trade¹⁹ (compared with intra-European Community trade which comprised nearly half of members’ trading activity from 1958-1972 [Mongelli, Dorrucchi and Agur, 2005]) is currently not a driving force in ASEAN integration. This current limitation in the buying power of ASEAN consumers is obviously illustrated by the fact that in 2011 the GDP per capita for ASEAN as a whole was only about US\$ 3,600.²⁰ This partially explains why the contribution of intra-ASEAN trade to total ASEAN trade has been stuck at 25 per cent for the last 10 years.

ASEAN also faces integration challenges because of the great diversity in the application of the rule of law among the ASEAN member states.²¹ The European model of integration was built on the somewhat more established rule-of-law systems of its members whereas the post-colonial legal systems of many ASEAN members still remain less developed. One indicator of this is that, despite the current financial crisis and the exposure of bureaucratic and parliamentary failures, EU member states all rank in the top half of Transparency International's CPI rankings for 2012, with Italy and Bulgaria the lowest ranked at 72 and 75 respectively. By contrast, as illustrated in Table 3, seven out of the 10 ASEAN members rank in the bottom half of the index, with Myanmar almost at the bottom with a ranking of 172 (Transparency International, 2012).

This perception of corruption (even if unjustified) undermines investors' confidence and poses a real problem for ASEAN economic integration, for the following reason. With the relatively less affluent domestic market of ASEAN, in the short term, the main economic objective for ASEAN should be the development of the production base referred to in the ASEAN Charter through the facilitation of integrated production networks (IPNs) created by MNCs. When an IPN becomes transnational, it faces several challenges. The main challenge beyond the cost of transport and logistics planning is ensuring that the rules applicable to each actor in the network remain predictable and certain. Where the IPN operates in countries where the rule of law is weaker, guarantees against arbitrary intervention and discrimination become more critical for the continued effective functioning of the IPN. If investors

Table 3 Transparency International's Corruption Perceptions Index, 2012

Country	Country ranking		CPI score	Score
	2011 ¹	2012 ²	2011	2012
Singapore	5	5	9.3	87
Brunei Darussalam	44	46	5.5	55
Malaysia	60	54	4.4	49
Thailand	80	88	3.5	37
Philippines	129	105	2.4	34
Indonesia	100	118	2.8	32
Viet Nam	112	123	2.7	31
Cambodia	164	157	2.1	22
Lao PDR	154	160	2.1	21
Myanmar	180	172	1.4	15

Source: Transparency International, Corruption Perceptions Index 2012.

Notes: 1. 2011 surveyed 183 countries and territories.

2. 2012 surveyed 176 countries and territories.

do not trust the strength of the rule of law in the region, less investment will flow in and this will limit the development of regional IPNs.

The automotive industry is frequently put forward as one of the best examples of IPNs in Europe, and that may well be true. Direct production of cars accounts for 2.2 million jobs and another 9.8 million jobs in closely related sectors (ACEA, 2010). While the creation of the European single market indirectly created the environment for new networks of businesses and production, in ASEAN, counter-intuitively, these networks already exist, despite some trade barriers. Rather than lobbying to change the legal environment to create a climate for such networks, Asian businesses often took advantage of the less-than-transparent discretion provided to policy-makers at all levels in many ASEAN countries and, instead, obtained specific solutions to the trade barriers they faced without insisting on formal obligations.

This increased regional trade and, since the 1980s, subject to the changing players and gravitational forces, much of the intra-ASEAN trade consists of components which are part of the production chains of “Factory Asia”, with one state being part of a process that culminates in a final product for export to developed countries. In 1985 there were only four major trade-in-goods players in the Asian region: Malaysia, Indonesia, Japan and Singapore. Resource-rich states Malaysia and Indonesia would supply resources to Japan, while Singapore manufactured component parts for assembly in Japan which would then be exported to the West (WTO and IDE-JETRO, 2011).

The gravitational forces changed when, in 2001, China joined the WTO and began to access Japan’s current supply chain of component parts. By 2005 the centre of gravity had shifted to China, with it being the main market for all component products from the Asian region. The competitiveness of China’s export trade is not only attributable to its cheap labour but also to the intermediate, high-quality goods/products it receives from the other Asian countries (and in particular ASEAN member states) which are part of the IPN or, as referred to in the WTO and IDE-JETRO report, the global value chain (GVC) structure. ASEAN countries today produce parts, accessories and components and export them to China which, copying the previously successful Japanese model, then assembles the products and exports the finished products principally to the West. Thus, unrestricted regional trade is “an important building block for the region’s economic strength, and consequently disruptions – whether political or administrative – put this competitiveness at risk” (Dieter, 2007).

But if “Factory Asia” already exists, what gains may be made with the ASEAN Charter and its emphasis on the rule of law? To answer this, a closer look into the state of “Factory Asia” is required.

Writing about the development of the automotive market in Europe, Dieter points out that “without the creation of a single regulatory sphere, the integration processes could not have taken place” (Dieter, 2007). He suggests that the expansion of the EU itself enlarged the space for business while the PANEURO scheme (that allowed for the cumulation of origin) increased the area available for sourcing of components without having to consider the local content requirements of the EU. By contrast, writing in 2006, Baldwin characterizes East Asian regionalism as being “a mess”, in that, while there is a high level of regional division of labour in the production process, there has been limited legalization of the process. He suggests that the problem with “Factory Asia” is not a plan but the management of the plan, highlighting that the unilateral tariff-cutting that created “Factory Asia” is not subject to the WTO discipline (binding) or any alternative legal disciplines (Baldwin, 2006). This has resulted in a business environment which is less transparent and less certain than that of Europe, but one which is no less productive. Dieter (2007) further shows that the production of automobiles and electronics in East Asia is relatively integrated in practice but is facing headwinds of protectionism and inconsistent governmental policies.²² The strengthening of the rule of law would reassure investors worried about arbitrary practices and regional backsliding towards protectionism.

9.5 The value of international investment agreements

How can the rule of law be strengthened regionally? It begins with international commitments between the ASEAN members. While much has been said about the value of ASEAN’s commitments to lower tariffs, creating a single window for customs clearances and increasing intra-ASEAN connectivity, the rule of law will be foundational for all these endeavours.

Some economies with low natural endowments and relatively small markets, such as Costa Rica, Hong Kong (China) and Singapore, have succeeded in attracting substantial amounts of foreign direct investment (FDI). Investors are attracted to their investor-friendly tax regimes, good infrastructure and high quality human resources, as well as their strong rule of law built on an effective domestic legal, administrative and judicial infrastructure. Unfortunately, the domestic legal infrastructure is often inherently quite resistant to change due to interest capture and the need to build human resource capacity. An extra-domestic system is therefore (at least in the short term) easier and quicker to implement. It could also act as a governance facilitator for the domestic system by introducing more transparency and accountability and, potentially, remedies for domestic system failures. In addition to assuring investors by creating an international obligation, the state would also create incentives for domestic reform.

Many studies have been conducted to analyse the efficiency of international investment agreements (IIAs) in attracting FDI (UNCTAD, 2009). Some point to China and Brazil as countries with few, if any, IIAs but which have been successful in attracting significant FDI. Nevertheless, China and Brazil are exceptions because both have large markets and, in the case of Brazil, significant natural endowments. Other countries may be less fortunate. In comparing the effectiveness of IIAs, often the difficulty is establishing the counterfactual.

Indeed, the Executive Directors of the International Bank for Reconstruction and Development (World Bank), in their 1965 report on the Convention on the Settlement of Investment Disputes between States and Nationals of Other States (ICSID Convention) stated that, while they thought that “private capital will continue to flow to countries offering a favorable climate for attractive and sound investments, even if such countries did not become parties to the Convention [...] adherence to the Convention by a country would provide additional inducement and stimulate a larger flow of private international investment into its territories” (IBRD, 1965). The ICSID Convention ensures access to third-party dispute settlement mechanisms for an investor investing in another country, provided the country and the investor’s country of nationality are parties to the Convention. This assures investors who may not trust a domestic legal system.

ASEAN has recognised the significant role that an IIA can play in attracting FDIs. In 2009, they concluded the ASEAN Comprehensive Investment Agreement and, soon after, the ASEAN–Australia–New Zealand Free Trade Agreement, with an investment chapter, as well as agreements on investment under the Framework Agreement on Comprehensive Economic Cooperation, with the Republic of Korea and the People’s Republic of China respectively.²³

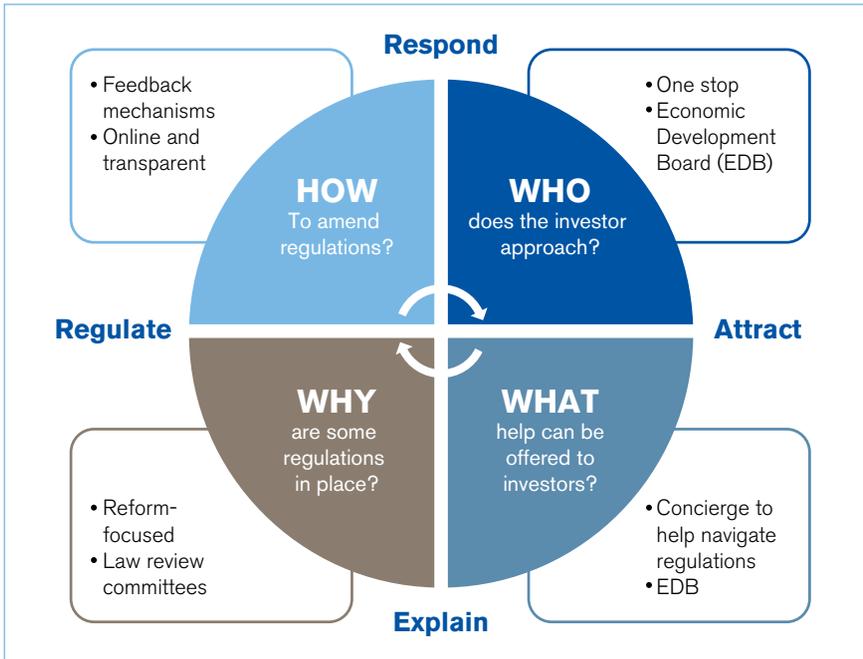
These IIAs require ASEAN members to provide clear rules and procedures, and that disputes be settled by independent adjudicative means. It should be noted that the provisions of these IIAs have been refined from being purely pro-investor to demonstrating understanding of the current investment context in which all the countries involved are capital-importing and capital-exporting countries. They attempt to strike a balance between preserving policy space for a government to regulate matters which are critical to the country and legal rules which provide foreign investors with confidence. This includes the matter of ensuring sustainable development of the country with sound environmental policies.

For regional stakeholders, these IIAs enable investors from the region to expand regionally. In the past, only MNCs or strong interest groups possessed the power to influence the policy-making process. However, with these IIAs, for the first time, all

investors, under the shadow of compulsory investor-to-state adjudication, have access to tools of persuasion based on legal obligations.

In this context, it should be noted that the WJP's four universal principles upheld by the rule of law, stated above, also correspond to the concept of legalization of international obligations between states. This has been defined as obligation, precision and delegation, meaning that states and other actors are legally bound by the rules, that the rules are clear and compliance is monitored, and that disputes are adjudicated by independent parties (Abbott et al., 2000). The WJP adds to this a focus on the administration and enforcement of the law. This is useful, since relying on litigation is a poor alternative to efficient and effective administration. Litigation is not a good system for policy-making and governance. It is episodic and expensive and usually only results in binary decisions. It acts as a useful last resort which encourages more reasonable negotiation and better governance. Regional governments could, therefore, also introduce processes to obtain feedback from investors (both domestic and foreign) and mechanisms to incorporate that feedback into their policy-making. Figure 2 illustrates one such process based on Singapore's experience.

Figure 2 Investor-centric feedback loop



Source: Prepared by the authors.

Rather than waiting for investors to complain about policies and regulations, Singapore instituted proactive procedures to attract investors by creating a one-stop entity to manage foreign investors – the Economic Development Board (EDB). The EDB was tasked with helping investors navigate regulations and, at the same time, fed back to relevant governmental bodies information about the obstacles faced by investors. Steps were then taken in a relatively transparent manner to see how these laws and policies could be fine-tuned. By making it easy for investors through a process of explanation, facilitation and reform, Singapore was able to make itself more attractive and, at the same time, reduce the legal risks associated with the binding commitments created by the IIAs.

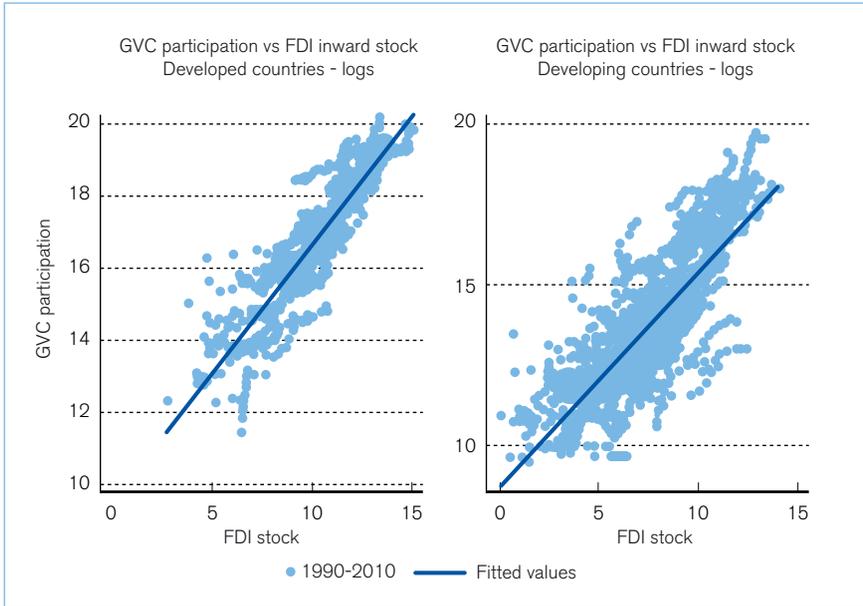
9.6 Conclusions

Singapore built on its colonial free trade policies by joining the General Agreement on Tariffs and Trade (GATT) in 1973 and, later, the WTO, thereby adding binding legal obligations to its already liberal trade policies. Together with commitments made in a number of IIAs and an effort to embed a domestic rule-of-law system, these assurances provided investors with the confidence to invest in a country with otherwise very limited factors of production and an insignificant internal market. These investors initially invested in factories which produced goods. But even today, when the high cost of production has made Singapore less competitive for the production of goods, the country enjoys a status as a hub for high-premium services such as banking, finance and logistics for many of the GVCs in Asia, because of this commitment to the rule of law.

If one includes Cambodia, which entered ASEAN in 2004, Viet Nam, which entered in 2007 and Laos, which entered in 2013, all ASEAN members have now committed themselves to the rules of the WTO and the dispute settlement process for the enforcement of such rules. As discussed above, ASEAN members have also committed themselves to various WTO-plus rules in IIAs, both between themselves and with major regional trade partners. Despite the poor rankings of most ASEAN members with regard to perceived corruption, this makes the region more attractive to investors, who should feel more reassured by having such binding international rules and the attendant international processes for the enforcement of the rules.

A recent UNCTAD study (illustrated in Figure 3) shows that the expansion of the operations of MNCs through FDI has been a major driver of growth of GVCs, as illustrated by the close correlation between FDI stocks in countries and their GVC participation (UNCTAD, 2013). Therefore, ASEAN members with supply-side constraints benefit significantly from the development of the rule of law regionally, as this makes the region more attractive to major investors seeking to set up IPNs.

Figure 3 Foreign direct investment and participation in global value chains, 1990–2010



Source: UNCTAD-Eora GVC Database, UNCTAD FDI Database, UNCTAD analysis.

Note: Data for 187 countries over 20 years. The regression of the annual GVC participation growth on the annual FDI inward (stock) growth yields a positive and significant correlation (at the 5 per cent level) both for developed and developing countries ($R^2 = 0.77$ and 0.44 , respectively). The correlation remains significant considering the two time periods 1990 - 2000 and 2001 - 2010 separately. Regressions use lagged (one year) inward FDI (stock) growth rates and include year fixed effects to account for unobserved heterogeneity.

This has the twin advantages of increasing trade and attracting much-needed capital for the development of those ASEAN countries.

This chapter has focused on the example of one country, Singapore, and one region, as represented by ASEAN, and the way in which the rule of law could maximize their potential for economic growth in the face of supply-side constraints. It is suggested here that the strategy of committing to international trade and investment rules as well as international dispute resolution helps to reassure investors. If this is coupled with a domestic system based in the rule of law that supports trade facilitation, even countries with severe supply-side constraints may be able attract FDI from MNCs and thereby gain more opportunities to participate in GVCs. This capital and technology inflow could result in improvements in infrastructure and increased capacity and productivity of the labour force, with the consequent technology transfer allowing that country to more actively participate in global trade.

However, there is no “one-size-fits-all” approach which would see the implementation of specific solutions for all situations. While some basic principles can be drawn from the “Singapore story”, it is idiosyncratic. ASEAN itself is only gradually finding common ground amongst its 10 very disparate members on the advancement of regional integration through the promotion of common principles of the rule of law.²⁴ It is, therefore, worth remembering the words of former Brazilian Minister Luiz Carlos Bresser Pereira: “Institutions can at most be imported, never exported” (Przeworski, 2004). Locally grounded solutions are required to ensure that the commitment to the rule of law is sustainable over time.

Endnotes

1. See “Factors of production”, “Capital”, “Human capital” and “Land” under the Glossary of Terms in Samuelson, P. A. and W. D. Nordhaus (2005), *Economics*, New York, McGraw-Hill (18th ed.). Some scholars argue that energy, human capital and entrepreneurship may be added to the picture but they can also be incorporated into the classical factors.
2. See historical data at: www.singstat.gov.sg
3. See 2012 data at: www.singstat.gov.sg
4. See: <http://data.worldbank.org/indicator/TG.VAL.TOTL.GD.ZS>
5. See: <http://worldjusticeproject.org/what-rule-law>. See also: Ginsberg, T. (2011), “Pitfalls of measuring the rule of law”, *Hague Journal on the Rule of Law* 3(2): 269-280.
6. Academic studies have suggested that central to economic growth is the perceived commitment of a government to the rule of law. While this is often achieved via the existence of institutional checks on government, arguably other factors could support strong commitment levels, including the stability and duration of the political system, the existence of credible challenges to authority or the extent to which the executive’s own support base would be harmed by an adverse shift in policy. See: Haggard, S., A. MacIntyre and L. Tiede (2008), “Rule of law and economic development”, *Annual Review of Political Science* 11: 205-234.
7. The Corruption Perceptions Index is developed by Transparency International. Higher rankings indicate the country is perceived to be less corrupt. The Index basically scores countries based on how corrupt the public sectors are seen to be. The data is sourced from independent institutions specializing in governance and business climate analysis. The index captures perceptions of the extent of corruption in the public sector, mainly from the perspective of business people and country experts.
8. The Logistics Performance Index is developed by the World Bank. Higher rankings indicate better logistics performance based on the performance along the logistics supply chain within a country. The Index is based on a survey of operators on the ground (global freight forwarders and express carriers), providing feedback on the logistics “friendliness” of the countries in which they operate and those with which they trade. The operators combine in-depth knowledge of the countries in which they operate with informed qualitative assessments of other countries with which they trade and experience of the global logistics environment.

9. See: <http://www.asean.org/news/item/the-asean-declaration-bangkok-declaration>
10. Goh (2003) provides an overview of the criticism and a response that separates the "ASEAN Way" and the principle of non-intervention. For an historical perspective of the "ASEAN Way", see Acharya, A. (2001), *Constructing a security community in Southeast Asia: ASEAN and the problem of regional order*, London and New York, Routledge (2nd ed.). Other criticisms of the "ASEAN Way" can be found in books/articles by Shaun Narine.
11. See: <http://www.asean.org/news/item/declaration-on-the-asean-economic-community-blueprint>
12. See: <http://www.asean.org/archive/5187-10.pdf>
13. To most people, a single market is synonymous with a customs union which includes free movement not only of goods but also of labour, services and capital. The most famous single market, the European Union (EU), began life as the European Coal and Steel Community in 1951 (Treaty of Paris, 1951) and went on to become the European Economic Community (EEC) in 1957 (Treaty of Rome, 1957) (when it became known in the United Kingdom and Ireland as "the Common Market"). The abolition of internal tariff barriers was achieved in 1968. The Single European Act was signed in 1986 to establish a Single European Market by 1992, by removing the barriers to free movement of capital, labour, goods and services.
14. The AEC will have free movement of goods, services, *skilled* [our emphasis] labour and *freer* [our emphasis] movement of capital (see para 9 of the AEC Blueprint) but is unlikely to be a customs union. This is because a customs union has to create a common external tariff policy. Singapore has an almost zero tariff policy (only beer, stout, samsu and medicated samsu are subject to tariffs, although a universal excise tax is imposed on goods such as cigarettes, automobiles and wine). This means that Singapore's tariffs will have to go up or that other ASEAN members' tariffs will have to go down significantly to implement a common external tariff policy. Furthermore, Singapore will have to give up many of its FTAs with non-ASEAN partners unless those partners agree with all the other ASEAN partners or the preferential tariff rates are harmonized with the ASEAN common external tariff rates (thus making the FTAs superfluous, at least for goods).
15. ASEAN (2012), *ASEAN Community in Figures 2012* (ACIF 2012) (http://www.asean.org/images/2013/resources/publication/2013_ACIF_2012%20Mar.pdf)
16. EUROSTAT (2011), *Europe in Figures: Eurostat yearbook 2011*, Luxembourg, Publications Office of the European Union, p.109.
17. ASEAN (2012), *ASEAN Community in Figures 2012* (ACIF 2012).
18. *International Monetary Fund, Report for selected country groups and subjects* (<http://www.imf.org/external/pubs/ft/weo/2012/01/weodata/weorept.aspx?sy=2010&ey=2010&scsm=1&ssd=1&sort=country&ds=.&br=1&c=998&s=NGDPD&grp=1&a=1&pr1.x=75&pr1.y=15>)
19. ASEAN (2012), *ASEAN Community in Figures 2012* (ACIF 2012).
20. ASEAN (2012), *ASEAN Community in Figures 2012* (ACIF 2012).
21. See also: Agrast, M. D. et al. (2013), *The World Justice Project: Rule of Law Index 2012-2013*, Washington, DC, World Justice Project. The Index compares Cambodia, Indonesia, Malaysia, the Philippines, Singapore, Thailand and Viet Nam. It did not gather data for Brunei Darussalam, Lao People's Democratic Republic or Myanmar.
22. Dieter (2007), note 35, p. 41-42

23. For a description of these ASEAN IIAs, see: Ewing-Chow, M. and G. R. Fischer (2011), "ASEAN IIAs: Conserving regulatory sovereignty while promoting the rule of law?" *Transnational Dispute Management* (8)5: 1-12.

24. For a very detailed study of this, see National University of Singapore, Centre for International Law (2009-), ASEAN Integration Through Law: The ASEAN Way in a Comparative Context Project (<http://cil.nus.edu.sg/research-projects/cil-research-projects/asean/>), from which a series of books is forthcoming, to be published by Cambridge University Press.

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IV

**Aid for Trade as a catalyst
to build trade capacity**

10 Aid for Trade and international cooperation for middle-income countries: the case of Chile

*Dorotea G. Lopez and Felipe N. Muñoz**

10.1 Introduction

The Aid for Trade (AFT) programme was launched at the Sixth Ministerial Conference of the WTO, held in Hong Kong in 2005, with the goal of helping developing countries, particularly least-developed countries (LDCs), “to build the supply-side capacity and trade-related infrastructure that they need to assist them to implement and benefit from WTO Agreements and more broadly to expand their trade” (WTO, 2005). It seeks to enable developing countries to play an active role in the world trading system and to use trade as an instrument for growth and poverty reduction. The United Nations Economic Commission for Latin America and the Caribbean (ECLAC) reaffirms this definition by stating that the purpose of AFT is “... expanding the capacity for growth and economic development of developing countries” (ECLAC, 2008). A direct antecedent of AFT was the “technical assistance related to trade” granted after the conclusion of the Uruguay Round in 1994, especially to LDCs, in order to help them meet their obligations under the multilateral trading system.

With respect to the provision of this type of aid, the Ministerial Conference chose to follow the provisions of the Paris Declaration on Aid Effectiveness of 2005, which sought to enhance general features of the horizontal relationship between the donor community and recipient countries. In 2007, the WTO Secretariat proposed that:

- AFT should not be conceived as a new form of official development assistance (ODA), centred on a donor–recipient relationship, but rather as a tool to seek a joint cooperative relationship
- the projects and programmes should be considered as AFT when these activities have been identified as trade-related development priorities in the national development strategies of partner countries.

* The authors would like to thank the WTO Chairs Programme. The contents of this chapter are the sole responsibility of the authors and are not meant to represent the position or opinions of the WTO or its members.

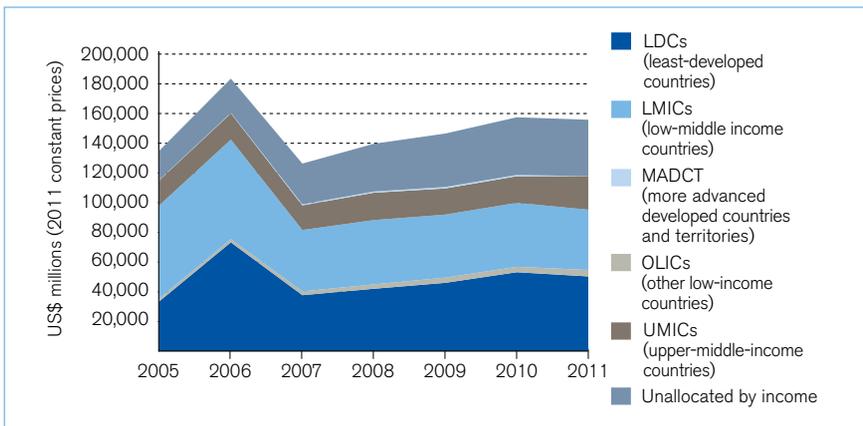
The WTO General Council approved these recommendations in October the same year. Although WTO members have declared that AFT should not become a substitute of the development benefits that a conclusion of the Doha Development Agenda (DDA) would have, the stalled negotiations of the Doha Round had left the AFT programme as one of the main issues on the trade agenda.

Developed countries and international agencies have committed funds to this initiative, and developing countries have identified trade-related development priority areas within their national development strategies. However, the current AFT structure polarizes the relationship between donors and recipients; donors have given priority to those eligible for the World Bank’s International Development Assistance (IDA),¹ leaving aside middle-income countries, particularly upper-middle-income countries (UMICs). Due to their development level, UMICs are not a priority for donors, yet they do not have the availability of funds to become donors, thereby reducing their opportunities and incentives to participate in this initiative. In this chapter we will examine whether and how UMICs can nevertheless play an active role within the AFT framework.

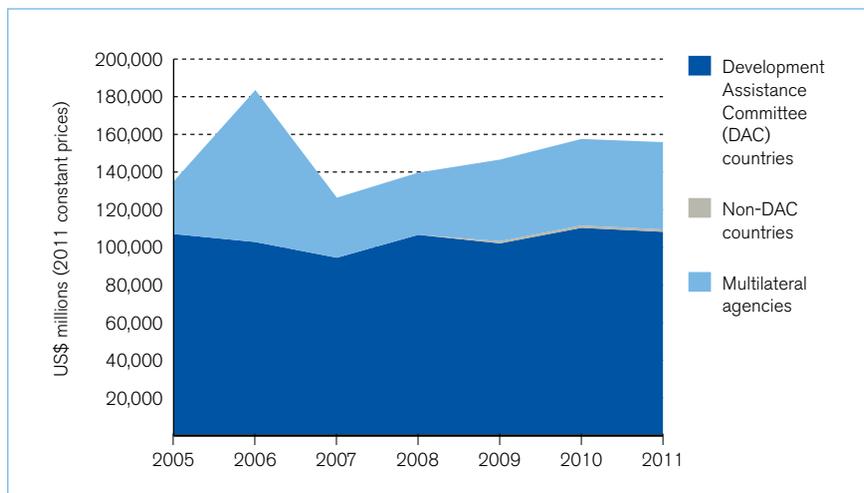
10.2 Aid for Trade: background

Since the launch of AFT in 2005, we have seen a steady increase in the amounts disbursed, with a peak in 2006. Nevertheless, AFT distribution is not homogeneous among recipient countries, reflecting the priority that exists in this programme towards the lower-income countries. In 2011, LDCs and other low-income countries accounted for two-thirds of total aid, while upper-middle-income countries accounted for approximately 15 per cent (see Figure 1). The rest is comprised of regional projects, with the prioritization of Asia and Africa.

Figure 1 Aid for Trade disbursements by recipient income group, 2005-2011



Source: OECD data.

Figure 2 Aid for Trade disbursements by donor income group, 2005-2011

Source: OECD data.

Reviewing the AFT funding sources, it is clear that major donors are members of the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD) and, to a lesser extent, of multilateral agencies, which provide nearly all of the available resources. The first official donation by a non-DAC country was received as late as 2009, and by 2011 this aid did not exceed 1 per cent of the total disbursements. The small size of this percentage can be explained by the limited availability of UMICs' funds, along with their own developing country needs (see Figure 2).

The data presented in Figures 1 and 2 reveal the low involvement of UMICs in the AFT initiative, as both recipients and donors. Financial constraints on UMICs for granting aid to recipient countries sometimes lead to their self-marginalization. The main reasons for this could be their unstable level of development, vulnerability to international economic crises and relative lack of international visibility.

At present there are two ODA formats, the classic model and the cooperative model. In the classic model, the donor is limited to the transfer of funds to the recipient country. In the new, cooperative model, which is embedded within a triangular scheme, countries participating in the flow of funds are considered partners, and the donor cooperates with the recipient (now partner) in the internal implementation of specific programmes. Triangular cooperation normally operates with a donor country (or an international organization) that provides funding and conditions, a country that receives them and a third country (or international organization) that helps in the implementation of the AFT

programmes. This chapter argues that, in the traditional way of understanding this cooperation, the third-country role has not been acknowledged and stimulated and, as a consequence, there is less involvement of UMICs in AFT initiatives.

The cooperative model could be improved by involving UMICs at a deeper level in triangular cooperation through inserting them at an equidistant point between the donor and recipient countries. These countries can play the role of social facilitator without the need to commit funds for aid. This formula should improve the role of UMICs in the development of trade.

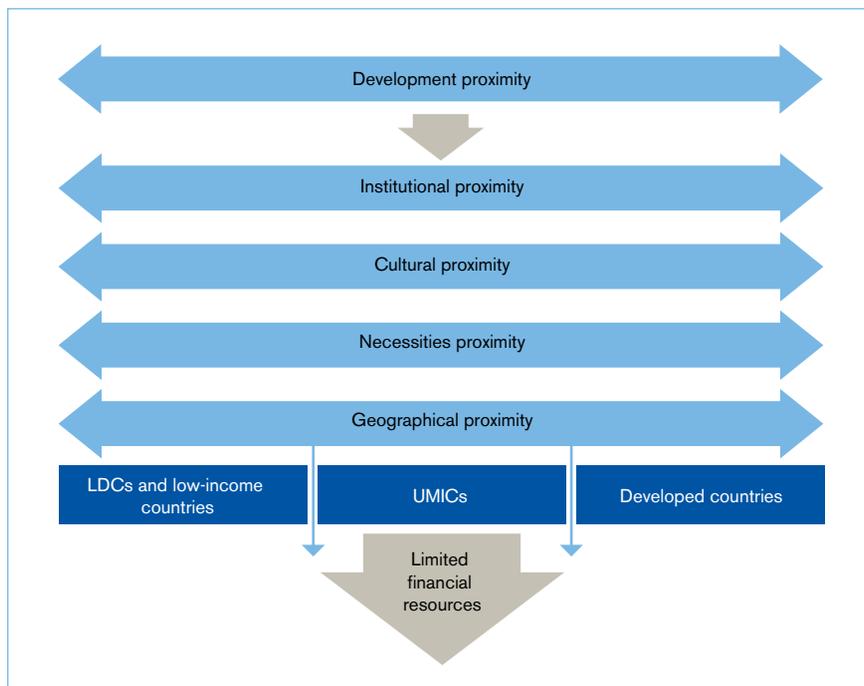
The reasoning behind this idea stems in part from the well-known fact that various support programmes for development – not only AFT – lack the ability to detect the needs of recipient countries. This is because in the formulation, design and, in many cases, implementation of projects and programmes, conditions such as development level, culture or other elements of the recipient country are not always taken into account. This is the result of aid being conceived from a two-sided donor–recipient approach. In contrast, in a triangular cooperation scheme, UMICs can act as facilitators because the proximity between both donor–UMIC and UMIC–recipient is closer than the typical donor–recipient relationship. This closeness allows them to work with donor countries in cooperative actions towards reaching aid development goals.

Among AFT demands, trade-related priority areas identified by recipient countries are mainly trade capacity-building, trade facilitation and infrastructure, particularly in areas related to norms, especially sanitary and phytosanitary (SPS), technical barriers to trade (TBT) and other standards (OECD/WTO, 2011). The self-needs identification may have high costs, and losses could be reduced by triangular cooperation. The UMICs have more recent and similar experiences – in both cultural and commercial processes – with LDCs and low-income countries that could be useful, through a triangular cooperation scheme, in the different steps of AFT initiatives: identification, formulation and implementation of actions.

10.3 Aid for Trade: proximities

Although AFT has been constructed on the basis of national development strategies prepared by developing countries, differences between donors and recipients may reduce the impact of the initiative. The presence of a third actor with closer proximity to both the donor and the recipient country may reduce possible negative impacts of such differences. In Figure 3 we identify a series of characteristics of UMICs which provide them with certain advantages in acting as such a bridge. These are mainly proximities that should create incentives for their inclusion in AFT initiatives through triangular cooperation and collaborative schemes.

Figure 3 Advantages for upper-middle-income countries as facilitator partners



Source: Prepared by the authors.

The idea in Figure 3 is that all the proximities are closely related with the development process and sometimes with other reasons, as follows.

Development proximities

Countries generally tend to build institutional dynamics according to their development processes and strategies. There is a clear relationship between institutions and trade development. It is well known that if institutions such as customs or national standardization authorities are not adequate for trade activity, they will impact on development negatively. The similarities between UMICs and recipient countries, and the closeness in the degree of development between their institutions, foster better opportunities for cooperation between them. This also facilitates the process of implementing this cooperation. For example, it is more likely that AFT for enhancing customs processes should find similar hurdles and challenges in the recipient LDCs to those that were experienced and solved by a UMIC. UMICs' involvement in implementing or coordinating the implementation of AFT can make it easier to overcome such hurdles.

Cultural proximity

Some of the problems in international trade are closely related to deep cultural differences. Factors such as language, training strategies and work culture are determinant for trade development and efficient AFT implementation. The capacity-building programmes for government officials tend to be more effective when they have a regional component or when more similar countries participate.

Proximity in needs

The self-identification of needs can sometimes affect AFT effectiveness negatively. The AFT could sometimes be conceived purely according to contemporary commercial or political priorities, denying the importance of long-term effects and the real problems that need to be solved. Again, a third country can play an important role in effectively allocating funds based on its own trade experience.

Geographic proximity

In some cases, particularly in Latin America, geographic proximity can represent an opportunity in the establishment of networks creating value chains or programmes to continue South–South cooperation strategies. However, these advantages are not always present or not necessarily virtuous. They should, therefore, be analysed on a case-by-case basis.

The above indicates that UMICs have a number of characteristics that place them in an excellent position to act as facilitators within AFT cooperation schemes. The obvious closeness between them and the final recipients of AFT should lead to better results. For example, there are coincidental institutional structures, such as similar trade-related institutions, particularly in Latin America; trade aspects are in the Foreign Affairs Ministry in some countries and the Trade Ministry in others. Customs problems and limitations are more similar when the trade has similar characteristics. Common culture such as language or history makes the way that things are done in each country more understandable. Trade agreements could enhance value chain creation as a result of AFT cooperation. This means that proximities have to be analysed in order to maximize their benefits.

Finally, but no less importantly, the UMICs receive a large number of positive externalities for participating in these initiatives, such as the improvement of their own trade processes, continuity in their self-analysis, the permanent creation of networks and value chain possibilities.

10.4 Aid for Trade and triangular cooperation: the case of Chile

In Chile, the International Cooperation Agency (AGCI, using its Spanish acronym) is the office in charge of Official Development Aid and Cooperation, in which AFT is included. This agency was created in 1991 under the aegis of the Ministry of Planning and Cooperation (since 2011, the Ministry of Social Development) to act as the conduit for ODA that Chile received from traditional donor countries. With Chile becoming a UMIC and no longer being a net recipient of cooperation, AGCI – now under the jurisdiction of the Ministry of Foreign Affairs – is the body that articulates Chile's cooperation with Latin America and Caribbean countries, both bilateral and triangular. Chilean cooperation is mainly oriented towards technical assistance, transferring and installing best practices, and human capital formation, for example granting master's scholarships to professionals in the region.²

Since 2005, Chilean policy towards international cooperation has been mainly cooperative. From 2008, due to the international financial crisis, donor countries have reduced their contributions to Latin America, redirecting them to other regions with more urgent needs, taking into account their lower levels of development. In consequence, and in line with its foreign policy, Chile has played an active role in the maintenance of aid to the region, particularly Central America and the Caribbean, unlike traditional donor countries which direct their aid to countries in Africa and Asia. In giving this support, Chile emphasizes the new formats of cooperation: South–South and triangular.

Technical assistance is the general format of AFT seen in Chile. By virtue of its capabilities and limitations, the country cannot generate support in other sub-groups of AFT identified by the WTO and the OECD (2005), such as economic infrastructure and productive capacity-building. In the case of Chile, we have identified seven initiatives (see Table 1). Three of them were reported to the WTO in 2011.³ Although they were not reported by Chile as AFT, other initiatives⁴ have been considered as part of a global support programme. The emphasis in these initiatives is on strengthening public institutions.

Two programmes were implemented in Chile as part of loans the Chilean Government requested from the Inter-American Development Bank (IDB) (see Table 1). These programmes were developed within the framework of the implementation of Chile's main free trade agreements (with China, the European Union, Japan, the Republic of Korea and the United States) towards maximizing the advantages of preferential access to these markets for small and medium-sized enterprises (SMEs). Two other programmes (Central America and the Caribbean) are part of the Chilean cooperation

strategy within the region, which is mainly concerned with capacity-building. In these programmes, Chile acts as a donor country, but it is important to note that the main component of them is manpower (through capacity-building or formal training for recipients) and not financial disbursements. And three initiatives in Table 1 are part of triangular cooperation with developed (Japan and United States) countries and international agencies (IDB/UN) to implement AFT collaborative schemes in Latin American countries. In these programmes, Chile collaborates mainly through the provision of institutional expertise and manpower, while traditional donors contribute financial resources to achieve the programme objectives. Therefore, it is possible to identify some successful triangular cooperation cases with the participation of a UMIC as a facilitator partner, a scheme that should be encouraged in future activities.

Table 1 Technical assistance is the general format of AFT: a review of specific initiatives

Initiative/programme	Donor	Recipient	Description
PYMEXPORTA 2005–2009	IDB	Chile	Focused on exporter SMEs; seeks to help them overcome obstacles in the use of preferential trade agreements signed by Chile.
Exporter coaching 2007–	IDB	Chile	To develop, implement and acquire institutional capabilities in working methodologies to promote exports and give effective tools for SME internationalization processes.
Strengthening EXPORTA's trade and institutional management 2006–2009	Japan	El Salvador	To give technical assistance to El Salvador's export promotion agency (EXPORTA), transferring ProChile's experience in the management of international markets and export supply development.
Strengthening Paraguay's customs regime 2011	United States	Paraguay	To strengthen internal control procedures of the National Customs Office of Paraguay, by enhancing the capabilities and competences of internal audit systems and physical inspection through technical assistance.
Technical assistance to strengthen action on food safety in Guatemala 2010–2014	IDB and United Nations	Guatemala	To strengthen the technical capabilities of professionals at the Public Health and Social Assistance Ministry (MSPAS) and the National Secretariat of Food Safety (SESAN) on food programmes, food and nutritional vigilance, through technical assistance and capacity-building. Courses on SPS measures were conducted. One of the main objectives was to strengthen the institutional and technical conditions for the control of production and commercialization of food according to CODEX Alimentarius and domestic legislation.

Table 1 Technical assistance is the general format of AFT: a review of specific initiatives (continued)

Initiative/programme	Donor	Recipient	Description
Diplomatic capacity-building and Diplomacy for Globalization course	Chile	Central America and the Caribbean	To strengthen knowledge and capacity-building among Central American and Caribbean diplomats on economics, international relations and public administration.
Agro-ecological development and food safety	Chile	Haiti	Capacity-building of professionals, technicians and farmer families in the production and commercialization of organic vegetables according to agro-ecological procedures for food and environmental safety.

Source: Prepared by the authors.

10.5 Conclusions

In a cooperation scheme based on the donor–recipient relationship, UMICs seem to have fewer incentives and a less-defined role for participation in AFT programmes. Their development position is such that they do not qualify as a priority when it comes to receiving aid and are not in a position to fully act as donors. They are restricted in their ability to adequately perform the role of donor, as they face narrow budgets that impose limitations regarding the availability of financial resources for AFT initiatives. This implies that, in general, governments are reluctant to engage in such schemes. On the other hand, donor countries consider UMICs a lower priority as aid recipients, precisely because of their relatively higher development level. Moreover, in some cases, UMICs which are members of the OECD, such as Chile, Mexico or Turkey, have fewer possibilities to be considered as aid recipients since they became members.

This chapter argues that a cooperative approach can give UMICs a more defined role in cooperation processes such as AFT, especially through collaborative partnerships. In particular, we argue that UMICs are well positioned to play the role of facilitator in such partnerships.

Delivering AFT through this enhanced scheme – allowing the involvement of UMICs – could be beneficial for all the countries involved in this initiative. Among the potential benefits are those related to adding value to exports and becoming part of value chains, which must be part of the objectives pursued in triangular cooperation and represent an important issue for countries like those of Latin America.

Triangular cooperation schemes have already begun to develop, as we have identified in the case of Chile, and they are an alternative that should be considered in the design of larger scale cooperation programmes. In addition, inserting UMICs within such processes is an indication for LDCs and low-income countries that a potential increase in their development levels may not necessarily result in marginalization from aid schemes.

Endnotes

1. Eligibility for IDA support depends on a country's relative poverty, defined as GNI per capita below an established threshold and updated annually (in fiscal year 2014, US\$ 1,205). IDA also supports some countries which are above the operational cut-off but lack the creditworthiness needed to borrow from the International Bank for Reconstruction and Development (IBRD). Some countries are IDA-eligible based on per capita income levels and are also creditworthy for some IBRD borrowing. They are referred to as "blend" countries (World Bank, 2013).
2. See: Ministerio de Relaciones Exteriores de Chile (MINREL) (<http://www.minrel.gob.cl/>)
3. PYMEXPORTA, strengthening of EXPORTA's trade and institutional management, and exporter coaching.
4. Strengthening EXPORTA's trade and institutional management 2006–2009, Technical assistance to strengthen action on food safety in Guatemala 2010–2014, Diplomatic capacity-building and Diplomacy for Globalization course, and Agro-ecological development and food safety.

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11 Aid for Trade and export diversification: the case of Barbados

*Keith Nurse and Ginelle Greene**

11.1 Introduction

For many developing states which have experienced a substantial decline in their share of world trade and global value added, Aid for Trade (AFT) initiatives have become a critical source of support in a context where these countries suffer from both market and government failure. As such, the key issue is whether AFT programmes, as currently configured, are the right policy instrument or set of instruments to address the weak participation of developing countries in global trade and global value chains. In many regards, the problem relates to an overdependence on a narrow range of exports (e.g. agricultural and resource-based commodities and low value-added manufacturing goods and services) that are faced with declining terms of trade, tariff progressivity and diminishing economic returns (Reinert, 2007). One of the key criticisms that has emerged is that the focus of AFT donors and relevant implementing agencies has been heavily weighted on the architecture of trade support programmes and not sufficiently on industrial upgrading and enterprise development (Cirera, 2009).

It is also recognized that the contribution and impact of AFT programmes is difficult to measure per se, in part because of the long gestation period associated with key outcomes. It is also a challenge to attribute impact in the trade arena to any one initiative or programme. Consequently, it is more realistic to assess process and relationships, given that the priorities of AFT programmes generally are focused on building trade capacity and, ultimately, enhanced market presence. It is on this basis that we agree with Morrissey et al. (2010) that the outcomes of AFT should be determined by the nature of the relationship between donors and recipients. The 2005 Paris Declaration on Aid Effectiveness further highlights that “benchmarks are necessary for reliable global monitoring of aid for trade efforts” (OECD and WTO, 2010a).

* The contents of this chapter are the sole responsibility of the authors and are not meant to represent the position or opinions of the WTO or its members.

It is on this basis that this chapter examines the specific programmes aimed at institutional capacity-building initiated by donor agencies as well as the stakeholders involved in the entire process, whether they be public, private or civil society partners, from the stages of allocation to distribution. In this regard, the performance of current trade support initiatives within the Caribbean region is examined, along with the nature of the relationships between the key stakeholders. Based on simple regression analysis and descriptive statistics, we review the trade performance of AFT projects in the Caribbean region. Although the macroeconomic relationship between the AFT flows and trade impact is not questionable, we suggest it as a prerequisite to mainstreaming AFT projects into national and regional development agendas. Some policy recommendations are therefore proposed, to draw better benefit from AFT projects.

11.2 The Caribbean context: the industrialization and competitiveness challenges

The experience of the Caribbean over the last two to three decades has been one of declining global competitiveness and accelerating deindustrialization in a context of increased trade liberalization and global financial turmoil.

Since the mid-1980s, the region experienced a massive reversal in the export of manufactured goods (Nurse, Francis and Niles, 2008). Primary and resource-based exports accounted for close to 80 per cent of the total goods exports of the Caribbean Community (CARICOM) in 1985 and 1990.¹ By 1995, those exports had declined to 55 per cent, with an expansion of low-, medium- and high-technology exports to approximately 40 per cent of total goods exports. After 1995, higher technology exports dropped rapidly, and primary and resource-based exports expanded to 85 per cent of total goods exports, a higher level than in 1985.

This scenario is attributed to the decline in value of manufactured exports as well as the rise in value of primary exports, principally hydrocarbons from Trinidad and Tobago. Indeed, Trinidad and Tobago's increased export earnings from this sector account for more than 100 per cent of the rise in value of primary exports for the region in the period. This is in the context of a significant drop in traditional primary exports such as sugar, bananas and rice that have seen an erosion of trade preferences into the European Union (EU) market on account of WTO liberalization (CARICOM, 2006).

Reducing the concentration of primary goods in total exports is an important indicator of export diversification. Using the Entropy Diversification Index, all the Caribbean economies also demonstrated a lack of export diversification for goods relative to Latin American countries over the 2009 to 2012 period (see Table 1).

Table 1 Export diversification in CARICOM and Latin American countries, 2009-2012

Exporter	2009	2010	2011	2012	Overall level of diversification, 2009-2012
CARICOM countries	1.15	1.09	1.1	0.68	1.01
Latin American (Central American Common Market [CACM] and Mercosur) countries	1.60	1.31	1.34	1.02	1.32

Source: Comtrade (2010).

Notes: As measured by the Entropy Diversification Index: the higher the number, the more diversified the export activities; the lower the number, the less diversified the export activities.

Overall during the 2009 to 2012 period, Latin America displayed a higher level of diversification of its export activity than did the CARICOM region; however, both regions displayed increasing levels of export concentration. Economies such as Barbados, Jamaica, and Trinidad and Tobago have maintained a high dependence on traditional low-value-added, low-technology exports and thus have experienced limited diversification over the last three decades. Caribbean economies have been underperforming relative to other economies such as Costa Rica and Mexico. In sum, the merchandise trade, other than that originating in the extractive industries which applies particularly to the Trinidad and Tobago economy, has seen a rapid decline (UNECLAC, 2006).

11.3 Can Aid for Trade make a difference in the Caribbean context?

WTO Director-General Pascal Lamy, at the launch of the Caribbean Community Regional Aid For Trade Strategy 2013-2015 in Port au Prince, Haiti, highlighted that “intra-Caribbean trade stands at just 13 per cent which... is on average, at 46 per cent below its trade potential”. However, he also indicated that “[t]here are tremendous opportunities for increasing the role of trade in the region’s growth strategy” and emphasized the importance of harnessing the development potential of the Regional Aid for Trade Strategy, in which AFT plays a role in supporting closer Caribbean economic integration (Lamy, 2013).

Trade diversification requires a trade, industrial and innovation governance agenda that aims to expand local value added and deepen integration into global markets and value chains, and thus strengthen CARICOM economies against external and exogenous shocks. The role of development cooperation as embodied in AFT is important given the challenges of market and government failure. The Intra-American Development Bank (IDB) and the WTO have provided a useful perspective on the core challenges of AFT in Latin America and the Caribbean:

Looking forward, Aid for Trade is even more critical to stimulate the supply-side response of developing countries, particularly low-income countries in the region. The impact of the financial crisis on the real economy and the failure to conclude the Doha Development Agenda risk jeopardizing the contribution of trade to economic growth and poverty reduction in developing countries. (IDB and WTO, 2009)

Cooperation is being effected within frameworks such as the ongoing Economic Partnership Agreement (EPA) which seeks to enable the countries of the Forum of the Caribbean Group of African, Caribbean and Pacific (ACP) States (CARIFORUM) to better exploit market access opportunities provided within agreements. For example, Article 8 of that EPA identifies a wide range of such economic development supports which include technical assistance towards building human, legal and institutional capacity. Agreement measures aim to promote private sector and enterprise development through assistance which enhances international competitiveness, export diversification, development of infrastructure, institution-building and support to comply with international sanitary and phytosanitary standards, technical standards, labour standards and environmental standards.

Within the past decade, donor agencies such as the IDB, United Nations, United Kingdom Department for International Development (DFID) and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) have conducted AFT programmes aimed at addressing CARICOM's supply-side issues. In addition, development cooperation instruments such as the European Development Fund (EDF) have also been utilized to provide financial resources for trade support.

Table 2 provides available data on the AFT commitments and disbursements for the period 2002-2009. It shows that commitments have doubled over the period. Disbursements, on the other hand, have grown fourfold. The disbursement rate has improved from a low of 38 per cent in 2002-2005 to a high of 92 per cent in 2008, thereafter dropping to 77 per cent in 2009. However, it is important to note that a large proportion of the official development assistance (ODA) funds received by CARICOM goes to Haiti,² which is the only least-developed country (LDC) in the regional bloc.

Table 2 Aid for Trade to CARICOM countries, 2002-2009 (US\$ million)

	2002–2005	2006	2007	2008	2009
Commitments	266.7	190.8	317.7	315.3	564.4
Disbursements	101.5	106.2	181.5	291.7	434.6
Disbursements as a share of commitments (%)	38.05	55.66	57.12	92.51	77.00

Source: CARICOM (2013).

In 2007, it was estimated that AFT disbursements were 35 per cent of total sector allocable aid. These disbursements were largely focused on building productive capacity (59 per cent), economic infrastructure (36 per cent), and trade policy and regulations (4 per cent), with trade-related adjustment receiving less than 1 per cent. This dovetails with the priority areas identified by the various Caribbean governments. Competitiveness was selected as the top AFT priority area, with trade policy analysis, export diversification and regional integration following (IDB and WTO, 2009).

11.4 Impacts of Aid for Trade on CARICOM's export activity: some empirical evidence

Indicators which allow for observation of trade development activity at a country level (i.e. the recipient state) are outlined below. Based upon the 2009 work of Gamberoni and Newfarmer (presented in WTO and OECD, 2010), and using data from the World Bank and the International Trade Centre to conduct trade measurements, we developed a conceptual framework of indicators to capture these possible effects of AFT on CARICOM's export activity. This involved analysis of factors such as export growth, market share, competitiveness and export concentration. Guided by this approach, the data were compiled and analysed for CARICOM. In order to understand the influence of CARICOM's AFT disbursements on its export activities, specific trade performance and capacity indicators identified by the World Bank were used.

Aid for Trade and trade performance

Trade performance is an indicator used by the World Bank as a measure of the impact of AFT upon exports via three trends:

- the real growth of exports of goods and services
- the change in export market share of goods and services, and
- the index of export concentration.³

As outlined earlier, CARICOM's export market share and export concentration indices showed increasing concentration during the period 2007 to 2010, with lesser levels of export diversification overall compared with its Latin American counterparts.

In order to gain greater insight into the role of AFT in this dynamic, some of the World Bank indicators outlined above were used to conduct a simple correlation exercise. Such a correlation and descriptive statistics were used to explore whether a relationship existed between AFT disbursements and CARICOM's extra-regional

Table 3 CARICOM overall allocation of AFT disbursements

	2006	2007	2008	2009	Total
Building productive capacity (US\$ million)	45.8	86.8	155.9	196.5	485
Economic infrastructure (US\$ million)	47.9	88.3	125.7	221.8	483.7
Trade policy and regulations (US\$ million)	2.6	1.8	3.8	5.3	13.5
Trade-related adjustment (US\$ million)	0	0	0	0.9	0.9

Source: CARICOM (2013).

export activities. The area which received the highest value of AFT disbursements in the CARICOM region was allocated to the area of “building productive capacity” as reflected in Table 3.

As AFT disbursements increased, CARICOM's exports also increased, the only exception being for the year 2009. Thus, regression analysis was conducted for two scenarios:

1. Where the values of 2009 were excluded from regression analysis conducted
2. Where the values of 2009 were included in regression analysis conducted.

This approach was taken in order to fully understand the relationship between the two variables.

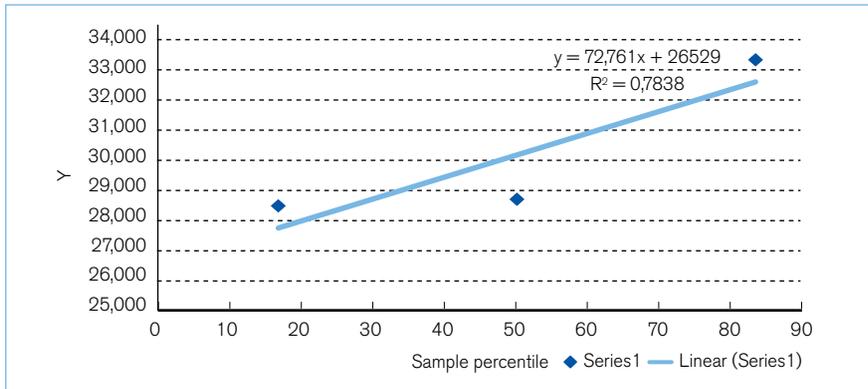
Scenario 1

The correlation coefficient was calculated for 2006-2008 based on a simple regression approach illustrated with equation (1) where Y' represents the exports of all products and X_1 the AFT disbursements.

$$Y' = \beta_0 + \beta_1 X_1 \quad (1)$$

The resulting value from such calculations was 0.92.⁴ This figure indicated that a strong positive relationship did exist between the two variables,⁵ that is, as AFT disbursements increased so too did CARICOM's export values.⁶ As such, when the values for 2009 were excluded from the regression analysis, the two variables demonstrated a significant linear relationship.

Equation (1) above shows the extent to which CARICOM's exports would increase for every increase in AFT disbursements. However in light of the above, it is also important to note the standard error value of 1509.3. This value suggests that other, external factors may have an influential role on the covariance between the two variables X and Y . This result is logical and expected as the objective here is not to develop a normative approach but, rather, to express some economic intuition and establish the macroeconomic foundation between AFT and trade performance. To determine whether other variables may be responsible for the relationship between X and Y , more robust and complementary econometric techniques based on a larger dataset need to be employed which could provide more in-depth analysis on the impact of AFT on CARICOM's exports.

Figure 1a Normal probability plot

Source: Authors' calculations from the World Bank database (2013) and Comtrade (2010).

The resulting calculated, adjusted R^2 value of 0.69 from the regression output table indicated that a significant positive linear relationship existed between CARICOM's exports and AFT disbursements during the 2006 to 2008 period. The adjusted R^2 value of 0.69 signified that 69 per cent of the variation in Y (CARICOM's exports) could be explained by variations in X (AFT disbursements). A hypothesis test was conducted which indicated that the credibility of the regression analysis was robust and thus the findings reliable, with a critical F value of 5.59, greater than the calculated F value of 0.25 (see Figure 1a).

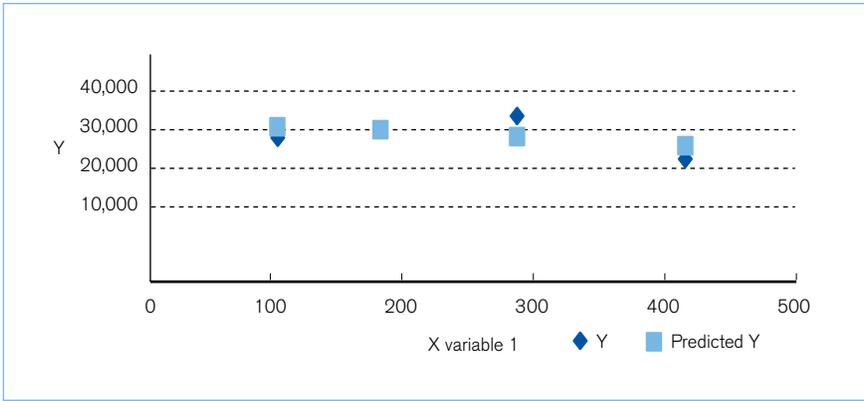
The normal probability plot graphically demonstrates the robust linear trend between the variables of AFT disbursements and CARICOM's exports. Only minor deviations may be observed from the line fit to the points on the probability plot. This pattern is further corroborated by the calculated correlation coefficient which reflected a linear relationship with a coefficient of 0.92.⁷ The fact that the points in the lower and upper extremes of the plot do not deviate significantly from the straight-line pattern indicates that there are not any significant outliers (relative to a normal distribution).

Scenario 2

When 2009 figures were included in the regression analysis, the variables revealed a weak R^2 value of 0.2 and a high standard error value of 4880. This may mean that, in the year 2009, many external factors may have influenced the relationship between the variables. Thus, particularly for the 2009 period, we cannot determine that AFT disbursements had a direct impact on CARICOM's exports.

Naturally, the global financial crisis has impacted on the Caribbean region, especially through the trade and financial channels, and this is mainly why we have discriminated our sample into two periods. This assumption is further supported by a

Figure 1b X variable 1 line fit plot for 2006 to 2009 timeframe



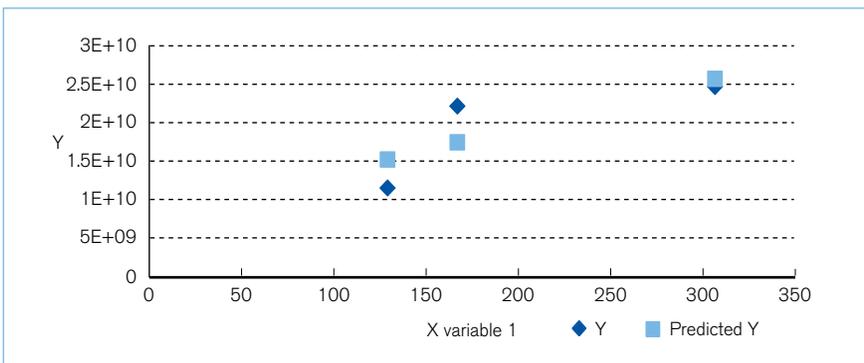
Source: Authors' calculations using data from the World Bank database (2013) and Comtrade (2010).

negative correlation coefficient of 0.42 for the 2006 to 2009 period. The hypothesis testing carried out supported the validity of these results, with a critical F value of 0.548, greater than the calculated F value of 0.536 (see Figure 1b).

The trend depicted by the variables when the 2009 data is included shows a slightly negative relationship between the two variables. However, for the 2006 to 2008 period exclusively, the opposite is the case (see Figure 1c).

In order to truly understand what possible externalities could have played an influential role on the relationship between CARICOM's AFT disbursements and export activity, further research is needed. Use of mixed-method monitoring and evaluation which employs qualitative and quantitative analysis may prove useful.

Figure 1c X variable 1 line fit plot for 2006 to 2008 timeframe



Source: Authors' calculations using data from the World Bank database (2013) and Comtrade (2010).

Tools such as case studies and mass surveys of beneficiaries may help to better determine the causal relationship between export growth and AFT disbursements (using available international standardized techniques such as, for example, GIZ's results-based monitoring (RBM) associated with AFT).

Infrastructure and institutions: a key challenge for the region

The Caribbean Community Regional Aid for Trade Strategy 2013-2015 highlights “physical isolation... geographical dispersal... distance from main markets... inadequate infrastructure” and “minimal export diversification” as the key characteristics which hindered trade expansion and economic development (CARICOM, 2013). In the continued attempt to measure the impacts of CARICOM's AFT experience, other relevant international indicators were reviewed.

Infrastructure and institutions, further indicators used by the World Bank, could be used to help measure the impacts of AFT via trends in the quality of transport and information technology, and the efficiency of customs.⁸

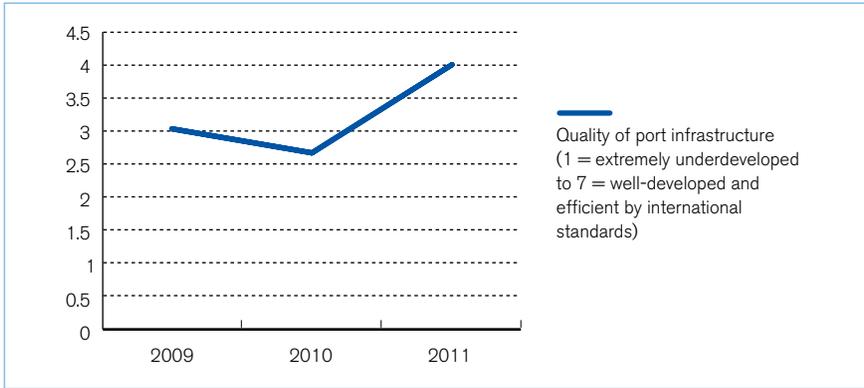
Geographically, the CARICOM region consists of a chain of islands, with only Guyana and Suriname sharing a common border. As such, port infrastructure and the role of maritime transport would be a significant factor in the development of intra- and extra-regional trade. Elements such as “port connectivity, infrastructure, storage facilities, size of ships, cargo volumes, transit times and positioning within international shipping routes, individually and collectively influence cost and competitiveness” (CARICOM, 2013). Logistics accounts for 20 per cent of CARICOM's production costs, compared with the world average of 10 per cent. Thus, the quality of port infrastructure can play a critical role in private sector development into new areas of export activity (CARICOM, 2013).⁹ Information on relevant indicators is reflected in Table 4 for seven of the CARICOM countries.

Table 4 Quality of selected infrastructure in CARICOM countries, 2010-2011

Country	Overall infrastructure	Roads	Ports	Air transport
Barbados	5.8	5.4	5.6	6.3
Belize	3.5	3.0	3.3	4.4
Guyana	3.8	3.8	3.7	4.0
Haiti	1.8	1.7	1.8	2.1
Jamaica	4.2	3.8	5.3	5.5
Suriname	4.2	4.2	4.5	4.0
Trinidad and Tobago	4.4	3.9	3.9	5.0

Source: Bilbao-Osorio, B. et al. (2011).

Note: As measured by the Global Competitiveness Index (GCI).

Figure 2 Quality of port infrastructure

Source: World Bank database (2013).

Barbados scored the highest among these seven CARICOM countries with respect to the quality of port infrastructure, with Haiti at the other end of the spectrum with extremely underdeveloped port infrastructure. However, overall, the region showed improvements in the critical area of port infrastructure (see Figure 2). One may also observe that, during 2009, CARICOM's allocation of AFT to the area of "economic infrastructure" increased by 383 per cent over 2006. As outlined in the regional AFT strategy for 2013–2015, the region continues to be one of importance for export development, with maritime transport identified as one of the areas for "upgrading key economic infrastructure" (CARICOM, 2013).

Trade incentives and business environment

Time to export/import is another indicator used by the World Bank (OECD and WTO, 2010b). This indicator is also reviewed in the regional AFT strategy for 2013–2015 (CARICOM, 2013). The CARICOM member states demonstrated a relatively low overall ranking in the Doing Business survey conducted by the International Finance Corporation and the World Bank (2010–2011).¹⁰ The findings placed the region at a comparative disadvantage relative to the rest of the world. A cross-border system compiled procedural requirements for the exporting and importing of goods by ocean transport. The resultant findings showed that eight of the CARICOM countries fell in the rankings between 2010 and 2011. Only Grenada showed improvements, increasing its standing by 25 places during the period. This is reflected by a decrease in the US dollar cost to import as well as export, and decreased times to both import and export. As a result, Grenada showed an overall improvement in its trading conditions, with increased procedural efficiency at key stages of trade activity. Results for CARICOM countries are shown in Table 5.

Table 5 Ease of doing business in CARICOM countries, and other selected indicators, 2010-2011

Areas	Doing business (rank)		Trading across borders		Time to export (days)		Cost to export (US\$ per container)		Time to import (days)		Cost to import (US\$ per container)	
	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011
Antigua and Barbuda	56	64	58	63	15	15	1,133	1,133	15	15	1,633	1,633
Bahamas	71	77	41	45	16	19	930	930	13	13	1,380	1,380
Barbados	...	...	...	...	...	...	...	...	...	...	...	...
Belize	93	99	118	119	21	21	1,710	1,710	21	21	1,870	1,870
Dominica	85	88	87	90	13	13	1,297	1,297	15	15	1,310	1,310
Grenada	98	92	82	57	14	10	1,226	876	19	15	2,479	2,129
Guyana	101	100	77	78	20	19	730	730	24	22	730	745
Haiti	163	162	145	145	35	35	1,005	1,005	33	33	1,545	1,545
Jamaica	79	81	105	104	21	21	1,750	1,750	22	22	1,420	1,420
St. Kitts and Nevis	83	87	38	39	12	12	850	850	13	13	2,138	2,138
St. Lucia	45	53	104	105	14	14	1,600	1,700	18	18	2,745	2,745
St. Vincent and the Grenadines	72	75	39	41	12	12	1,075	1,075	12	12	1,605	1,605
Suriname	160	161	102	101	25	25	975	995	25	25	885	945
Trinidad and Tobago	95	97	53	51	14	14	866	808	26	19	1,100	1,250
CARICOM (average)					18	18	1,165	1,143	19	18	1,603	1,593

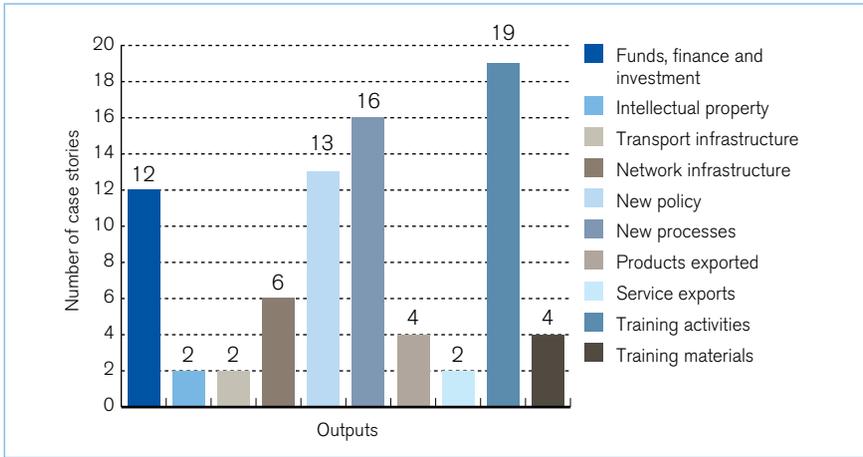
Source: International Finance Corporation and the World Bank, Doing business (<http://doingbusiness.org>), cited in CARICOM (2013).

Note: ... indicates where data was unavailable

11.5 Mainstreaming Aid for Trade projects in national and regional development agendas

Based on a survey of case stories from Latin America and the Caribbean, it was observed that there are some key trends and patterns across sub-regions (WTO, IDB and OECD, 2011 - see Figure 3). For the Caribbean region, the case stories illustrate what are some of the key outputs from AFT initiatives. Figure 4 shows that the main output was in the area of training activities. The next most significant areas were new processes, new policy and the mobilization of funds for finance and investment. The outputs that achieved lower priority were infrastructural (e.g. network, transport) and commercial (e.g. products exported, training materials, service exports and intellectual property).

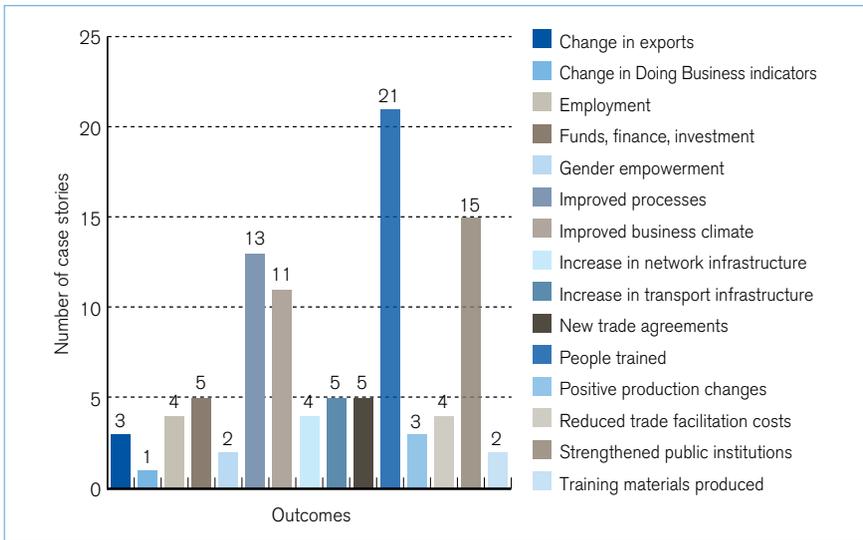
Figure 3 Outputs of Caribbean AFT case stories



Source: WTO, IDB and OECD (2011).

When the key outcomes are measured, there is some correspondence with the key outputs. Thus, it is observed that the outcome for people trained is ranked highest by a significant margin (see Figure 5). The other key outcomes were strengthened public institutions, improved processes and improvement in the business climate. The other outcomes are ranked significantly lower than these four. This suggests that the impact of AFT is skewed into narrow areas.

Figure 4 Outcomes of Caribbean Aid for Trade case stories



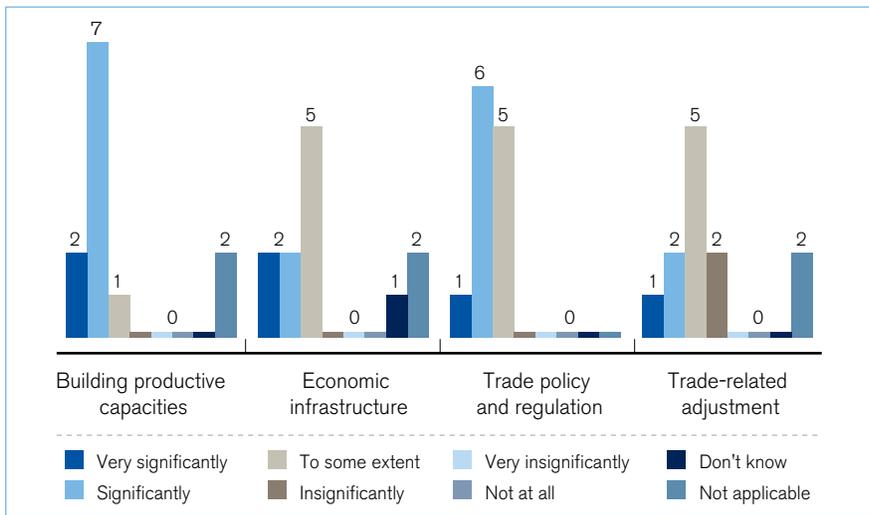
Source: WTO, IDB and OECD (2011).

Expanding and widening the impact of AFT initiatives is a critical area for improving effectiveness. In this regard, it is important to take into account the main priorities for Caribbean respondents, which were “better predictability of AFT funding, stronger donor focus on local capacity development, and greater say in design of interventions (WTO, IDB and OECD, 2011).”

A significant share of the AFT initiatives that currently exist are accessible through national business support organizations (BSOs) or government agencies which develop programmes to assist the private sector. BSOs play a critical role as they are more focused on enterprise development, and their capacity to support private sector export development and promotion is of paramount importance. Data from a survey of 12 BSOs across the region (Figure 6) correspond with the distribution of allocations identified in Figures 4 and 5, in that building productive capacities had the most significant impact on trade development.

One of the key institutions which has contributed to the AFT process in the Caribbean is the Caribbean Aid for Trade and Regional Integration Trust Fund (CARTFund), financed by DFID and administered by the Caribbean Development Bank which is headquartered in Barbados. It was established in March 2009 with the stated objective of helping CARIFORUM countries “to generate momentum on the implementation of the Economic Partnership Agreement (EPA) signed between

Figure 5 Aid for Trade impact on trade development, as assessed by business support organizations



Source: 2013 Survey conducted by author with 12 CARICOM business support organizations.

Note: Figure 5 measures the number of business support organizations that provided assessment in each category.

the CARIFORUM States and the European Union, and of the CARICOM Single Market and Economy (CSME)"(CARICOM, 2011). The Fund's mandate embraces four key areas:

- supporting EPA implementation
- deepening CARICOM economic integration and Organisation of Eastern Caribbean States (OECS) sub-regional integration
- assisting potential beneficiaries of the Fund with project preparation, and
- sharing lessons from the projects and activities.

The CARTFund programme funded 18 projects in its first two years of operation. These projects were almost evenly distributed among regional organizations, government ministries and BSOs. An assessment of CARTFund (Gill, 2011) identified several key lessons and made a number of observations. The first area identified was the process aspect. The process design allowed for the use of consultants to improve the quality of pre-screened submissions, without which the rejection rate would have been much higher. It is on this basis that it is proposed that the CARTFund experience has revealed that skills in the preparation of project proposals are inadequate in the region, and that there would be considerable merit in building a compensatory mechanism into the overall design of funding arrangements to make the necessary adjustments to submissions in order to obtain high project approval rates. This is most probably the main lesson to be drawn. The experience of CARTFund also points to the need to undertake capacity-building in project preparation at various levels throughout the region (Gill, 2011).

The other key observations were that, while the project proposals were innovative in theme, the main challenge was that there was an absence of a strategic framework to link these AFT initiatives to wider national and regional development agendas. Weak donor coordination was the third key issue, which was considered problematic because of the potential for duplication of effort. Assessment of results is difficult because of the absence of an evidence-based framework which would provide clear benchmarks and targets for monitoring and evaluation. The final point made was the absence of applications from the private sector, even with efforts being directed at this target group (Gill, 2011).

This assessment is mirrored in other initiatives, for example, the Compete Caribbean programmes such as the business competition Caribbean Idea Marketplace and the Cluster Competitiveness Improvement Plan.¹¹ In short, the CARTFund experience shows the gaps in the AFT strategy that is being employed. Such gaps may stem from programmes characterized by:

- limited monitoring and evaluation practices to build an evidence-based framework for strategic planning
- weak institutional capacity among government agencies, BSOs and regional organizations
- limited sustainability of programmes beyond donor funding, and
- an absence of alignment with broader country and governmental development strategy.

This reinforces the need for effective AFT initiatives which can address the specific needs of small economies and a regional context. National BSOs can play an important role here within the AFT allocation and distribution system. However, given the challenge of scale, it is important for capacity to be built at the regional level through clusters and other sector-wide initiatives.

11.6 Conclusions

Based upon the above findings, one may discern that, from a macroeconomic perspective, a resilient, positive relationship does exist between CARICOM's AFT disbursement inflows and its total export values. However, the ability to directly attribute a causal nature to the link between the two variables necessitates the construction of a more robust evidence-based framework within the region. Further highlighted by regional stakeholders involved in the implementation of AFT projects was the absence of a strategic framework and impact assessment methodology to link these AFT initiatives to wider national and regional development agendas.

A key issue that needs to be considered when assessing the performance of AFT programmes is that many of the projects or initiatives to be examined fall under concepts such as “capacity development” or “trade facilitation”, which are broad and difficult to measure in terms of impact. More in-depth research would be required to offer a more definitive impact assessment. One such approach is an impact chain analysis (Maselli, Lys and Schmid, 2004) which captures micro data at several levels from input to output, utilization and impact/outcomes.

From a trade policy standpoint, one of the other key considerations is the distinction between “market access” and “market penetration”. While the former refers to a market opening, the latter speaks more specifically to market entry by exporting firms. The data available in the various reports and studies refer only to market access and so it is not possible to measure actual market penetration. This is a critical issue for developing countries since the real benefit is measured when there is market penetration.

An alternative that may prove useful is to focus on “processes” and “relationships” that facilitate capacity development and export development on the part of the developing country. In this regard, we would assess the appropriateness of the policy mix relative to the stated goals in the country reports. This would essentially involve an assessment of best practices and innovative practices and the development of key benchmarks and indicators. The main list of indicators used by the various agencies is categorized by issue area and does not allow for specific and measurable indicators that attach value to the impact potential of the various modalities of engagement. However, by using such indicators as a broad guide, impact analysis of AFT may be narrowed down to very specific areas in the recipient state. Finally, by utilizing a combination of both quantitative and qualitative analysis, similar analysis may be conducted for each beneficiary country. Such a case-by-case examination should incorporate the indicators outlined in this chapter, as well as adopting the techniques of an impact chain analysis, and involve the specific stakeholders involved in AFT projects within member states. It is hoped that, through the adoption of such targeted monitoring and evaluation practices, the impacts of trade-related aid may be better measured and, thus, more effective policy prescriptions derived towards CARICOM's export diversification and trade development.

Endnotes

1. See United Nations, Department of Economic and Social Affairs (2008).
2. Of the recorded US\$ 12.82 billion official development assistance inflows, 71 per cent for the 2002 to 2009 period went to Haiti (World Bank database, 2013).
3. See: World Bank, World Trade Indicators (www.worldbank.org).
4. EXPORTS OF ALL PRODUCTS = 7.59E + 59306714 Aft_Disbursements_j
5. A strong positive correlation is denoted by positive values closer to 1.
6. For the top five exported products of each of the 15 CARICOM countries.
7. The sign of the correlation coefficient (+, -) defines the direction of the relationship, either positive or negative. A positive correlation coefficient means that as the value of one variable increases, the value of the other variable increases; as one decreases the other decreases. A negative correlation coefficient indicates that as one variable increases, the other decreases, and vice-versa.
8. See World Bank, Logistics Performance Index (www.worldbank.org).
9. According to the CARICOM Secretariat, for example, the “presence of gantry cranes, navigational aids, regulatory frameworks and computerization serve to increase services time and overall costs” (CARICOM, 2013).
10. See: International Finance Corporation and the World Bank, *Doing Business* (<http://doingbusiness.org/>)
11. For further details, see: <http://www.competecaribbean.org>

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12 Aid for Trade and building trade capacity: the case of Morocco

*Azzedine Ghoufrane and Nabil Boubrahimi**

12.1 Introduction

Although Morocco is one of the main beneficiaries of Aid for Trade (AFT)¹ – the first in the Maghreb and among the top ten in the world – researchers and national academic experts have not shown much interest in it.

This study draws upon two considerations: the quantitative and qualitative trends that have been marking AFT globally, regionally and nationally (since the Sixth WTO Ministerial Conference held in Hong Kong in 2005), and the experience of Morocco in this field, based on the contribution of the Second National Rural Roads Programme (NRRP-II) in reducing poverty and isolation in rural areas.

Transport infrastructure is significant in this context; it is not only considered to be a “powerful booster of exportations” but also an instrument to fight poverty, leading to the opening-up of the countryside and development of local resources. In addition, the overall competitiveness of a country cannot be improved without having adequate logistics capable of promoting the country’s integration into global value chains. Today, logistics (roads, highways, ports, telecommunications infrastructure, etc.), as demonstrated by several studies,² are a powerful determinant of the competitiveness of national economies.

International trade has the potential to enhance development and reduce poverty; however, AFT-related infrastructure remains a vital factor and essential instrument

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in seizing the opportunities offered by this trade. The two main organizations involved in this initiative – the WTO and the Organisation for Economic Co-operation and Development (OECD) – have put forward a broad definition of the concept of AFT. However, it is understood that “AFT is not a new global fund for development or a new category of aid. Instead, it is part of the regular official development assistance (ODA)”.³ On the conceptual level, the notion of AFT is also linked to the debate on Millennium Development Goal 8: “develop a global partnership for development” (UNECA, 2013).

12.2 Global trends in Aid for Trade

Aid and trade currently tend to coexist in the framework of international initiatives, in the sense that ODA has become an optimal tool of trade liberalization and national choice regarding economic openness.

The implementation of the AFT initiative in 2005 has led to better understanding of the correlation between trade and development, as well as the potential benefits of trade liberalization and trade capacity-building. In this context, the findings of the four global reviews of AFT carried out by the OECD and WTO in 2007, 2009, 2011 and 2013 are generally positive. They stress the encouraging results of this initiative in both its quantitative and qualitative aspects.

The first positive finding of this study in terms of quantity is the rising trend in AFT from the time of the Sixth WTO Ministerial Conference in Hong Kong (2005) until 2010. The commitments under AFT reached about US\$ 45 billion in 2010, an increase of 82 per cent compared with the period 2002-2005, with an annual growth rate of 13 per cent (OECD and WTO, 2013). It is interesting to note that, despite the global financial and economic crisis, major donors increased their financial commitments to AFT in favour of the least-developed regions.

However, this rising trend was thwarted by the sudden drop in commitments to AFT in 2011 under budgetary pressure of the debt crisis on donor countries of the OECD. In 2011, the flow of ODA declined significantly, which negatively affected AFT.⁴ Commitments fell to 14 per cent in 2011 – the level of 2008-2009, amounting to US\$ 41.5 billion (OECD and WTO, 2013).

Africa as a key beneficiary

Africa has been one of the greatest beneficiaries of AFT resources. The African continent is the second-largest recipient of AFT after Asia, and has been receiving

more than one-third of total funding for AFT. Africa received US\$ 16.3 billion between 2009 and 2011, whereas Asia received US\$ 17.6 billion (UNECA, 2013).

In terms of AFT per capita or relative to GDP by region, AFT to Africa has exceeded that provided to other continents, with an average of US\$ 11.26 per capita or 0.65 per cent of GDP between 2009 and 2010 (UNECA, 2013; OECD and WTO, 2013). From a global perspective, five African countries are among the world's top ten recipients of AFT: Egypt, Ethiopia, Ghana, Morocco and Tanzania. Despite the economic crisis, 55 per cent of disbursements of AFT in Africa for the period 2006-2011 consisted of grants and similar instruments (UNECA, 2013).

Since 2005, the AFT initiative has mobilized US\$ 200 billion, with approximately US\$ 170 billion in disbursements (Lamy, 2013). By category of AFT, despite the decline in the importance of aid related to infrastructure (which decreased by 23 per cent in 2011 compared with 2010), this form of aid continues to mobilize significant funds (53 per cent of total AFT in 2011).

The second finding of this study is the positive character of the additional AFT, in that the growth of this new form of development aid is not at the expense of the other substantial sectors, such as health and education. This shows that most donors remained committed to the fact that AFT should be additional.

Our third finding is related to the growing importance of the regional dimension of AFT. For instance, Africa's share of total disbursements of AFT for regional programmes increased from 9 per cent in the period 2006-2008 to 15 per cent in the period 2009-2011 (UNECA, 2013).

Improving aid effectiveness

Progress has been made by improving the quality of AFT in accordance with the 2005 Paris Declaration on Aid Effectiveness.⁵ Alongside the positive quantitative results highlighted by global and regional reviews of AFT, qualitative progress has been made since the launch of the AFT initiative in Paris at that time. This includes:

- the gradual integration of trade into national development strategies by recipients of AFT (the principle of national ownership);
- the improvement of dialogue between donors and recipients of AFT (the principle of mutual responsibility);
- the establishment of an evaluation of the implementation of the AFT process (the principle of managing for results).

Furthermore, to adapt to the profound changes that have marked the global economy in recent years, since the launch of the fourth Global Review of AFT in 2013 the focus has been on the identification of strategies to assist recipients to connect to or progress in value chains.⁶ Hence, the importance of the private sector in the development of trade as well as competitiveness is to be recognized.

12.3 The Moroccan experience of Aid for Trade

Integrating trade into national development planning and taking ownership of the AFT initiative are the best ways to raise funds. According to the recommendations of the Task Force on AFT, “[p]rojects and programmes should be considered as AFT if these activities have been identified as trade-related development priorities in the recipient country’s national development strategies” (WTO, 2006). In this respect, Morocco has set as a priority for AFT in its relations with donors, new projects such as sectorial competitiveness,⁷ export diversification and value chains. With regard to connection to value chains, which was the main focus of the fourth Global Review of AFT, it should be noted that this is also one of the key objectives of Morocco’s National Pact for Industrial Emergence 2009-2015 which identified the country’s global businesses (e.g. automotive, aerospace, agriculture, pharmaceutical products, etc.) in order to improve its competitiveness and facilitate its trade integration.

General framework

Given that Morocco is a middle-income developing country, it does not only rely on ODA to mobilize funding and investment. Morocco received nearly US\$ 2.9 billion in ODA in 2011, representing 2.9 per cent of its US\$ 100 billion GDP – a percentage that remains important, however, for the economic sustainability of the country, especially in the context of external deficits. This aid supplements and strengthens the national capacity to mobilize external financing.⁸ In the light of data provided by donors, this initiative has shown that Morocco is a “good disciple”. It is among the top ten recipients of AFT in the world and the first in the Arab Maghreb Union (UMA), receiving US\$ 1.45 billion during the period 2002-2006 (UNECA, 2009).

Between 2009 and 2011, the UMA region accounted for an average AFT commitment of nearly US\$ 1.5 billion per year and received disbursements for US\$ 1.4 billion. This means that Morocco and Tunisia together account for nearly three-quarters of all resources disbursed to UMA member countries (UNECA, 2013). In terms of categories of AFT, trade-related infrastructure (42 per cent of total AFT), including energy, rail and road transportation, has benefited from the increase observed in favour of Morocco (UNECA, 2009); these are priority sectors for the development of the Moroccan economy.

Trade and development strategies and priorities

Morocco is trying to take ownership of its AFT by defining and articulating trade and development strategies and priorities. Following the recommendations of the second Global Review of Aid for Trade (2009), Morocco established a national committee for AFT (Comité National d'Aide pour le Commerce, or CNAPC), led by the Ministry of Economy and Finance. Its main objective is to take ownership of the AFT initiative at the national level and coordinate with relevant departments in charge of strategies for implementation and trade integration. Through its new industrial policy (the National Pact for Industrial Emergence 2009-2015), implemented in 2009, Morocco seeks to have comparative advantages in industries that are part of the expansion of global value chains.

The question that arises in the specific context of Morocco is how to turn this aid into a catalyst for productive investment that could help the economy fit into these value chains. Firstly, any productive investment needs a favourable and effective infrastructure to improve the attractiveness of the territory and reduce the cost of logistics in the value chain. Hence the need to set priorities in the development of externally funded projects. Secondly, with regard to comparative advantage, Morocco ought to raise its profile of specialization by moving from its traditional sectors into the realm of high-technology and high-value sectors. Finally, Morocco should take into account the regional dimension as a structural lever for the transformation of both the Moroccan economy and its industrial system. This will be even more relevant if donors continue funding projects with a regional dimension.

Case story: Second National Rural Roads Programme (NRRP-II)

Among the flagship projects that have benefited from the AFT initiative is NRRP-II. This case elucidates the significant achievement of a project under AFT and the real challenge for the overall development of Morocco. NRRP-II, launched in 2005, aims to achieve several objectives, including balanced regional development and reducing regional disparities, strengthening national solidarity, strengthening the fight against poverty and reducing the isolation of rural areas, as well as developing local resources and increasing the accessibility of rural trade by reducing transportation costs. In addition, the integration of this programme as a priority for trade-related development has allowed Morocco to obtain financing and raise additional funds on preferential terms.

It should be noted that the fundamental feature of NRRP-II, which is part of the basic national infrastructure, in particular that related to access roads, is that it plays an essential role in the strategy of social and economic development of rural areas. Indeed, rural roads facilitate the accessibility of the rural population to basic social

and economic services as well as the development of local resource exchanges. To that end, the Moroccan Government has provided the necessary means to enable the installation of basic amenities to meet the urgent need to open the road infrastructure within a reasonable time.

NRRP-II extends over two phases, incorporating the following aspects:

- the construction, maintenance and management of rural roads to provide access to and for the rural population
- a participatory approach to development with the broad involvement of representatives of the people and local councils (with the signing of agreements between the state and the rural communities involved in the programme)
- the raising of additional funds and involvement of additional actors to expand the partnership between Morocco as an AFT recipient and donors.

NRRP-II was adopted by the government and local councils in 1,284 rural communities with the objective of achieving 2,000 km of roads per year and opening up access to and for 300,000 people annually, with a 15 per cent local resource component and 85 per cent contribution by state networks. A further objective is to increase the pace of construction of rural roads from 1,000 km per year, recorded since the launch of the first NRRP in 1995, to 2,000 km per year.

NRRP-II also aimed to raise the rate of accessibility of the rural population to the road network from 54 per cent in 2005 to 80 per cent in 2012 (rather than 2015, as originally planned). To respond effectively to the challenge of achieving the objective in only seven, instead of ten, years, Morocco undertook a large-scale mobilization of most of its resources from the investment budget and Special Road Fund, along with contributions from local authorities. These domestic resources boosted the Special Road Fund, which in turn mobilized additional financial resources in the form of loans made on concessional terms by donors. The financial package designed for NRRP-II accelerated the construction of rural roads from 1,000 km per year prior to 2002 to more than 2,000 km per year in 2009, and consequently an increase in the beneficiary population is expected.

This financial mobilization for optimal funding and the partnership aspect of NRRP-II have already resulted in increased accessibility for the rural population; by 2012, there were nearly 12 million beneficiaries, according to the Ministry of Equipment and Transportation. In terms of partnership, various foreign institutions have participated in the implementation of this programme: the African Development Bank (AFDB), European Investment Bank (EIB), French Development Agency (AFD), Japan Bank for International Cooperation (JBIC), Kuwait Fund for Arab Economic Development (FKDEA) and the World Bank.

12.4 Lessons from experience in Aid for Trade

Despite the positive aspects (both in quantitative and qualitative terms) previously outlined, AFT is fraught with difficulties and suffers from shortcomings which limit its effectiveness. These are:

- the lack of a commonly accepted definition of AFT, which does not promote consensus (e.g. in quantification of AFT and scoping AFT categorization)
- the non-implementation of operational strategies to exploit the potential of integration into the multilateral trading system, and the non-prioritization of attention to barriers that hinder the development of trade, which has a negative impact on optimal mobilization of funding
- the lack of coherence between national and regional programmes in trade prevents developing countries from taking full advantage of the benefits of AFT at the regional level
- the low involvement of the private sector negatively impacts on AFT, as it is unrealistic to conceive of achieving productive capacity and diversification of supply without a competitive business community
- the global and regional AFT examples and case studies, identified mainly in the third Global Review of AFT in 2011 (OECD and WTO, 2011), tend generally to the bright side and a correlation between aid flows and improvement of the commercial potential of developing countries in general and LDCs in particular. This assessment approach to AFT needs to be consolidated by impact studies.⁹

Lastly, if AFT remains a work in progress and a perfectible process, it is always possible for Morocco to improve its approach in this area by reinforcing its ownership of the initiative and strengthening institutional coordination among all the actors involved. Also, the newly established CNAPC should supervise the implementation of an operational strategy for national development priorities.

12.5 National ownership of AFT: issues for policy-makers

Greater national ownership of AFT by the beneficiary developing countries should not be limited to implementing what has been agreed upon internationally or responding to donors' priorities.¹⁰ It requires the real involvement of beneficiaries in the design of AFT and its mechanisms of follow-up and evaluation, in order to circumvent the current controversy over the principle of additional AFT compared with other, traditional components of ODA. This could involve establishing a domestic database. As a result, dependence on external statistical sources would decrease, allowing parties to the initiative (donors and beneficiaries) to reach a consensus.

From this perspective, truly national ownership of the AFT programme cannot be achieved without meeting a number of conditions, including better prioritization, effective operationalization, institutional coordination among all national stakeholders, adequate and continuous monitoring, institutionalization of dialogue between donors and recipients, and a good relationship between the public and private sectors.

Prioritization and coordination between institutions

Identifying the barriers that “paralyse” the commercial potential of Morocco falls under the responsibility of the CNAPC, which was set up in order to tackle these barriers and identify priorities for that purpose. This raises the fundamental question of the effectiveness of the principle of hierarchy of priorities and coordination among the relevant institutions. Therefore, it is essential to undertake a diagnosis of the current AFT situation through:

- a comprehensive definition of a national strategy to promote growth and development through trade, which would lead to focus on the main impediments to competitiveness and diversification – in other words, a correct diagnosis
- identification of national needs and additional regional AFT to distinguish between projects which have an impact on the development of exports at the national level (i.e. the national strategy for export promotion) and those that have an impact on regional development (e.g. the Port of Tangier Med as a regional platform for the development of trade in the Mediterranean) – follow-up is needed, based on performance indicators and case studies
- identification of barriers to the development of exports on the basis of an analysis of the entire export chain, starting with exportable supply, production capacity and export sectors and logistics platforms, and marketing to raise external financing in the context of the AFT categories mentioned above
- encouragement of the partnership of the private sector in the formulation and implementation of results – oriented in terms of AFT operational strategies
- accompaniment of the development of the AFT initiative at national level by specific measures of adaptation and adjustment to the regional level (in the 16 regions of Morocco).

Promoting action within the Morocco AFT approach

In Morocco, the development of the national strategy for export promotion is a practical, large-scale action and a priority that was assigned on the basis of a correct diagnosis. Through this strategy, Moroccan foreign trade has been identified as a government priority and has received public funds amounting to 500 million dirhams (US\$ 55 million) for 2009-2010. Export development has been confirmed as one of the main growth engines of the Moroccan economy in the years to come.

In order to diversify exports and enhance the country's comparative advantage, foreign funding should be allocated to building production capacity and trade development, which would strengthen Morocco's export competitiveness; this could, for instance, be in the form of training business executives on exporting, fostering economic diplomacy, etc.

Nevertheless, reinforcing the ownership of national and regional projects is strongly considered to be achievable, by smoothing the selection process for projects and strengthening and sustaining cooperation with the relevant financial institutions (e.g. the AFDB). Such cooperation would lead to exploration for new export sources, resulting in wider local involvement in ATF. In this regard, the AFDB and the United Nations Economic Commission for Africa (UNECA) – both of which play an important role in the AFT initiative in the region – in collaboration with the WTO and the OECD, can assist Morocco to benefit from their experience in this field, by taking action such as providing ongoing training to departmental officials involved in AFT.

Why Morocco has been unable, so far, to benefit from the AFT initiative in a satisfactory way is largely due to the lengthy process of integration into regional development projects, which are fundamentally favoured by donors. Therefore, AFDB and UNECA should assist Morocco more amply towards their implementation. As stressed by former WTO Director-General Pascal Lamy, "Aid for trade must also play a more supportive role in helping governments to formulate and concretize their regional agenda" (Lamy, 2013). Finally, Morocco cannot overcome the constraints hampering supply at the regional level without the relaunching of the AMU and the activation of programmes and projects designed to improve infrastructure for transportation, energy, and trade facilitation and standards.

12.6 Conclusions

The launch of the AFT initiative has helped to focus international attention on the structural and institutional barriers that hamper many developing countries and LDCs from benefiting from their trade potential and integration into the multilateral trading system. Funds mobilized under this initiative have enabled these countries to overcome structural problems that limit their ability to make the most of business opportunities, and strengthen their human and institutional capacities in developing business strategies.

However, the initiative is currently facing two major challenges. First, there is the blocking of multilateral negotiations under the Doha Round, which was expected to rebalance international trade relations in favour of developing countries. This block weighs heavily on the future of the AFT initiative, which was designed as a supplement

to the Doha Round. The second challenge is the inherent, potentially adverse effects of a succession of economic crises on the evolution of AFT. This is averred by the fact that many donors have adopted austerity measures as a result of these crises.

Regarding Morocco's approach to AFT, it should be noted that the country was able to capitalize relatively well on some experiences in this field and set up a committee for monitoring the aid at the national level. However, efforts by Morocco to integrate trade into national development strategies as a means to promote growth and reduce poverty – benefiting, as a result, from the AFT initiative – still face constraints related to the limitations of the Moroccan exportable offer.

In conclusion, while Morocco sought to enter some free trade agreements with both developed and developing countries¹¹ in order to become an “investment and export platform”, the worsening of the trade deficit with most of its partners has demonstrated the limits of the competitiveness of the Moroccan productive offer. Hence the need to take into account the complementarities among all components of economic policy (exchange rate policy, trade policy, industrial policy, etc.), and to attract aid funds to the AFT categories which have a direct relationship with Moroccan supply-side constraints, namely “production capacity enhancement and trade development”.¹²

Endnotes

1. The OECD and WTO have proposed two designs for AFT: a restrictive one in which AFT is considered to be concessional assistance, and an extensive one in which AFT is considered to be any form of development aid that is related to trade and that is provided to middle- and low-income countries (OECD and WTO, *Does Aid for Trade yield any results?* undated note). It is important to note that foreign funding falls into the category Aid for Trade (OECD).
2. See, for example, the World Economic Forum in collaboration with Bain & Company and the World Bank (2013), *Enabling trade: Valuing growth opportunities*, Geneva.
3. OECD and WTO, *Does Aid for Trade yield any results?* undated note.
4. In 2011, funding for AFT accounted for 33 per cent of ODA.
5. With regard to ODA in general, it should be noted that, in 2008, Morocco participated for the first time in the monitoring survey of the implementation of the Paris Declaration on Aid Effectiveness. See OECD (2012) (vol. 2).
6. The most recent (fourth) Global Review of AFT, held in Geneva in July 2013, examined how to use aid to connect businesses in developing countries and least-developed countries (LDCs) to global value chains. This review tried to identify barriers that prevent developing countries from participating in or contributing to value chains, and their impact on development.

- 7.** This prioritization is part of support for the various sectorial strategies (National Pact for Industrial Emergence 2009–2015, Maroc Export Plus, Green Morocco Plan, Halieutis Plan, logistics strategy, etc.). See: WTO and OECD (2013), *Questionnaire for partner countries on Aid for Trade*, Fourth Global Review of Aid for Trade: "Connecting to value chains", Geneva, 8–10 July.
- 8.** For example, on 5 December 2012, Morocco issued a bond issue on the international financial market in the amount of US\$ 1.5 billion.
- 9.** For example, the econometric study undertaken by UNECA which shows that an increase of 10 per cent in AFT is associated with an increase of 0.4 per cent in the index of economic diversification (UNECA, 2013, p.38).
- 10.** On the diversity of expectations, Hallaert (2013), citing OECD and WTO (2011), states, "Developing countries expect that aid for trade will boost and diversify their exports but feel it has not (yet) delivered on this promise. Donors, in contrast, see trade (and thus Aid for Trade) as a means to achieve growth and poverty reduction."
- 11.** Including agreements with the European Union, Turkey, the United States and the Arab countries.
- 12.** For example, AFT should be directed at support for productive capacities and focus on developing both the diversification and sophistication of the Moroccan economy.

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13 Integrating small African economies into global value chains through foreign aid: the case of Namibia

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13.1 Introduction

The aim of this chapter is to examine the broad framework which has been evolved for the reception of Aid for Trade (AFT) in Namibia. The economic situation before this period included the prevalence of poverty, the HIV/AIDS pandemic, low educational opportunities and a very highly skewed or unequal distribution of the wealth of the country, which has increased income inequalities and unsustainable economic growth, as outlined in *Namibia Vision 2030* (Namibia, Office of the President, 2004). In this regard, Namibia shares this economic dependency at the regional level, and most trade and economic relationships are mainly with Botswana, Lesotho, Swaziland and South Africa, all of which are members of the Southern African Customs Union (SACU) and Southern African Development Community (SADC). The objective is to create a free trade area in the Southern Africa region.

This chapter will examine both the legal and policy framework implemented to manage the inflow of foreign aid and technical assistance to assist Namibia's development and increase its trade capacity, within the Southern Africa region and globally. It also reviews the amounts of foreign aid inflows into the country. Finally, the sources of such inflow and a brief assessment of the effectiveness of aid in enhancing the trade capacity of Namibia will also be examined and discussed.

13.2 Economic development and foreign aid: legal and policy framework

The Namibian Constitution in Article 148 spells out the economic framework and vision to be pursued in order to sustain growth. Chapter 11 of the Constitution contains the "principles of state policy". Article 98 thereof deals with the principles of

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economic order which were set forth to guide the general economic direction to be followed by both the incoming independence government and subsequent governments of the country. These constitutional provisions were also meant to serve as broad guidelines for the crafting of the country's economic policy.

In this regard, Article 98 (1) provides that "The economic order of Namibia shall be based on the principles of a mixed economy with the objective of securing economic growth, prosperity and a life of human dignity for all Namibians." Article 98(2) provides for the various forms of ownership of property in the country. Inter alia, these include public, private, joint public-private, etc. As constitutional provisions, they are stated in very broad terms and are not spelled out in much detail. For example, the questions of foreign aid in general and AFT in particular, and their role in the economy, are not even mentioned in any specific way. This is left to other major national policy framework documents such as *Namibia Vision 2030* and various national development plans (NDPs). The country is currently in the midst of concluding the implementation of the Third National Development Plan (NDP3). The Fourth National Development Plan (NDP4) has been prepared and will be in effect from 2012/13 to 2016/2017 (NPC, 2013).

In the pursuit of its economic development agenda, as stated in *Namibia Vision 2030*, Namibia welcomes various forms of partnership. These entail "partnerships between government, communities and civil society, with the private sector, non-governmental organizations and the international community...". At the same time, paragraph 30 states several policy objectives, including that of transforming the country from its current status of an aid-receiving lower-middle-income country into "that of a provider of development assistance" (Namibia, Office of the President, 2004).

13.3 Economic context in which Aid for Trade operates

Namibia is a country with a very small population – about 2.5 million people (NSA, 2011). It is still largely reliant on the export of primary products in agriculture, such as fish and animals. The role of mining is predominant as the country is rich in diamonds and uranium and other minerals which it produces and exports. The manufacturing base of the Namibian economy is still relatively low. The country is very heavily dependent on trade, especially with South Africa (AFDB, 2009). As Namibia is a member of both SACU and SADC, Namibian exports enjoy duty free access to the economies of Botswana, Lesotho, South Africa and Swaziland. Within SADC, the target is to deepen economic integration and ensure that there is a free trade area among the economies of its 15 member states. In many ways, this is as yet a "work-in-progress", which should be a major candidate or target for the inflow of AFT funding for Namibia. The objective is to develop the country's infrastructure, such as roads, railways and ports, to facilitate intra-regional trade.

These broad observations on the nature of Namibian trade flows are borne out by a more detailed analysis of the recent patterns of trade between the country and its trading partners. In 2012, minerals such as diamonds, precious or semi-precious stones and metals dominated Namibia's exports, amounting to 29 per cent of the country's total exports compared with 28 per cent in 2011. The second largest category of exports consisted of ores, slag and ash, which accounted for 18 per cent of total exports, an increase on 15 per cent on 2011. The third largest category of exports included fish, molluscs and other aquatic resources, amounting to 14 per cent, the same as in 2011 (see Table 1).

In 2012, there was a marked increase of almost 2,000 per cent in the value of exports of chemicals. Vehicles exports (mainly re-exports) recorded 60 per cent growth in value, while ores, slag and ash recorded a 45 per cent growth in value. On the other hand, a traditional Namibian mineral export, copper, dropped in value by almost 50 per cent due to the closure and rehabilitation of the country's copper smelter at Tsumeb in the northern part of the country (NSA, 2012). Table 1 illustrates movements in Namibian exports between 2011 and 2012. Values are expressed in Namibian dollars (N\$).

Table 1 Change in value of Namibia's exports, 2011-2012

HS code	Commodity descriptions	2012		2011		Percentage change in value, 2011-2012
		Value (N\$ million)	Per cent	Value (N\$ million)	Per cent	
71	Diamonds, precious or semi-precious stones and metals	12,054	28.6	10,184	27.6	18.4
26	Ores, slag and ash	7,766	18.4	5,356	14.5	45.0
3	Fish and crustaceans, molluscs and other aquatic invertebrates	5,716	13.6	5,145	14.0	11.1
79	Zinc and articles thereof	2,265	5.4	2,391	6.5	-5.3
22	Beverages, spirits and vinegar	1,982	4.7	1,663	4.5	19.2
74	Copper and articles thereof	1,550	3.7	2,992	8.1	-48.2
87	Vehicles	1,524	3.6	952	2.6	60.1
2	Meat and edible meat offal	1,493	3.5	1,388	3.8	7.6
25	Salt, sulphur; earths and stone; plastering materials, lime and cement	837	2.0	744	2.0	12.4
28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare earth metals, of radioactive elements or isotopes	772	1.8	37	0.1	2,009.9
	Other products	6,210	14.7	5,987	16.3	3.7
	Total	42,170	100.0	36,838	100.0	

Source: Namibian Statistics Agency (NSA), 2012

In 2012, Namibia's main imports consisted mainly of mineral oils and their products, which accounted for 13 per cent of total imports. This represented an increase on the 9 per cent recorded in 2011. The increase in value of oil imports can be explained by the recent marked depreciation of the South African rand to which the Namibian dollar is pegged. The importation of vehicles was the second most important category, at 11 per cent of total imports (down slightly on 2011). Boilers, machinery and various mechanical appliances occupied third place at 9 per cent of total imports, a decrease from the 10 per cent recorded in 2011 (see Table 2).

The pattern of Namibian exports in 2012 shows some interesting changes. In 2012, South Africa remained the main destination for Namibian exports; that country imported goods worth N\$7 billion. This was followed by the United Kingdom, which imported N\$ 5 billion worth of Namibian exports, then Angola and Belgium (N\$ 3 billion each). In percentage terms, this represented 16 per cent of Namibian exports going to South Africa, 12 per cent to the United Kingdom, and 9 per cent to Angola and Belgium. In 2011, the export figures were 18 per cent to South Africa, 17 per cent to the United Kingdom, 9 per cent to Angola and 6 per cent to Belgium. The

Table 2 Change in value of Namibia's top imports, 2011-2012

HS code	Commodity descriptions	2012		2011		Percentage change in value, 2011-2012
		Value (N\$ million)	Per cent	Value (N\$ million)	Per cent	
27	Minerals, fuels, mineral oils and products of their distillation	7,802	13.1	4,333	9.0	80.1
87	Vehicles	6,779	11.4	5,861	12.2	1,507.0
84	Boilers, machinery and mechanical appliances; parts thereof	5,289	8.9	4,979	10.4	6.2
71	Diamonds, precious or semi-precious stones and metals	3,139	5.3	2,617	5.4	20.0
85	Electric machinery and equipment and parts thereof	2,937	4.9	2,621	5.5	12.1
26	Ores, slag and ash	2,926	4.9	1,652	3.4	77.2
89	Ships, boats and floating structures	2,454	4.1	112	0.2	2,095.6
73	Articles of iron or steel	2,329	3.9	2,148	4.5	8.4
30	Pharmaceutical products	1,300	2.2	1,350	2.8	-3.7
22	Beverages, spirits and vinegar	1,289	2.2	1,188	2.5	8.4
	Other products	23,264	39.1	21,204	44.1	9.7
	Total	59,407	100.0	48,064	100.0	

Source: NSA (2012).

decrease in Namibian exports to its traditional export destinations such as South Africa and the United Kingdom is explained by the fact that there was a relatively steep increase in exports to Botswana in this period, amounting to almost 10 per cent of Namibia's exports in 2012, from a very low base of less than 5 per cent in the previous year. Exports of diamonds, precious or semi-precious stones accounted for much of this increase in exports to Botswana. Furthermore, in 2012, there was a significant increase in Namibian exports to Switzerland, amounting to about 4 per cent of total exports (NSA, 2012).

In 2012, the value of Namibian imports amounted to about N\$ 59 billion, compared with N\$ 48 billion in 2011, an increase of about N\$ 10 billion or 22 per cent. The major countries from which Namibia imported goods were South Africa (N\$ 41,571 billion), Switzerland (N\$ 3,513 billion) and China (N\$ 2,372 billion). Other trading partners from which Namibia imported goods were export processing zones (N\$ 1,473 billion), the United Kingdom (N\$ 1,434 billion), Germany (N\$ 1,189 billion) and Botswana (N\$ 931 million). As far as intra-SADC trade is concerned, there is an encouraging development: there was a marked increase in Namibian imports from neighbouring countries such as Zambia and Botswana. In the case of Zambia, the increase in the volume of exports to Namibia was from N\$ 92 million in 2011 to N\$ 947 million in 2012 (see Table 3). The reasons for these positive developments are, perhaps, the improvements in road infrastructure connecting these neighbours and a more serious commitment to the implementation of the SADC trade protocol.

Table 3 Namibia's major import partners, 2012 and 2011

Country	2012		2011	
	Value (N\$ million)	Per cent	Value (N\$ million)	Per cent
South Africa	41,571	69.9	36,491	76.0
Switzerland	3,513	5.9	1,992	4.1
China	2,372	4.0	1,456	3.0
Export processing zones	1,473	2.5	1,124	2.3
United Kingdom	1,434	2.4	1,628	3.4
Germany	1,189	2.0	1,034	2.2
Zambia	947	1.6	92	0.2
Botswana	931	1.6	235	0.5
The Netherlands	667	1.1	99	0.2
Singapore	449	0.8	30	0.1
Other countries	4,958	8.3	3,844	8.0
Total	59,505	100	48,025	100

Source: NSA (2012).

In the context of Namibia's pattern of trade with economic blocs, it is worth noting that, during 2012, the bulk of Namibian exports went to SADC member states – goods worth N\$ 15.750 billion, representing 32 per cent of total Namibian exports for the year. In the preceding year, Namibia exported goods worth N\$ 11.738 billion to SADC member states, representing 29 per cent of its total exports. Non-SACU SADC countries, such as Angola, account for about 38 per cent of Namibia's exports to SADC member states. During 2012, Namibian exports to the Common Market for Eastern and Southern Africa (COMESA) grew to about 5 per cent of total exports. Meanwhile, Namibian exports to the European Union (EU) dropped from 38 per cent in 2011 to 31 per cent in 2012 (NSA, 2012).

Regarding trade with economic blocs, Namibia sourced the bulk of its imports in 2012 from SADC countries. The value of total imports from this bloc was N\$ 44.444 billion compared with imports from SACU countries at N\$ 42.669 billion (this represents 20 per cent of growth in total imports from SADC countries and 16 per cent from SACU member states over 2011). It should be noted, however, that, unlike Namibia's exports to SADC, which have diversified destinations, Namibia's imports are almost exclusively derived from SACU member states and one country, South Africa, in particular (from which Namibia sourced 70 per cent of its imports in 2012). Among the sources of Namibian imports, the EU came a distant third, representing only 5 per cent of total imports (NSA, 2012).

13.4 The structure and sources of Aid for Trade in Namibia

In recent times, the most significant study of the issue of AFT in Namibia is a 2011 report jointly commissioned by the Ministry of Trade and Industry (MTI) and United Nations Development Programme (UNDP), entitled *Integrating Globally: Namibia's Aid for Trade Framework and Strategy*. According to this detailed study, in 2009 Namibia's main AFT donors were Japan (US\$ 37 million), Germany (US\$ 17 million), the EU (US\$ 5 million), France (US\$ 4 million) and Spain (US\$ 2 million). In the period 2006-2009, both the AFT donors and the amounts of funding varied as other countries which provided such funding included Canada, Denmark, Finland, Norway and the UK.

The study identifies that, while US\$ 130 million was committed to Namibia to support various areas of trade, only the considerably lesser amount of US\$ 61 million was actually disbursed. It does not proffer any reason for this. However, in view of the widely known lack of capacity in the country, this situation could be due to an inability on the part of the relevant recipient sector ministries to properly plan the expenditure of such an amount. The disbursements were used to develop economic infrastructure (US\$ 48.7 million) and to build productive capacity

(US\$ 12.5 million). In addition, US\$ 232,000 was disbursed for the development of trade policy and regulation. However, further understanding the breakdown and analysis of these figures in terms of their effectiveness in actually boosting national trade capacity and actual trade is very difficult. In this respect, the report states that:

(...) due to [the] lack of [a] national Aid for Trade coordinating and monitoring mechanism it is difficult to ascertain the following: whether these were additional resources and were predictable; to what extent were they aligned to national development objectives and priorities; whether the identification and formulation of these Aid for Trade investments was participatory and inclusive; and what were their development impacts" (MTI and UNDP, 2011).

Table 4 shows AFT commitments to and disbursements in Namibia, focusing on the period 2006-2009.

Table 4 Aid for Trade flows to Namibia, 2000-2009 (US\$ thousand, 2009 constant prices)

Areas	Commitments					Disbursements			
	2000-05 average	2006	2007	2008	2009	2006	2007	2008	2009
Trade policy and regulations and trade-related adjustment									
Trade policy and administrative management	1,148	...	80	146	201	...	80	129	231
Trade facilitation	35	170	3	...	...	170	3	...	...
Regional trade agreements (RTAs)	...	8	63	...	...	8	63	...	...
Multilateral trade negotiations	...	...	106	...	6	...	106	...	1
Trade-related adjustment	...	...	...	...	...	...	...	...	...
Trade education/training	67	...	861	213	...	...	861	213	...
Sub-total	1,250	178	1,113	358	207	178	1,113	342	232
Economic infrastructure									
Transport and storage	14,825	106,422	2,804	13,160	4,585	5,373	10,327	16,236	52,939
Communications	599	221	222	12,451	116	431	513	6,990	-8,716
Energy supply and generation	1,136	229	17	49,906	84	1,193	770	732	4,487
Sub-total	16,559	106,872	3,043	75,517	4,785	6,996	11,610	23,957	48,710

Table 4 Aid for Trade flows to Namibia, 2000-2009
(US\$ thousand, 2009 constant prices) (continued)

Areas	Commitments					Disbursements			
	2000-05 average	2006	2007	2008	2009	2006	2007	2008	2009
Building productive capacity									
Business and other services	1,351	2,781	2,109	1,539	1,041	2,567	2,654	1,178	1,491
Banking and financial services	420	43	10,140	7,946	1,802	991	317	3,067	2,732
Agriculture	5,027	5,140	5,237	2,116	46,768	4,556	4,718	3,522	3,243
Forestry	1,472	1,117	1,366	777	1,082	1,422	1,817	1,166	1,328
Fishing	4,757	1,942	1,403	336	1,474	2,537	1,509	355	1,476
Industry	1,916	6,725	435	912	9,032	2,760	2,241	1,592	2,057
Mineral resources and mining	556	...	53	50	38	307	393	174	39
Tourism	376	212	6,918	2,694	64,570	328	6,919	200	164
Sub-total	15,876	17,960	27,662	16,372	125,806	15,468	20,568	11,255	12,530
Focus on trade development									
Principal objective	...	7,274	834	112,567	...	7,071	1,260	1,428	...
Significant objective	...	344	11,450	3,002	...	344	3,151	2,549	...
Sub-total	...	7,618	12,284	115,569	...	7,415	4,410	3,977	...
Total Aid for Trade	33,685	125,011	31,817	92,247	130,798	22,643	33,291	35,554	61,472

Source: MTI and UNDP (2011); calculations based on OECD-DAC, Creditor Reporting System (CRS) database.

Examining AFT funds received by Namibia in 2009, the categories to benefit most were economic infrastructure (79.24 per cent) and building productive capacity (20.38 per cent) (MTI and UNDP, 2011).

Although it is difficult to ascertain evidence explaining the criteria for identification of the above sectors or categories as suitable candidates for receiving AFT funding, a closer analysis of the detailed breakdown of the subcategories (shown in Table 4) would indicate that, in general, they are critical elements for the boosting of Namibia's capacity to participate in both regional and global trade.

With regard to the need to develop the necessary trade infrastructure such as inter-regional roads (both by sea and land), there is huge deficit in funding. Namibia also requires assistance to develop capacity in trade negotiations at regional and global levels. In this regard, in its country report on Namibia for 2009, the African

Development Bank (AFDB) identified the following areas of trade that it would be prepared to support:

- partnerships for trade and regional integration;
- the development of regional infrastructure;
- the facilitation of cross-border investment and capacity-building in trade and regional integration.

In respect of the last, the AFDB states:

The Bank will assist Namibia and other countries in SADC in building capacity in the following areas: (i) core competency in training, knowledge and institutional and managerial skills transfer for those involved in trade and regional integration negotiation; (ii) developing trade information documentation; and (iii) improving response capacity of existing and/or future exporters to meet the challenges and take advantage of the opportunities created by trade and regional integration agreements through improved information (awareness) and direct export development support (AFDB, 2009).

13.5 Problems in the development of Aid for Trade policy in Namibia

Specific problem areas in the development of AFT policy in Namibia were identified in the 2011 study discussed above (MTI and UNDP, 2011). A general consideration is that there are few opportunities for dialogue and consultation between the Namibian Government and donors, both in general and, more specifically, regarding AFT funds. The country does not have an overarching body or mechanism for the development and coordination of AFT policy because the national committee established for this purpose remains inactive. Therefore, a key challenge is to have more interaction among actors at the national level to identify priorities for implementation. In addition, there is, as yet, no comprehensive study of the AFT needs of the country. This makes it very difficult to identify specific national projects which can effectively serve Namibia's development needs in the area of trade and play the role of catalyst in boosting trade and economic development. On the whole, there is limited coordination among aid donors with a view to harmonizing their efforts in mobilizing aid assistance for the country (MTI and UNDP, 2011).

In the process of conducting this study, it emerged that there are at least four different agencies in Namibia which deal with various aspects of foreign aid flows into the country: the Ministry of Trade and Industry, Ministry of Finance, National Planning Commission and Namibia Statistics Agency. It proved extremely difficult to

source reliable data from these bodies on recent aid flows into the country, their breakdown, disbursement, expenditure and outcomes. It is, therefore, crucial to establish a process for an open and transparent national dialogue on the exact role of foreign aid in general and AFT in particular in the Namibian economy.

13.6 Conclusions and policy recommendations

This study has shown that Namibia contributes to both global and regional trade and, consequently, global value chains, by exporting to its traditional trading partners in Europe and the SADC region. There is, however, a notable weakness in the country's capacity to maximize its potential participation in both global and regional value chains. The reason for this is that the bulk of its export base is still unprocessed minerals and primary agricultural products. The manufacturing sector has remained largely undeveloped. As a result, there are supply-side constraints which inhibit the production of high quality products which would enable Namibia to effectively compete in both the global and regional markets.

Since the launch of the AFT initiative at the Sixth WTO Ministerial Conference in Hong Kong in 2005, Namibia has received financial and technical assistance aimed at boosting its regional and global trade, and developing its economic infrastructure and trade negotiation capacity. The purpose has been to advance the country's development goals as crystallized in *Namibia Vision 2030* and the various NDPs.

In this regard, it is submitted that the following policy recommendations will go some way towards attaining the goals of greater economic growth, the reduction of unemployment and the creation of higher living standards for the population. On the whole, Namibia has succeeded in establishing a relatively peaceful and secure environment in which to do business. However, while investment has flowed into the natural resource sector, the country has not succeeded in attracting substantial investment into the manufacturing sector. The Foreign Investment Act of 1992, which has been amended a number of times, requires a comprehensive review in order to create a more competitive environment to attract foreign investors into the manufacturing sector, if the country is to achieve its goal of becoming an industrialized nation by 2030. A well-coordinated programme on the effective use of foreign aid could assist in channelling resources to MTI to enable it to speedily complete the process of reviewing the country's investment laws.

This study has demonstrated that Namibia is gradually diversifying its export markets to include regional neighbours, such as Botswana and Zambia, and also global players, such as China. These first steps in diversification must be continued and consolidated. The focus must be on how the country can take advantage of its strategic position as a coastal state with relatively well-developed port facilities to promote increased regional trade with landlocked countries such as the Democratic Republic of Congo, Zambia and

Zimbabwe. AFT funds could be utilized to fund the completion of the Walvis Bay Corridor project, which is aimed at promoting intra-SADC trade and deeper economic integration. As this project has potential benefits for many countries within the SADC region, the Namibian Government should develop avenues for cooperation with these potential beneficiary countries.

It is imperative that a broad, national and foreign forum be convened urgently to provide a platform for a dialogue on the role of foreign aid in general and AFT in particular in Namibia. It is to be hoped that, at the conclusion of such discussion, a consensus would emerge regarding the designation of a single national body (such as the NPC) to be responsible for coordinating all aspects of foreign aid to and within the country. It is further to be hoped that this body will ensure transparency and accountability for the management of foreign aid funds by subjecting itself to parliamentary oversight.

The diversification of Namibia's exports and export markets is closely linked to the development of a comprehensive national policy on industrialization, which is being coordinated by MTI. A well-coordinated AFT programme has the potential to positively impact on the expeditious development of Namibia's industrialization policy, by channelling additional resources for the development of capacity and technical assistance within the Ministry.

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14 The potential economic impact of Aid for Trade in the MENA region: the case of Jordan

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14.1 Introduction

Many developing and least-developed countries (LDCs) remain on the margins of global trade, attract limited foreign or domestic investment, and have achieved only very limited success in the diversification of their supply of goods and services. Within the framework of Aid for Trade (AFT), attempts are being made to explore strategies to connect firms in developing countries and LDCs to international value chains. The World Trade Organization (WTO) has defined AFT as projects and programmes that have been identified as trade development priorities in the recipient country's national development strategies. The AFT Task Force¹ established in 2006 underlined that clear and agreed benchmarks are necessary for the global monitoring of AFT efforts. The following categories of AFT were identified: trade policy and regulations (including trade facilitation); trade development; trade-related infrastructure; building productive capacity; trade-related adjustment; and other trade-related needs. According to the United Nations Development Programme (UNDP), developing countries that have participated in international trade – including trade with other emerging economies – make rapid progress in poverty reduction and job creation (UNDP, 2013).

The recently signed Aid for Trade Initiative for Arab States will spearhead trade reforms in Arab countries in the Middle East and North Africa (MENA) region, with the aim of bringing about pro-poor economic growth.² The most notable coordination

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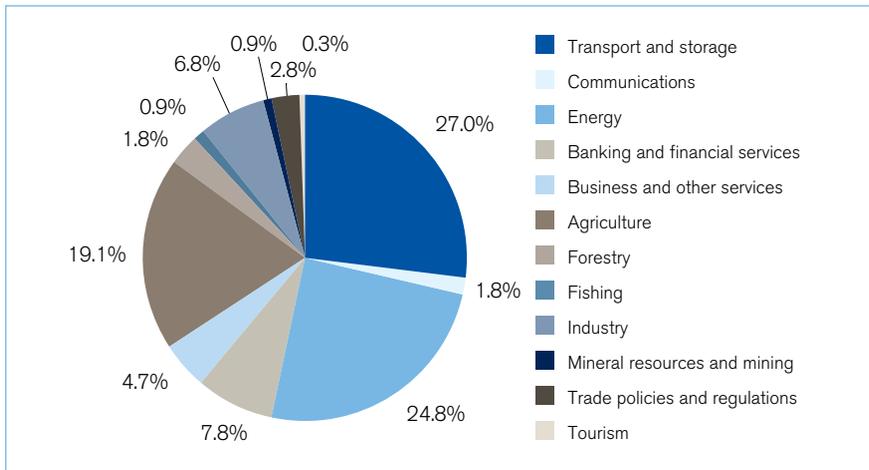
programme in the Arab region is Enhancing Arab Capacity for Trade (EnACT), which involves Algeria, Egypt, Jordan, Morocco and Tunisia. It provides trade intelligence and enhances exporter competitiveness with a focus on gender and youth. Ongoing initiatives draw heavily on local/regional expertise to build capacity.³ Most recently, the International Islamic Trade Finance Corporation (ITFC), in partnership with the International Trade Centre (ITC), UNDP, United Nations Conference on Trade and Development (UNCTAD) and United Nations Industrial Development Organization (UNIDO), launched a new project entitled “Building Export Capacities for Regional Integration in the Arab States”, covering the period from March 2013 to December 2014. The purpose of this large, multi-agency programme is to foster inclusive economic growth and increased employment in the Arab states through the promotion of trade reforms and the broader development agenda, and the deepening of regional integration and regional and national AFT engagement.⁴

This chapter is structured as follows: Section II outlines the structure of AFT in the MENA region, Section III covers the regional impact of AFT, Section IV analyses the economic impact of AFT on Jordanian economic growth, and Section V provides policy recommendations and concluding remarks.

14.2 The structure of AFT in the Middle East and North Africa region

The largest proportion of AFT for developing countries in 2011 (54 per cent) was devoted to financing better economic infrastructures, in areas such as transportation, communications and energy supply (see Figure 1). This was followed by spending on agriculture and fishing (20 per cent), capacity-building (19 per cent) and industry (7 per cent). AFT aims to enable both developing countries and LDCs to build up their supply-side capacity and trade-related infrastructure to expand their trade opportunities. In particular, the ITC focuses its AFT on empowering beneficiary countries to build up the technical capacity of their private sectors and ensuring their viewpoints are taken on board in the AFT strategy. Trade policy and regulation received the remaining 3 per cent of total AFT funding to the region in 2011. Improved infrastructure is expected to provide an important stimulus to both donor and recipient exports. In fact, it might even be suspected that donors target AFT by selecting infrastructure projects that primarily serve their own export interests (Hoeffler and Outram, 2011; Hühne, Meyer and Nunnenkamp, 2013).

Figure 1 Composition of AFT to developing countries, by major sector, 2011

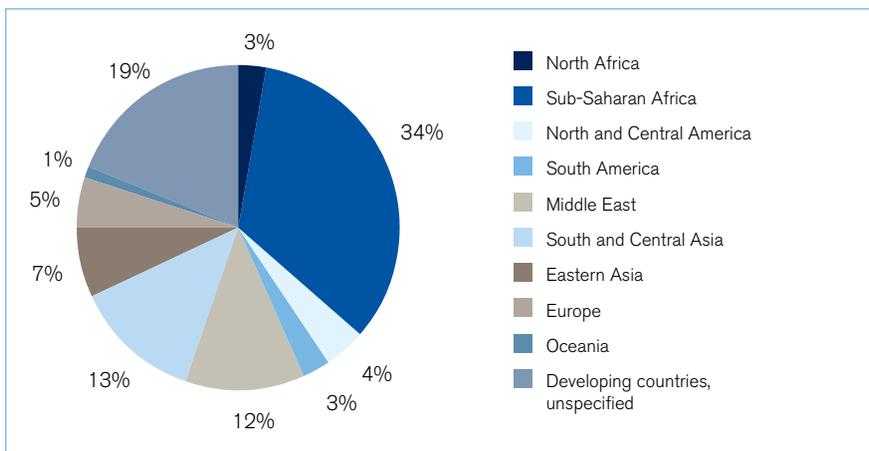


Source: OECD database (<http://stats.oecd.org>).

Note: Covers AFT from all donors who are members of the OECD's Development Assistance Committee (DAC).

The regional distribution of total AFT for the period 2002-2011 is shown in Figure 2. As might be expected, the largest share went to sub-Saharan Africa (34 per cent), followed by the South and Central Asia and Middle East regions (13 per cent and 12 per cent, respectively). The smallest shares were received by North and Central America (4 per cent), South America (3 per cent), North Africa (3 per cent) and Oceania (1 per cent).

Figure 2 Composition of AFT by region, 2002-2011



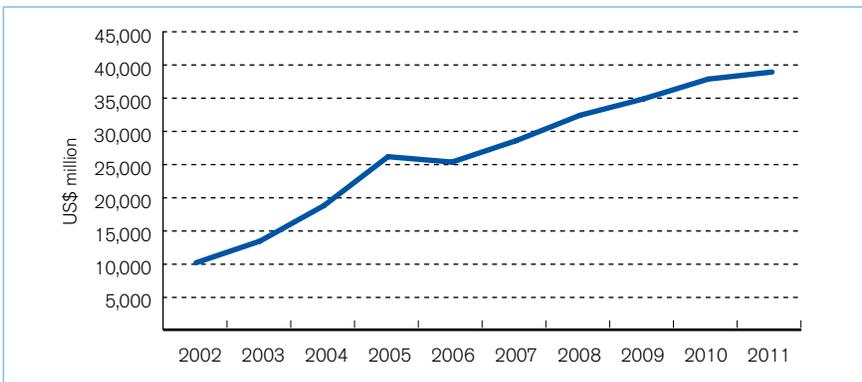
Source: OECD database (<http://stats.oecd.org>).

Note: Covers AFT from all donors who are members of the OECD's Development Assistance Committee (DAC).

14.3 The regional impact of AFT

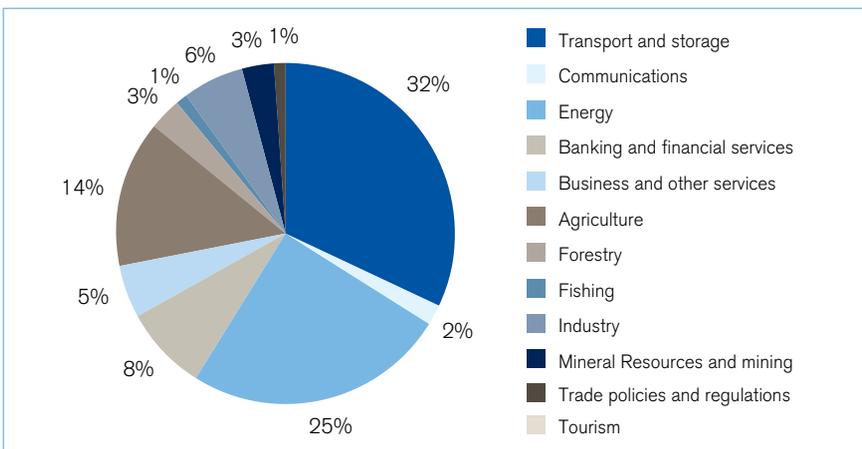
As shown in Figure 3, the total value of AFT for the MENA region increased rapidly during the period 2002-2011, from US\$ 10,211 million in 2002 to US\$ 39,039 million in 2011. This amounts to an average annual increase of 28.2 per cent during the period. Most of the aid went to the transport and storage sector (32 per cent), energy sector (25 per cent), industry, energy and agriculture sectors (14 per cent), and banking and financial services sectors (8 per cent) (see Figure 4).

Figure 3 AFT disbursed to selected MENA region countries, ⁵ 2002-2011



Source: OECD, International development statistics (<http://stats.oecd.org/qwids/>).

Figure 4 AFT disbursed to selected MENA region countries by main sector, 2002-2011



Source: OECD, International development statistics (<http://stats.oecd.org/qwids/>).

The following analysis provides a tentative assessment of possible impacts of AFT by comparing the behaviour of some selected indicators in the two periods before and after the launching of the AFT initiative in 2005.

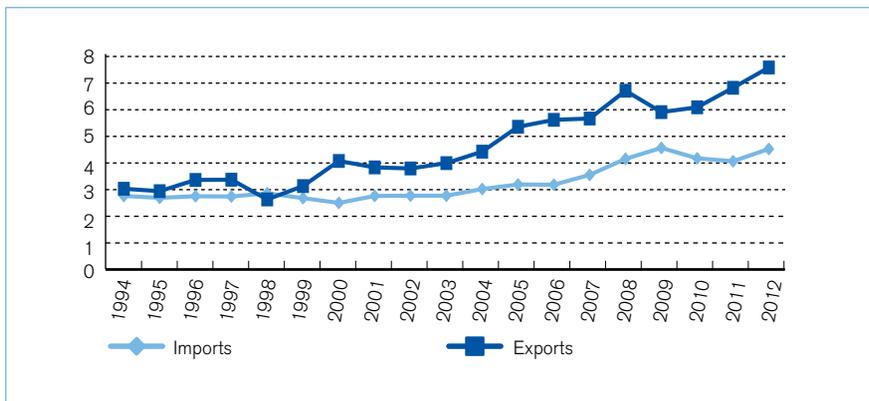
Trade share

Figure 5 demonstrates stagnation in the MENA region's share of world trade in the 1990s, with clear improvements starting around 2004. While the MENA region accounted for about 3 per cent of the world exports and 4 per cent of world imports in 2000, by 2012 it had increased to about 4.6 per cent of imports and 7.7 per cent of exports. However, it should be noted that sharp oil price increases were behind the significant improvements in MENA export performance after 2010 which can be observed in Figure 5.

Trade openness

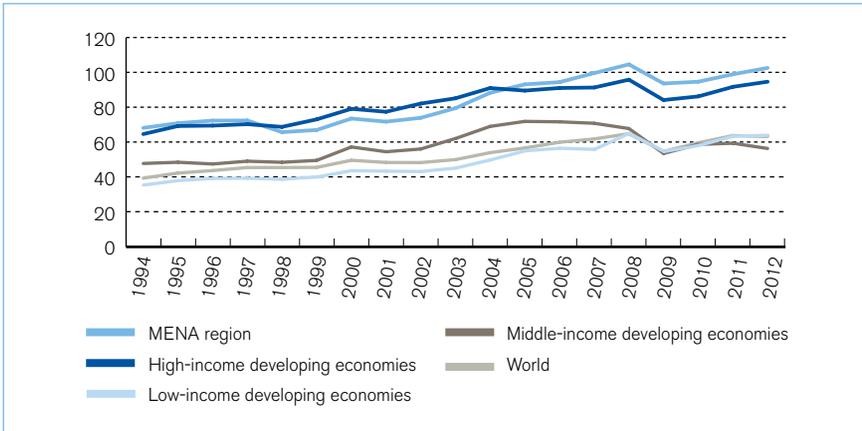
Another relevant indicator of the potential impact of AFT on the region is trade openness as measured by the ratio of trade to GDP. Figure 6 shows how the ratios of trade to GDP evolved over time. The MENA states' trade openness fell to about 63 per cent in the late 1990s but rose to around 100 per cent by 2012. World trade openness rose in the 1990s and continued to rise during the rest of period, although at a slow rate. Figure 6 illustrates that the MENA states' trade openness ratio was never below the world's ratio, and even surpassed that for high-income developing countries from 2005.

Figure 5 Selected MENA region countries' trade as share of world trade, 1994-2012



Source: UNCTAD (<http://unctadstat.unctad.org>).

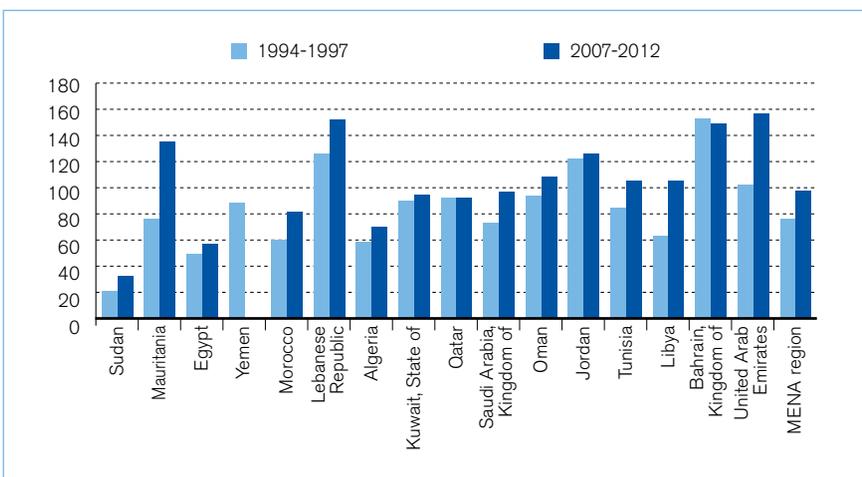
Figure 6 Selected MENA region countries' trade as percentage of GDP



Source: UNCTAD (<http://unctadstat.unctad.org>).

To see the trade openness picture at the country level, Figure 7 compares the ratio of merchandise trade to GDP in the mid-90s and for 2007-2012, for individual MENA countries. The aggregate measure for the MENA region represents most of the countries in the region; with some variation, most of these countries experienced a rise in their trade openness over the period. However, it is clear that trade-to-GDP ratios rose in the rest of the world as well.

Figure 7 Merchandise trade as a percentage of GDP, 1994-1997 and 2007-2012



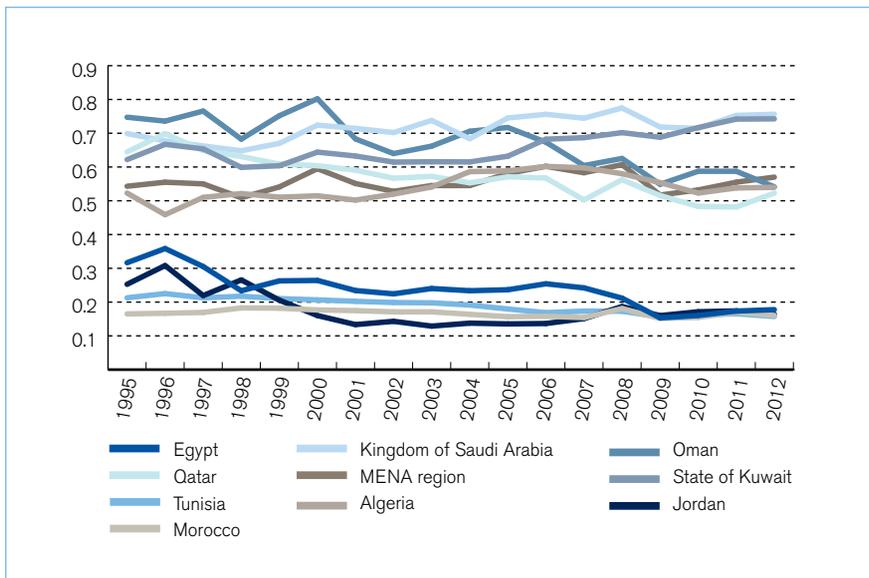
Source: UNCTAD (<http://unctadstat.unctad.org>).

Export diversification

The exports concentration index is a commonly used measure of exports diversification. For values between zero and one, the higher the value, the lower the export diversification. Figure 8 shows the exports concentration index for selected MENA countries during the period 1995-2012. As illustrated, all countries have a stagnant trend with an only slightly varying degree, which reflects very limited success in exports diversification. As might be expected, countries such as Egypt, Jordan, Morocco and Tunisia have a lower concentration index than Algeria, the State of Kuwait, Oman, Qatar and the Kingdom of Saudi Arabia, which can be described as natural-resource-abundant countries. However, within this latter group of countries, Oman and Qatar showed better improvements in export diversification compared to other countries in this group.

In each of the countries in the sample that have abundant natural and oil resources (Algeria, the State of Kuwait, Oman, Qatar and the Kingdom of Saudi Arabia), the top four exports have dominated total exports (accounting for more than 90 per cent). This explains the high degree of export concentration witnessed in these countries.

Figure 8 Export concentration index in selected MENA countries, 1995-2012



Source: Author's calculations based on the World Integrated Trade Solution (WITS) database (<https://wits.worldbank.org/WITS/WITS/Restricted/Login.aspx>).

For the other, non-oil-rich countries, the contribution of the top four exports to total exports is much smaller, reflecting greater export diversification, as shown in Figure 8.

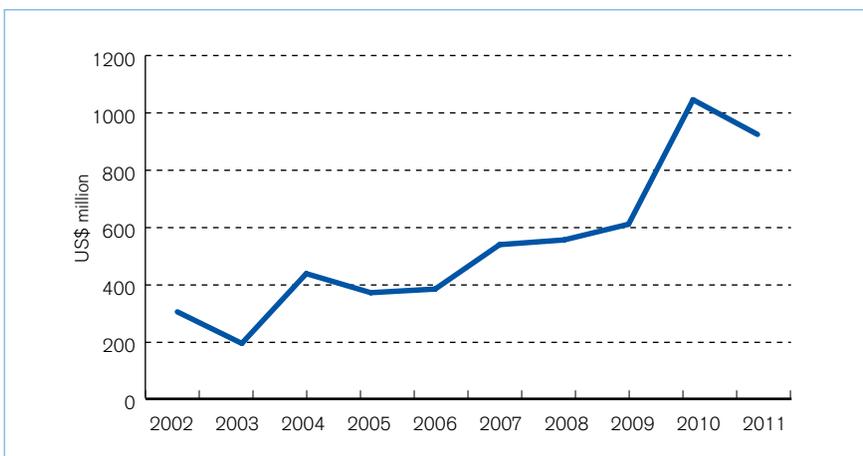
In a recent study by Spetan and Saqfalhait (2013), export diversification was found to be an extremely insignificant determinant with respect to growth, indicating that for the group of MENA countries covered in their study, diversification has not improved enough to be an important determinant to growth.

14.4 The economic impact of AFT on Jordan

This part of the chapter provides a single-country analysis, taking Jordan as a case study. As shown in Figure 9, total AFT allocated to Jordan more than tripled during the period 2002-2011, increasing from US\$ 305 million in 2002 to US\$ 919 million in 2011. Most aid was allocated to energy (39 per cent), business and other services (16 per cent), trade policies and regulations (12 per cent), and industry (11 per cent) (see Figure 10).

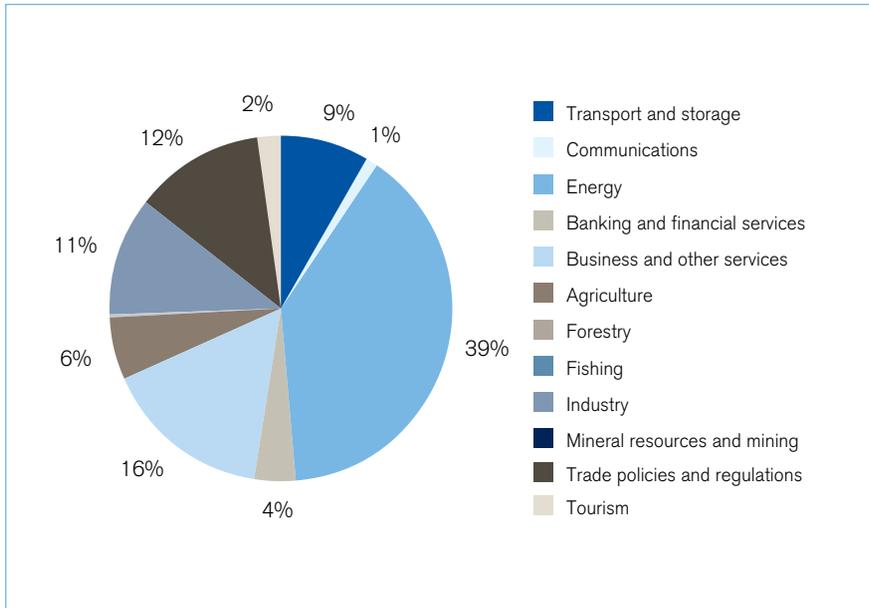
As in the regional analysis above, a comparison of the behaviour of selected indicators before and after the launch of the AFT programme will be presented in this chapter. In addition, a simple economic growth model will be utilized to evaluate the impact of AFT on real economic growth in Jordan.

Figure 9 AFT disbursed to Jordan, 2002-2011



Source: OECD, International development statistics (<http://stats.oecd.org/qwids/>).

Figure 10 AFT disbursed to Jordan by main sector, 2002-2011

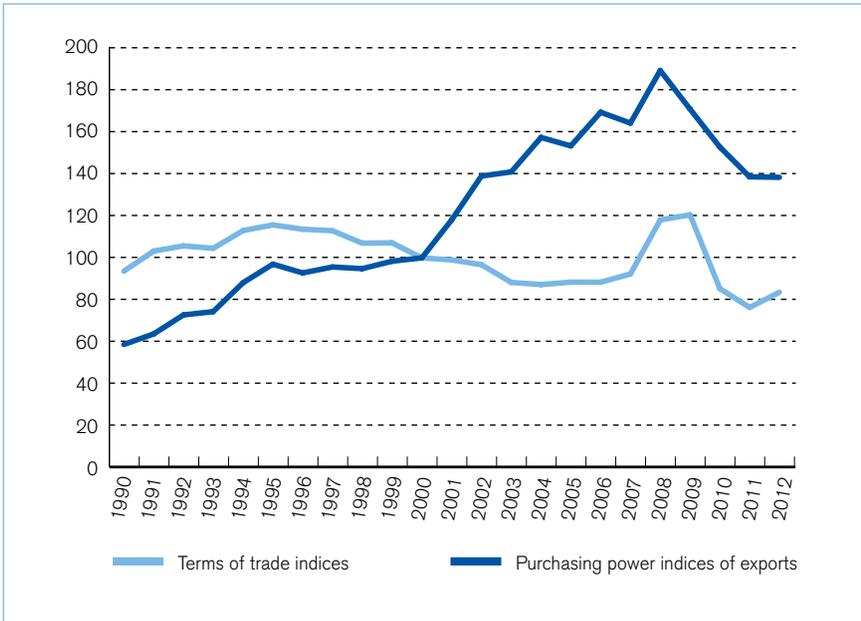


Source: OECD, International development statistics (<http://stats.oecd.org/qwids/>).

Terms of trade and competitiveness effects

Figure 11 shows the general trend of both terms of trade and purchasing power of exports for the period 1990-2012. Jordan's purchasing power index of exports increased continuously up to 2009, indicating a strong export position during that period. However, this trend was reversed after 2009, apparently because of the global crisis, followed by the impact of the Arab Spring after 2010. Jordan's terms of trade were stable with a slight downward trend up to 2005, and then increased up to 2009. Terms of trade for the purchasing power index of exports dropped sharply after 2009 for the same reasons mentioned above. This deterioration in terms of trade may have been useful improving the competitiveness of Jordanian exports. It can be concluded that after the AFT initiative became effective in 2005, Jordan's terms of trade declined, reflecting improved international competitiveness. However, this trend was interrupted by the negative impacts of both the global economic crisis and the Arab Spring after 2009 and 2010.

Figure 11 Jordan's terms of trade and purchasing power of exports, 1990-2012

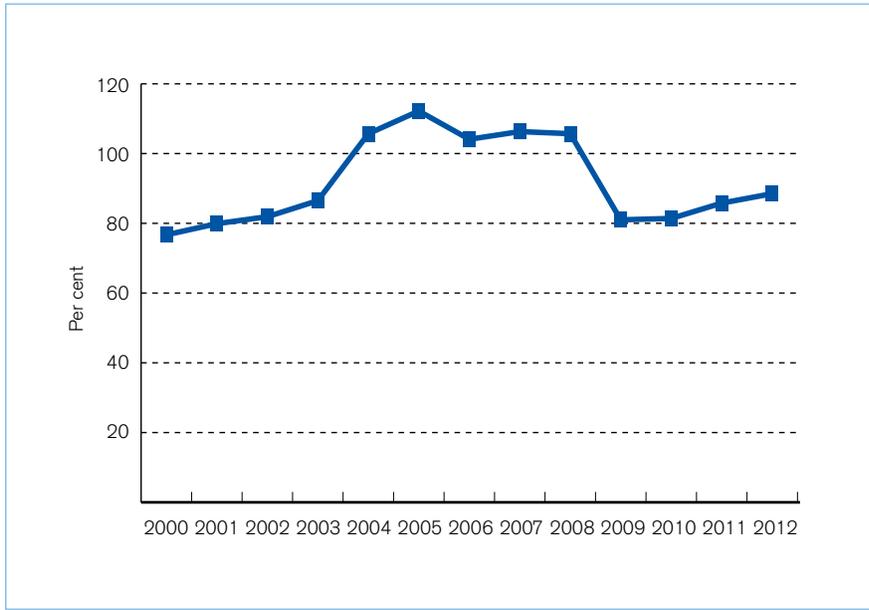


Source: Author's calculations based on UNCTADstat.

Jordan was consistently ranked as one of the top 50 most competitive economies worldwide for the years under review (except for 2010) (according to the World Economic Forum's *The Global Competitiveness Report*).⁶ The factors behind this accomplishment are the high quality of Jordan's human capital (a consequence of high levels of education and training), political stability, strong institutions and infrastructure. These are Jordan's competitive advantages, which continue to compare favourably with other countries, both regionally and globally. Jordan's weaknesses lie in the country's unstable macroeconomic environment, inefficient labour market and small market size.

Trade openness

Jordan has followed an aggressive trade liberalization policy to promote economic growth during the last two decades. The country has entered into various bilateral and regional trade agreements, and has lowered tariffs and other impediments to trade such as behind-the-border constraints and non-tariff barriers (NTBs) in order to promote trade openness.

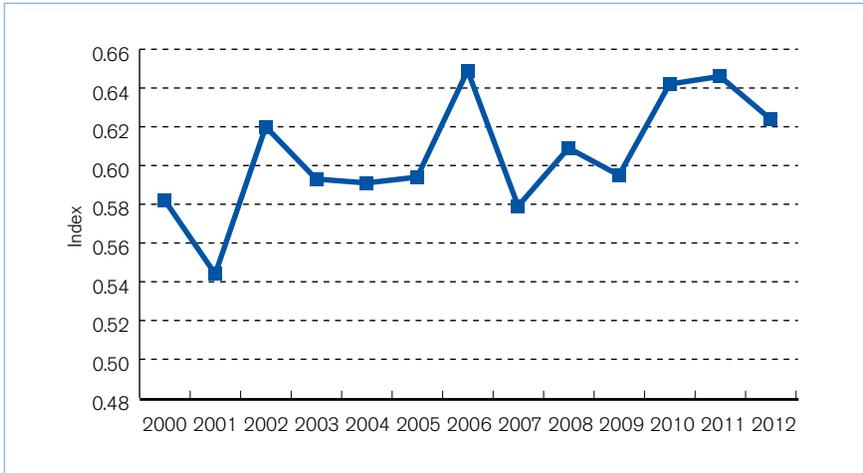
Figure 12 Jordan's total trade as a percentage of GDP, 2000-2012

Source: Author's calculations based on the Central Bank of Jordan databank (<http://www.cbj.gov.jo/>).

As shown in Figure 12, trade openness accelerated soon after Jordan joined the WTO in 2000, and continued until 2005. The trend stabilized at around 110 per cent during 2006-2008, and then dropped sharply in 2009 after the global economic crisis, although it subsequently revived. Figure 12 also provides limited evidence of the impact of the AFT initiative on trade openness.

Export diversification

Jordan's exports of clothes, potash, medical and pharmaceutical products, vegetables, fertilizers and phosphates topped the list of exported commodities in the period 2000-2012.⁷ As shown in Figure 13, the five-degree measure of export diversification slightly increased after 2005, indicating a minor setback in export diversification after the launching of the AFT initiative. This result is in line with the findings of Spetan and Saqfalhait (2013) that export diversification does not act as a growth determinant in the case of Jordan.

Figure 13 Diversification of Jordan's merchandise exports, 2000-2012

Source: UNCTAD (<http://unctadstat.unctad.org>).

Note: Figure 13 measures the share of the top five export sectors to total exports.

AFT and economic growth: econometric analysis

To examine the relationship between AFT and real economic growth, a classic macroeconomic growth model has been adapted and estimated using conventional econometric techniques. The econometric model to be estimated can be written as:

$$\text{dlog } Y_t = b_0 + b_1 \text{dlog}(\text{capital}) + b_2 \text{dlog}(\text{labour}) + b_3 \text{dlog}(\text{land}) + b_4 (\text{policy}) + b_5 (\text{A4T}) + e_t$$

$$\text{with } (e_t = \text{random disturbances}) \quad (1)$$

The coefficient of the policy variable added to the production function in equation (1) measures the impact of other policy variables on technological changes after controlling for the impact of factors of production. The rate of growth in output is calculated as the log differences of annual real GDP values; all other variables are similarly calculated with the exception of the policy variable(s). Due to the lack of sufficient quantitative data, the AFT variable (A4T) is represented by a dummy variable taking the value of 1 for 2006 and thereafter, and 0 otherwise.

A major challenge facing econometric analysis is data limitation on the AFT variable, since the AFT initiative took place in 2005 and became effective in 2006. A sample of annual data covering the period 1980-2010 has been prepared using the databases of the Central Bank of Jordan and the World Bank. Consistent with the

Table 1 Correlation coefficients, using the observations 1980-2010

ld_rgdg	ld_labor1	ld_pop	ld_remit	ld_capf	
1.0000	0.0754	-0.0580	0.7668	0.3427	ld_rgdg
	1.0000	0.8057	0.0362	-0.0629	ld_labor1
		1.0000	-0.0469	-0.1941	ld_pop
			1.0000	0.4211	ld_remit
				1.0000	ld_capf
		ld_fding	ld_gsize	tradeo	
		0.0451	-0.1751	0.0601	ld_rgdg
		-0.0760	0.0177	0.3326	ld_labor1
		-0.0794	0.0347	0.2213	ld_pop
		-0.0750	-0.0600	0.1266	ld_remit
		-0.0521	-0.2978	0.1903	ld_capf
		1.0000	0.0346	-0.0805	ld_fding
			1.0000	0.0433	ld_gsize
				1.0000	tradeo

Source: Author's calculations.

theoretical model explained earlier, the estimated equation included the annual growth rate of the following variables: real GDP (ld_rgdg), area of utilized land in production (ld_alandu), gross fixed capital formation at constant prices (ld_capf), labour force (ld_labor), foreign direct investment (FDI) inflows (ld_fding), workers' remittances (ld_remit) and AFT (A4T).

Inspection of the correlation matrix of the model variables (see Table 1) reveals that the growth of real GDP is positively and strongly correlated with the growth of worker remittances (0.767) and the growth of gross capital formation (0.34). No significant correlation is detected among explanatory variables, which can be considered as an initial indication of no multicollinearity problem. The only exception is the high correlation coefficient between growth rates of labour and population (0.81), which may suggest that each one can be taken as a good proxy of the other.

As the first necessary step before turning to the model estimation, all the model variables must be checked for unit root to make sure that they are stationary. The result of applying the ADF unit root test indicates that all variables are stationary and ensure non-spurious regression results. The constant was dropped from the estimated equation consistent with the specification of the growth model. The growth equation was estimated first by OLS and tested for both autocorrelation and heteroscedasticity. Although no evidence of serial correlation was detected, the Breusch-Pagan test indicated the existence of heteroscedasticity (Wooldridge, 2009). Therefore, the model was re-estimated after correcting for heteroscedasticity, and the result is shown in Table 2.

Table 2 Macroeconomic growth model, heteroscedasticity corrected, using observations 1981-2010

	Coefficient	Std. error	t-ratio
ld_labour	0.411014	0.0321100	12.80
ld_alandu	0.0204904	0.0131853	1.554
ld_capf	0.0609170	0.0150442	4.049
ld_remit	0.170534	0.0109724	15.54
ld_fdinf	0.00126	0.000569684	2.218
A4T	0.0357285	0.0046038	7.76
Adj. R-squared = 0.939322		F(6, 24) = 75.65492	

Source: Author's calculations.

Note: Dependent variable: ld_rgdp

The model overall fits very well, as shown by the relatively highly-adjusted R-squared value (94 per cent) and highly significant Fisher F-test value (75.7). Variance inflation factors for all model variables turned out to be very close to 1, indicating the absence of multicollinearity. All estimated coefficients carry the correct expected sign. In addition, all coefficients are statistically significant at the level of 5 per cent or better, with the exception of the coefficient of the utilized land variable which, although carrying the correct sign, is statistically insignificant. The coefficients of labour and worker remittances were the largest and most significant, indicating the importance of both variables to economic growth in the Jordanian economy. The FDI coefficient is very small in size and only marginally significant, indicating a mild positive effect of FDI openness on economic growth. Turning to the AFT coefficient (A4T), which is the focus of this study, its estimate, 0.036, turned out to be highly significant at better than the 1 per cent level. It means that the launch of the AFT programme has contributed positively to real economic growth, by 0.036 per cent annually. However, this result must be taken with great caution since AFT is a dummy variable and may reflect other impacts of unspecified developments.

14.5 Policy implications and concluding remarks

This study analyses the impact of the AFT programme at both regional and single-country levels. It presents empirical evidence of the impact of the programme in the MENA region, on export diversification, market share, trade openness and competitiveness (of selected countries). The study finds evidence of the positive impact of AFT in all these areas. However, the impacts on export diversification were mixed and vary across countries.

The case of Jordan is interesting since it provides a good example of a small country with very limited natural resources, but which has been able to achieve good economic performance. The factors behind this accomplishment are the high quality of human capital, political stability, strong institutions and infrastructure. These are Jordan's competitive advantages, and they continue to allow Jordan to compare favourably with other countries, both regionally and globally. Policy-makers in Jordan should continue the ongoing process of economic reform to get rid of all market distortions and upgrade technology and skills to meet the requirements of Jordan's production base and exports. The long-adopted policy of investing in human capital has proven fruitful and should continue to be applied vigorously.

As mentioned by Diop, Marotta and de Melo (2012), fiscal policy has not contributed significantly to diversification in the MENA region, because it has been more oriented towards food and fuel subsidies (consumption) rather than public goods such as infrastructure. Policy reform at the macroeconomic level can hardly be separated from diversification policy; furthermore, such reforms and policy actions generally reinforce each other. Therefore, additional efforts should be taken to address supply-side constraints to structural diversification. Policy interventions of the industrial type, which could be used to alter countries' patterns of specialization on a sector level, should first be analysed before turning the focus of attention to microeconomic policy, which can influence technological development and equipment investment as well as the accumulation of human capital. Another important idea which emerged from theoretical consideration and the analysis above is that technology and human capital are key engines for growth and structural diversification. Therefore, AFT flows could really impact positively on growth and ultimately contribute to economic transformation. There is no doubt that investment in technology and human capital is associated with positive external effects on production possibilities.

Endnotes

1. See: http://www.wto.org/english/tratop_e/devel_e/a4t_e/implementing_par57_e.htm
2. See: <http://www.prweb.com/releases/2013/5/prweb10695846.htm>
3. See: <http://www.intracen.org/projects/enact/>
4. See: <http://www.intracen.org/layouts/three-column.aspx?pageid=49080&id=72709>
5. The selected MENA region countries referred to in Figures 3-6 are Algeria, the Kingdom of Bahrain, Djibouti, Egypt, Iraq, Jordan, the Lebanese Republic, Libya, Morocco, Mauritania, Oman, Palestine, Qatar, the Kingdom of Saudi Arabia, Somalia, Sudan, the Syrian Arab Republic, Tunisia, the United Arab Emirates and Yemen.
6. See: <http://www.weforum.org/issues/global-competitiveness>
7. Based on trade data available from the Central Bank of Jordan (<http://www.cbj.gov.jo/>)

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Connecting to global markets

Challenges and opportunities:
case studies presented by WTO chair-holders

In recent decades, trade flows have become increasingly global, with developing countries and emerging economies playing an ever-expanding role.

However, these countries face a number of constraints in connecting to global markets. To obtain a better understanding of these constraints, the WTO invited the members of its academic network in developing countries – the WTO Chairs Programme – to identify major challenges in their respective countries and suggest ways to overcome them. In response, the WTO chair-holders contributed a set of papers to the WTO's Annual Conference of the Chairs Programme and to the Global Review of Aid for Trade in July 2013.

This volume brings together these contributions from the 14 WTO chair-holders. It is divided into four sections, focusing on export diversification, the role of non-tariff measures, the rule of law in connecting to global markets, and the role of the Aid for Trade initiative in building trade capacity and overcoming supply side constraints. The contributions provide some powerful arguments in support of using trade policy instruments as an engine for growth and provide valuable insights into how developing countries can increasingly integrate into the multilateral trading system.



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