SPECIAL ECONOMIC ZONES IN THE DOMINICAN REPUBLIC:
POLICY CONSIDERATIONS FOR A MORE COMPETITIVE AND INCLUSIVE SECTOR.

Trade and Competitiveness Global Practice

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1. Introduction

The Dominican Republic is often considered an example of the successful implementation of Special Economic Zones (henceforth SEZs) in the Western hemisphere. The zones fueled economic growth during the 1980s and 1990s and, while they experienced a sharp decline in employment due in part to the expiry of the end of the Multi-Fiber Agreement and stronger international competition in the textile and apparel industry in 2005, signs of recovery have been observed since 2009. Surgical equipment, chemicals and plastics, and footwear have recently emerged as the new drivers of export dynamism in the zones (World Bank, 2015). Yet, an old question remains: are Dominican SEZs developing activities with substantive domestic value addition and fostering linkages to local industries? This report sheds light on this question.

The special tax regimen enforced by SEZs has been traditionally regarded as an engine of economic growth that, however, is relatively disconnected from the rest of the Dominican Republic. The literature on economic development in the Dominican Republic has traditionally pointed to the existence of weak linkages between special economic zones and domestic firms (Kaplinsky, 1993). According to Manzano et al. (2013), one reason for the observed lack of linkages owes to the fact that most SEZ industries during the past two decades relied on maquiladoras, requiring low-skill labor and exporting products of low domestic value-added. Recently, SEZs have started to export more sophisticated products such as medical equipment and pharmaceuticals, but these sectors import most of their inputs and have built few supply arrangements with domestic suppliers (Sánchez-Ancochea, 2012). A common theme in the existing literature is that assessments of linkages between SEZs and the rest of the economy is primarily qualitative or based on small-sample surveys, therefore further empirical evidence is needed to make more definitive claims.

The objective of this report is to inform the policy discussion around the developmental impact of SEZs in the Dominican Republic by empirically assessing i) the implications of regulatory reforms aimed at complying with WTO disciplines regarding the elimination of incentives conditioned on export performance for SEZs firms, ii) the extent to which SEZs participate in Global Value Chains, and iii) their linkages with domestic suppliers. Employing customs transaction data, supply-use input-output tables, and a census conducted by the Central Bank to firms in SEZs, this reports sheds light on the following questions: (i) has Law 56-07, declaring the textile, leather and footwear industries national priority and, therefore, extending SEZ benefits to national manufacturers operating in these sectors, effectively boosted exports and affected trade dynamics outside SEZs?; (ii) what is the position of the Dominican Republic in Global Value Chains?; and (iii) have SEZ exporters developed greater domestic linkages? We complemented the empirical work with semi-structured interviews conducted with key stakeholders both from the private and public sectors.

The analyses produced five main findings:

Firstly, a structural shift in SEZs from clothing manufacturing to medium-high skill manufacturing was motivated by the end of the Multi-Fiber Arrangement (MFA) in 2005 and by the signature of the CAFTA-DR agreement. Historically, export competitiveness of the Dominican Republic has largely depended on the type of preferential market access the country receives from the U.S. In the 1990s, the US assigned a specific import quota of clothing and textile to the Dominican Republic under the MFA, which created a mushrooming of *maquilas* operating under the special regimen. After 2005, the CAFTA-DR provided transversal preferences that, coupled with the Dominican Republic special tax regimen, its dynamics policy to attract Foreign Direct Investment, and the characteristics of the labor force, created the conditions for the emergence of electrical, footwear, and medical equipment products in SEZs.

Secondly, because the employment intensity in these more complex industries is lower than in the apparel sector, the labor implications of this structural transformation should be carefully considered. On the one hand, the potential of SEZ zones to continue generating jobs at the same pace as before is likely to be reduced. This situation may be particularly detrimental for women as they filled the bulk of jobs available in the garment sector. On the other hand, the emergence of medium high-skill manufacturing is correlated with higher wages as the demand for more skilled workers increases. The recent rebound of the textile sector may alleviate the negative pressure on job creation in SEZs.

Thirdly, the emergency of more sophisticated manufacturing processes in SEZs have increased the value addition (production stages) that is generated in the country. U*pstreamness* of SEZs exports –a measure of the distance in terms of the number of production stages between the production of a given good and the final demand– have slightly declined over the last decade, which reflects the zones' specialization in assembly of final products. At the same time, intermediate imports have moved upstream or farther away from the final demand. These two findings point to the fact that more stages of production are taking place in the country, particularly in the pharmaceuticals, footwear, and electrical sectors. These findings imply that the domestic value addition embedded in Dominican exports have increased with the emergence of these medium high-skill manufactures.

Fourthly, the gains due to more value added being generated in the Dominican Republic are not correlated with more linkages being developed with domestic firms outside the SEZ. The more sophisticated nature of the manufacturing production taking place in the zones (footwear, pharmaceutical, and electrical products) entails that many inputs are imported because there is not domestic availability or national products do not meet required standards. As of 2012, Dominican companies in SEZs were acquiring 81 percent of their inputs abroad.

Fifthly, the elimination of fiscal incentives targeted exclusively to exporters in SEZs that sought to level the playing field actually made SEZs a more attractive location for firms.

The expiration of the deadline to make the SEZ program in the Dominican Republic compatible with the WTO Agreement on Subsidies and Countervailing Measures led to the elimination of the export share requirements (ESR) to receive the incentive– firstly for producers of leather, textiles and apparel and leather, sectors designated as 'national priority' in 2007, and afterwards for all SEZs producers in 2011**.** The removal of the ESR for firms operating in SEZs without altering the fiscal incentives available to them, made SEZs a more attractive location for firms to operate in. We find that the pathway to WTO compliance chosen by the Dominican Republic created the condition to support the migration of firms that previously operated under the national regimen, into the SEZ regimen. The fiscal costs of this policy ought to be measured.

These findings call for new policies aimed at enhancing the ability of SEZs to support a sustainable and inclusive economic growth in the Dominican Republic. Policies aimed at encouraging domestic linkages, developing labor adjustment assistance programs, and improvements around the institutional framework supporting export competitiveness and FDI attraction should be prioritized**.** The first set of policies includes the creation of a suppliers' database, matchmaking events, the creation of local clusters around the parks, the design of FDI incentives that reward domestic sourcing, and the removal of both formal and informal regulatory barriers for supplying SEZs firms from the domestic territory. The second set of policies includes vocational training in new skills demanded by SEZ firms, job search assistance, and transitional income support. The exact intervention should be carefully crafted to maximize limited fiscal resources and, ideally, be cost-shared with workers and employers. The third set of policies includes a regulatory and institutional revision of the support framework to encourage consistency and coordination across both the public and the private actors involved in promoting SEZs. Finally, a robust cost-benefit analysis of the role of SEZs in terms of economic outcomes (jobs, domestic linkages, etc.) and forgone tax revenue would help to inform the policy debate. While the current administration is already implementing some of these recommendations (mainly on promoting domestic linkages), these efforts should be deepened.

The report is organized as follows: The second section presents the historical importance of SEZ as an engine of economic growth in the country. The third section depicts the structural shift in terms of production in SEZs and evaluates the degree of value addition taking place in the Dominican Republic. The fourth section evaluates the degree and evolution of linkages between SEZs and local firms. The fifth section shows the impact of the regulatory changes in the SEZ regimen undertaken to comply with WTO disciplines. Finally, some conclusions and policy recommendations are presented in section six.

2. A Country Running on the Engine of its Special Economic Zones

SEZs are geographically bounded areas in which customs, tax and investment regulations are more liberal than in the rest of the country. These zones are normally established with the goal of attracting foreign direct investment (FDI), serving as pressure valves to alleviate large-scale unemployment, promote exports, and support wider economic reforms aimed at diversifying production (Farole and Akinci 2011). SEZs are pervasive across the developing world and their performance record is uneven given the different regulatory distortions they introduce into the market.

The Dominican Republic is one of the world's pioneers in the use of SEZs with a program ongoing for more than 40 years. Few other countries worldwide have used SEZs as effectively as an engine for attracting FDI, job creation, and economic growth (Burgaud and Farole 2011). SEZs fueled economic growth during the 1990s and the beginning of the 2000s. After the elimination of trade preferences in textiles and apparel in 2005, the sector experienced a sharp decline in employment; signs of recovery have been observed since 2009. Exports originating in SEZs account for more than half of aggregate export value between 2006 and 2014 —although their importance has dwindled both in terms of value and the total number of exporting firms relative to the total number of SEZ and non-SEZ firms exporting from the DR. Conversely, firms based in SEZs are less important in terms of total imports; during the same period of time they accounted for 20% of total import value and constitute less than 2% of all importing firms between 2006 and 2014.

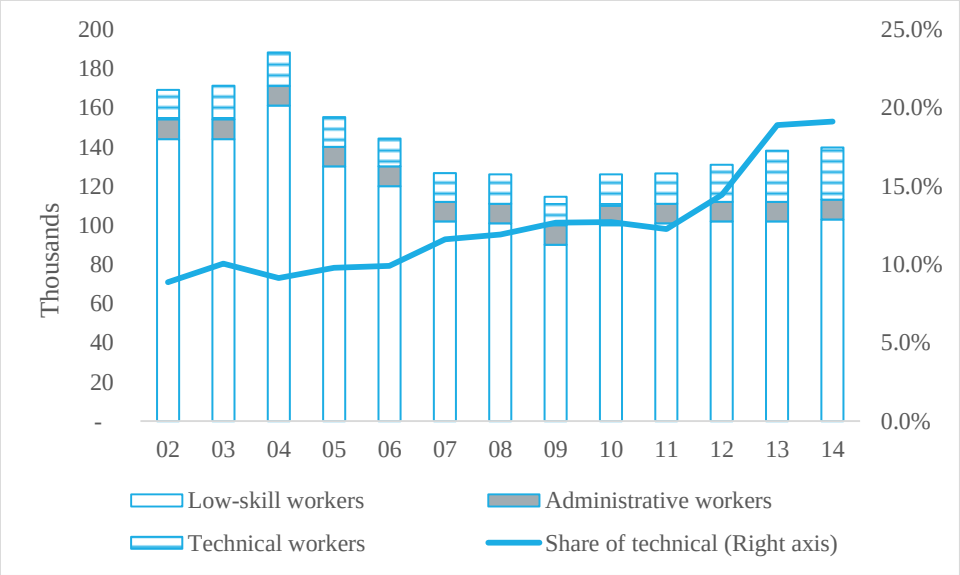
The success of SEZs in attracting FDI has been linked to the type of trade preferences the Dominican Republic receives from the US. Because of the small size of the domestic market, the majority of FDI sought to benefit from tax incentives provided in SEZs and low labor costs to assemble labor-intensive products and ship these to the US – so called efficiency seeking FDI.[1] The geographic proximity to the US is the main source of comparative advantage of the Dominican Republic. The type of production taking place in SEZs was defined, to a large extent, by the type of preferential market access the U.S. granted to the country. Under the Multi-Fiber Arrangement (MFA), the US assigned a specific import quota of clothing and textile to the Dominican Republic, which created a mushrooming of *maquilas* operating under the special

[1] The factors that motivate investors' decisions differ depending on the industry characteristics and the comparative advantages of the host countries. However, the FDI motivations can broadly be categorized as: (i) Natural resource-seeking investment, which describes a situation where a foreign investor establishes an enterprise in the host country to access natural resources; (ii) market-seeking investment, which is driven by the foreign investor's intention to primarily serve the host country's market; (iii) efficiency-seeking investment, which refers to the type of investment in which the investor chooses a host country in order to take advantage of some competitive factor, such as a cheap/productive, knowledgeable or efficient labor force, utilities, services etc.; and (iv) "Strategic asset-seeking" investment, which occurs when an investor seeks control of a firm-specific asset, such as a brand, distribution system, managerial practice or technology. See Dunning (1993).

regimen. After the abolition of the MFA in 2005 and the creation of the CAFTA-DR free trade agreement, the US provided transversal preferences that were central to the emergence of other economic sectors in SEZs.

Currently, the SEZs are still a powerful engine of job generation, exports, and productive diversification. The number of industrial parks has grown 25% over the last 5 years, standing at 60 parks in 2014 with an average of 11 firms in each park (See Adozona 2014). The number of parks in operation now is the same as it was in 2004 when the clothing sector was buoyant. The administration of industrial parks is primarily private (70%), with the remainder either public (25%), or both private and public (5%).[2] Services, textiles, medical instruments, tobacco, and agroindustry are the main activities taking place in SEZs. Currently, SEZs provide around 140,000 direct jobs of which the majority are held by low-skilled workers, although the share of technical workers has steadily grown since 2011 (Figure 1). These jobs are held almost equally by men and women. It is important to note that the share of female labor force participation in SEZs has steadily dropped since 2011, indicating the decline of the textile industry and the growth of more sophisticated industries in SEZ demanding more skilled workers.

Figure 1: Direct Jobs Created by SEZs in the Dominican Republic (2002-2014)



Note: This figure shows the evolution of direct jobs, by type, in SEZs in the Dominican Republic.
Source: National commission for Special Economic Zones (CNZFE).

[2] The fact that the majority of parks are privately owned implies that much of the work to attract international investors into these zones is conducted by private organizations or by the national commission of special economic zones rather than by the national investment promotion agency (CEI-RD). World Bank (2014) highlights the particularities of the institutional arrangement to support trade and competitiveness in the Dominican Republic.

Box 1. Lessons and Challenges on Setting up Successful SEZs. The Dominican Republic case.

The Dominican Republic is a renowned case of positive SEZ experience in the Americas. Since their inception in 1969 and drawing from its proximity to the US, preferential trade agreements, and investment incentives, SEZs in the country were able to attract garment manufacturers that were offshoring production. The dynamism of this sector boosted exports and helped the Dominican Republic to being the top performer economy in Latin America and the Caribbean during the nineties, with an average growth rate of 6.7 percent in 1992-2000. While the garment sector was severely hit by the end of the Multi-Fiber Arrangement in 2005, SEZs were able to attract investment in new sectors, positioning the country in a number global value chains, and leading the way towards economic diversification and increasing export sophistication.

Special Economic Zones' expansion has been led by both the private and the public sector. In fact, the first SEZ was established by a private investor, Gulf and Western. As of 2015, there are 47 private SEZ parks, 15 public parks and 3 parks featuring joint administration. Through the association of SEZ entrepreneurs (ADOZONA), the private sector actively participates in the policy discussion and fosters a series of initiatives, including the creation of an export promotion and investment fund.

Dominican SEZs are also open to domestic exporters and suppliers. While SEZs' main motivation is often attracting foreign direct investment, Dominican SEZs have also favored the presence of domestic exporters and, more recently, domestic suppliers. The agglomeration economies, know how, and enhanced business environment enjoyed in the SEZs have facilitated the emergence of Dominican exporters, which represent nowadays about a quarter of the total firms established in SEZs, including the notable case of Grupo M, one of the largest employers in both the Dominican Republic and Haiti.

Dominican SEZs count with a strong regulator that is also an efficient investment attraction agency. The Consejo Nacional de Zonas Francas Especiales (CNZFE), comprising public and private actors, has a double mandate: (i) regulate the Law 8-90 on the establishment and functioning of SEZs and (ii) design an integrated policy for promoting free zones, attracting new companies, and developing existing SEZs. Over the years, the CNZFE has established a Statistical Department, an Economic Analysis and Competitiveness division, and a Promotion Department, intelligentsia that helps identify potential value chains and investors. Through a series of economic ambassadors, the CNZFE is also present in a number of international exhibitions, and has been successful in attracting investors from a number of emerging industries, including surgical equipment, pharmaceuticals, jewelry or electrical appliances.

Authorities have been proactive in the negotiation of trade agreements that increase preferential market access in key export markets. In the aftermath of the expiration of the MFA, Dominican Republic joined the CAFTA-DR in 2007, and became a member of the Economic Partnership Agreement between the Caribbean and the EU in October 2008. These agreements facilitated the recovery and diversification of the SEZs in the aftermath of the global crisis. In 2007 and 2011 the country reformed its SEZ regimen to remove incentives conditioned on export performance, a practice forbidden by the WTO Agreement on Subsidies and Countervailing

Nonetheless, it is worth noting some of the limitations and challenges facing the SEZ model in the Dominican Republic. The strength of SEZ related stakeholders has placed the focus of policy interventions in the preservation of sources of competitiveness that nay not remain sustainable in the long run —low wages, trade preferences and tax incentives— which may have distracted policy makers from the need to address fundamental challenges to external competitiveness through structural reforms (e.g. on electricity, transportation costs, and overall business environment). In addition, there is evidence that introduced policies have not significantly fostered backward and forward linkages between SEZs and the rest of the economy, which limits the scope for further positive externalities

and overall economic upgrading.

Sources: Farole and Akinci (2011). World Bank (2015).

While the SEZ scheme has been a determinant in the development strategy of the country, it has also created a duality in its production structure. Products manufactured within SEZs tend to be more technologically sophisticated than products manufactured under the national tax regimen, which are mostly resource-based goods. Firms based in SEZs are fundamentally different than their peers outside the zones in terms of the average size of their export and import transactions, number of traded products, and number of destinations or source countries (Table 1).

Table 1: Export and Import Outcomes at the Firm-level (2006-2014)

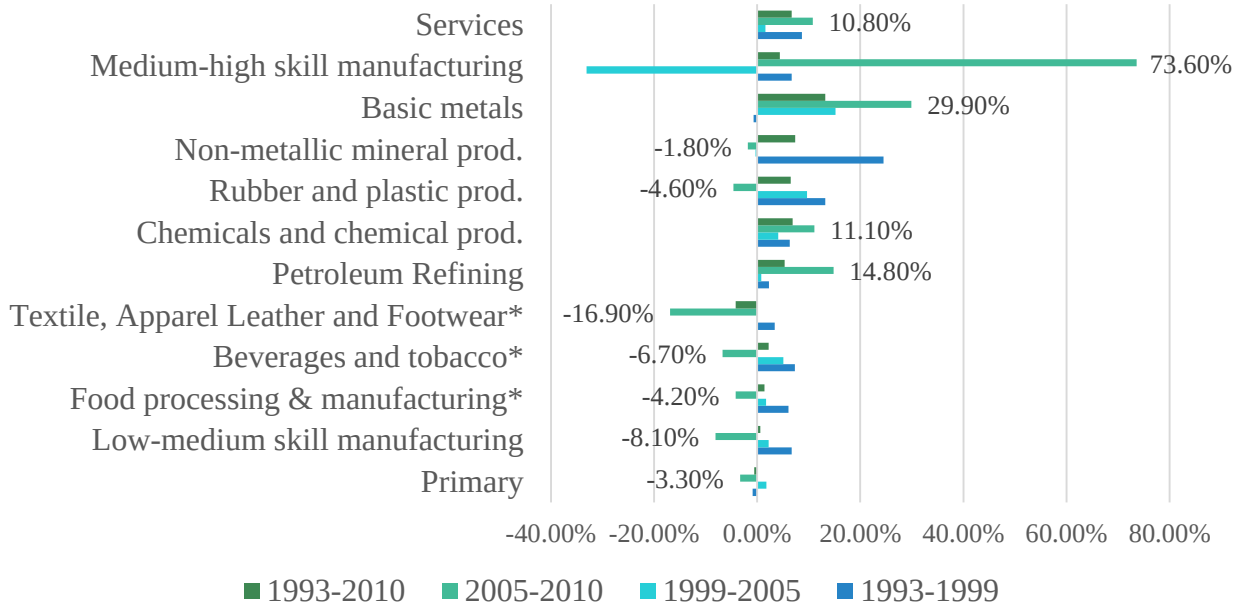
		Special Economic Zones		National Regime	
		Exports	Imports	Exports	Imports
Transaction value/firm	Mean	44.98	54.05	5.62	3.32
	Median	0.27	4.99	0.05	0.04
Products/firm	Mean	6.38	46.32	4.03	9.91
	Median	1	20	1	2
Destinations/origins /firm	Mean	2.58	4.82	1.61	1.47
	Median	1	2	1	1

Note: Export and import transaction values are denominated in hundreds of thousands US Dollars. Figures are averaged across the period 2006-2014.
Source: authors' calculations using customs data.

The dynamism of real wages is also different for SEZ and national industries. Real wages in SEZ sectors have declined due to the domestic economic crisis of 2003 and the decline of the textile sector. Jobs in SEZs decreased from 195,262 to 134,426 between 2002 and 2010 (-30 percent). The share of wages in total output declined from 22.2 percent in 2002 to 18.3 percent in 2008, prior to increasing to 19.1 percent in 2010. This was driven both by a decline in employment, and also by a decline in wages in the textile and apparel sector, with the total salary mass decreasing by 16.9 percent in real terms between 2005 and 2010 (Figure 2). Other sectors with a presence in SEZs, such as tobacco processing (-6.7 percent), as well as those related to primary goods, also saw a decline in real wages, while sectoral employment modestly increased in the period. Meanwhile, medium-high skill manufacturing experienced a dramatic increase in

real wages in the second half of the 2000s, compensating for a prior decline at the beginning of the decade. [3]

Figure 2. Change in total Sectoral Wages
(Real terms)



Source: Author's elaboration using National Accounts
* Denotes SEZ production sector

[3] Medium-high skilled manufacturing includes production of surgical equipment, electrical appliances, pharmaceuticals, and optical equipment, among others.

3. Changes in Sectoral Specialization in SEZs and the Degree of Participation in GVCs

During the last 30 years, the Dominican Republic has undergone a structural transformation from a resource-based economy to a more diversified production base. The historical preferential market access to the U.S. underpinned this productive transformation. Beginning in the late 1960s, the Dominican Republic started to diversify its economy, bringing to an end centuries of dependence on agriculture, and especially sugar production. By the 1980s, the country's economic focus had shifted to mining, tourism, and manufacturing. Successive governments helped build up the country's manufacturing sector by creating SEZs, which offered tariff exemptions and a series of tax concessions to foreign companies. The main activity in the SEZs was garment assembly for export to the US in the context of fixed import quotas under the MFA. The phasing-out of the MFA, completed at the beginning of 2005, along with the signature of the CAFTA-DR agreement and the extensive use of SEZs as a policy tool to increase exports and generate job opportunities, created the conditions necessary to attract investment from multinational companies that produced relatively more sophisticated goods to serve the U.S. market. These facts created the conditions to shift the production structure away from clothing manufacturing.

Although non-SEZs have become more prominent in the export basket over the past decade, the dynamics in SEZs still drive export performance and have been a significant factor in the recent changes in the sectoral composition of the Dominican export basket. In 2015, exports from SEZs accounted for USD $5.5 billion, accounting for 58 percent of total exports. This share had steadily decreased from 80 percent in the early 2000s to 53 percent in 2013. Over the last decade the share of low-technology manufacturing has remained broadly stable, whereas the importance of medium-technology sectors have risen. In particular, exports of medical equipment, pharmaceuticals, and footwear have more than doubled their share in SEZ exports (Figure 3). While the clothing sector is still predominant in the overall export basket in SEZs, contributing 23 percent of total SEZ exports, the nominal value of clothing exports in 2015 ($1.28 USD billion) is roughly the same in nominal terms that it was in 2004 ($1.25 billion). It is important to note, however, that after declining over the first decade of the 2000s, the textile sector rebounded after 2010. This uneven performance reflects a restructuring of the sector from large-scale sewing to more just in-time production, short series, and full-package solutions. Box 2 presents the case of a small clothing producer that managed to survived the years of the crisis

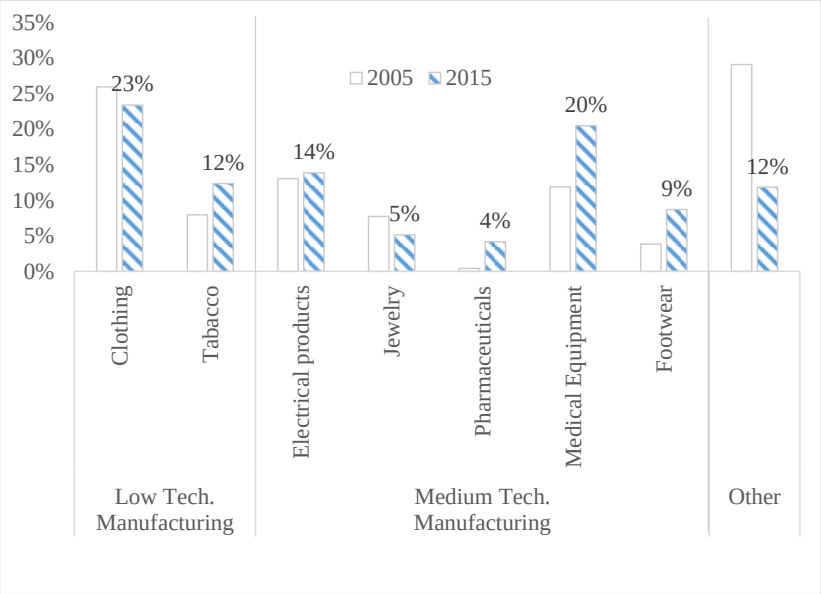
Box 2. The Quest of an Entrepreneur to Survive the end of the Multi-Fiber Agreement

Allen Tejada*, a young Dominican entrepreneur founded *Tejada Textiles* in 2006 after the Family Dollar corporation, a U.S. based corporation specialized in low-price everyday items, approached him to become one of its suppliers of cotton shirts and other apparel products. The long-term contract offered by the company in 2005

was enough for Mr. Tejada to quit his job in another *maquila* and take on debt to start operations in 2006. Part of the working capital was loaned by the U.S. company. However, with the imminent competition from Asian low-cost producers in the U.S, the contract was cancelled in 2007 leaving Mr. Tejada with his financial obligations and no stable clients. This shock forced the firm to downsize and realign its core product offering towards subcontracting for larger textile firms operating in SEZs. The company specialized mainly in low value added activities (cut, make and trim), focusing on rather smaller volume orders with a quick turnaround. Over time, the company found its niche in just-in-time production. Currently, the company processes an order for the U.S. within a three-week lead-time, as compared to six months by its Chinese competitors. This has given *Tejada Textiles* a significant advantage, as US retailers are keen on maintaining lean inventory levels, particularly after the financial crisis. The firm continues selling products to larger firms in SEZs, but the prospects in the U.S. markets keep improving. *Tejada textiles* does not serve the domestic market, buys mostly imported inputs, and identifies its main competitors in SEZs in Central America. Mr. Tejada hopes to move to full-package production (a higher-markup and more value-added activity). However, access to working capital in the domestic financial market is a binding constraint.

* Name has been changed for confidentiality reasons.

Figure 3: Sectoral Export Composition of SEZs in the Dominican Republic



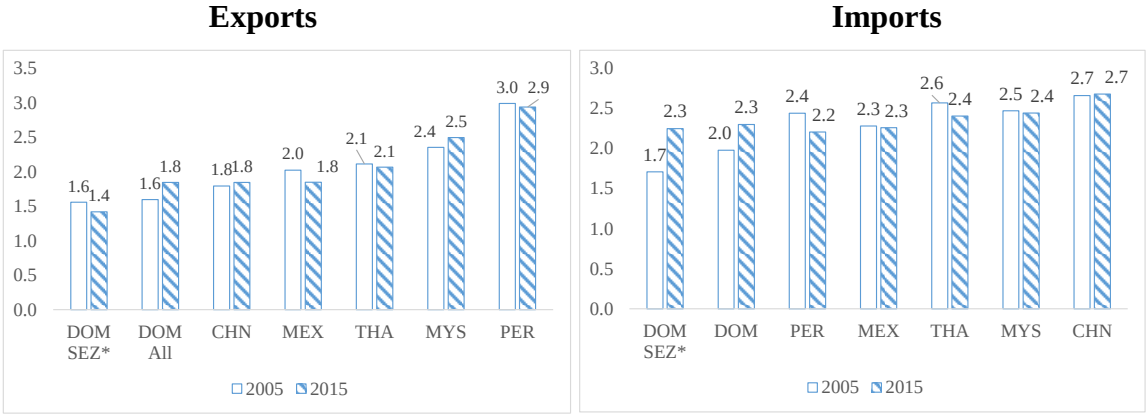
Note: This figure presents the sectoral share of total merchandise exports in SEZ in 2005 and 2015. Main sectors are categorized by technology levels using the EUROSTAT aggregation of manufacturing activities.
Source: authors' calculations using data from the Central Bank.

Changes in the sectoral composition of SEZ have important labor implications. Because the labor intensity in medium-technology sectors is lower than in traditionally low tech-industries (garment production), the potential of SEZ to keep generating jobs is likely to be reduced. This implication may be particularly detrimental for women who constitute the lion share of employees in the clothing sector. However, the emergence of more sophisticated

process is correlated with higher wages as the demand for more technical workers increases. The recent rebound of clothing production in SEZs may alleviate the negative impact of the change in the sectoral composition of low-skilled workers. To draw any conclusion, it is essential to quantify the size of this adjustment costs and disentangle the key factors related to the functioning of labor markets in the Dominican Republic. See The World Bank (2016) for an analysis of the role of labor markets in limiting the inclusiveness of economic growth in the Dominica Republic.

The emergence of relatively more sophisticated production processes has brought SEZs into more complex GVCs. On average, SEZ exports moved *downstream* (closer to final consumers in terms of number of production stages) in GVCs while their imports moved upstream (further from final demand) which is consistent with the increasing value addition taking place within the zones. In fact, *upstreamness* of SEZ exports has slightly declined over the last decade and is the lowest among countries that are highly integrated into GVCs like Mexico, Thailand, and China which reflects the zones' specialization in assembly and final good exports (Figure 4). On the other hand, SEZ imports have moved upstream during the same period which reflects an import structure shifting towards intermediate inputs that are higher upstream in the value chain (e.g. from cotton fabric to cotton yarn or fiber, for instance). Overall, this indicates that the sectoral transformation in SEZs have brought more value added to the country. Box 3 presents the calculation of the *upstreamness* measure.

Figure 4: Export and Import Upstreamness (2002-2012)



Note: These figures shows the changes in average "*upstreamness*" or distance to final demand for the Dominican Republic as a whole and SEZs compared with benchmark countries over the last decade. The upstreamness indicator ranges from one to five with a lower value indicating a particular product or industry is downstream in the value chain or closer to final demand in terms of the number of production stages.
Source: Authors' elaboration using UN-COMTRADE and customs data

Box 3 . Indicators to identify the position of a particular country in a GVC

The position of a particular country in GVCs can be measured by its "distance to final demand" (Antràs, Chor,

Fally and Hillberry, 2012) – i.e. the distance in terms of the number of production stages between the production of good i in country c and final demand. Measured as:

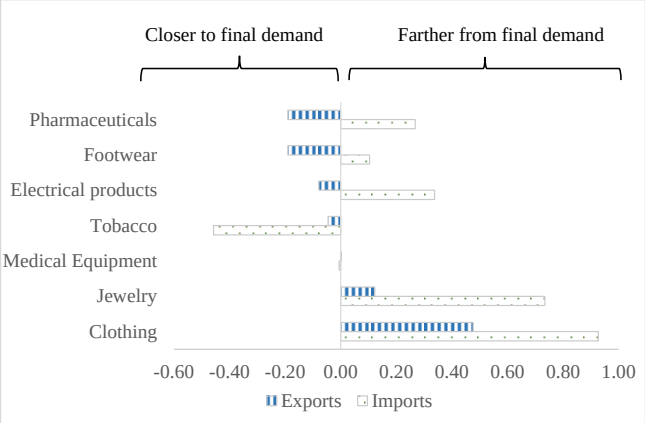
$$GVC\_DIST_{ci} = 1 + \sum_{d,j} \varphi_{cdij} D_{dj}$$

Ddj is the distance to final demand in terms of number of production stages in country d and industry j. These are summed up over all country-industry (d,j) combinations who use inputs from industry i and country c using φcdij as weights. φcdij is the fraction of production from industry i in country c that is purchased as an intermediate good by industry j in country d. Evidence suggests that only a few countries have moved downstream. Most countries have increased their upstreamness because the overall length of value chains has increased with the fragmentation of production. Moreover, the offshoring process that lengthens GVCs tends to affect more the early stages of production, although a new wave of services offshoring has been taking place in recent years (Taglioni and Winkler, 2016). The comparison between the upstreamness of exports and imports provides a measure of the degree of transformation taking place in a given country, with a greater difference between the former and the latter indicative of a greater degree of domestic value addition and transformation.

Pharmaceuticals, footwear, and electrical products are the industries where the number of stages of production taking place in SEZs have increased more, improving the feasibility that more value added is incorporated into the production process. This is reflected by the fact that exports appeared to be closer to the final consumer whereas imports are farther away from them (Figure 5). Jewelry and textiles, on the other hand, appear to be farther from final demand, indicating that these GVCs may have grown longer and that Dominican firms are specialized in an intermediate stage of the production process. For the case of clothing, this could reflect the fact that final assembly happens in Haiti because of the benefits the country receives from the US trade preferences programs.[4] It is important to note that while the number of production stages taking place in SEZ has increased, the majority of production stages for pharmaceuticals, electrical products, and medical equipment still happens outside the Dominican Republic (Figure 6).

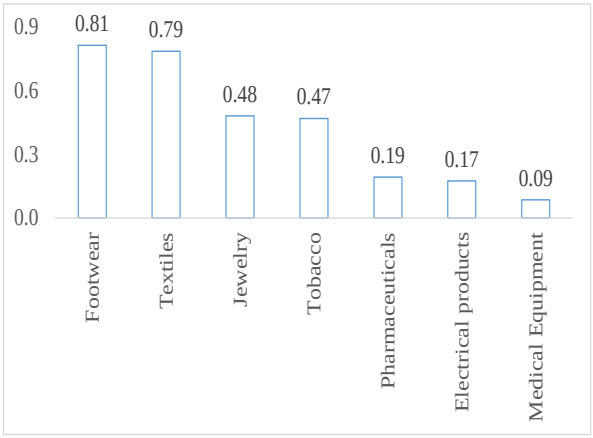
[4] Imports of certain Haitian manufactured textile and apparel goods are eligible for duty-free treatment under the Caribbean Basin Trade Partnership Act (CBTPA). Additional benefits under CBTPA have been created through the Haitian Hemispheric Opportunity through Partnership Encouragement Act of 2006 (HOPE), the Food Conservation and Energy Act of 2008 (HOPE II) and the Haiti Economic Lift Program of 2010 (HELP). CBTPA and HOPE established unlimited duty-free treatment for various apparel products, with certain restrictions regarding the source of the yarns and fabrics used in the apparel, and duty-free treatment for certain apparel up to certain annual quotas, known as tariff rate quotas (TRQs). HOPE II and HELP expand these existing preference programs by allowing additional textile and apparel articles to qualify for duty-free treatment, as well as increasing some of the TRQs.

Figure 5: Changes in Sectoral Export and Import Upstreamness (2002-2012)



Note: This figure shows the changes in the upstreamness measures between 2002 and 2012 for both exports and imports for the key sectors in SEZ.
Source: authors' calculations using customs data.

Figure 6: Domestic Length (2012)



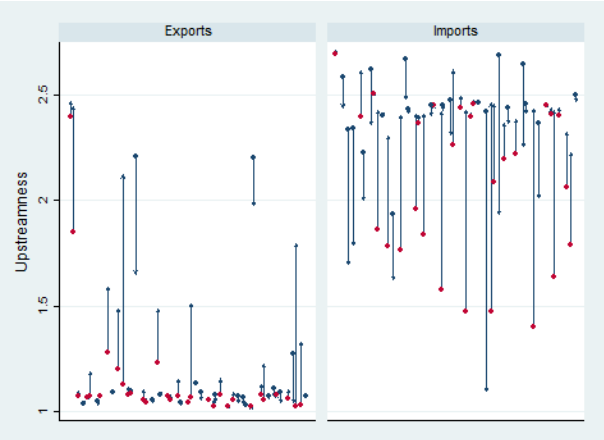
Note: This figure present the share of production stages taken place in the Dominican republic in 2012.
Source: authors' calculations using customs data,

Sectoral tendencies on upstream mobility mask significant heterogeneity of responses by firms within the same sector. Figure 7 shows the changes in export (left) and import (right) *upstreamness* for firms in the clothing and medical equipment sectors[5]. Each dot represents the upstream position of a firm in 2007 and the arrow shows the direction of the change in *upstreamness* by 2012 with red dots representing firms that have moved upstream and blue dots representing firms that moved downstream during that period. Firms are sorted in ascending order in terms of export size so that bigger firms always appear on the right. A cursory view of Figure 7 reveals at least three important stylized facts. First, changes in upstream mobility in the textiles and clothing sector have been more frequent and larger than in the medical equipment sector. Second, few firms in the textile and clothing sector have changed their export *upstreamness* and the majority export products very close to final demand. Third, the majority of firms in the textiles and clothing sector imported products significantly more upstream in the value chain in 2012 compared to 2007 which, taken together with the minimal change in export *upstreamness* shown before, indicates that these firms are performing more activities domestically than was the case five years ago.

[5] The Miscellaneous (HS 90-97) sector includes some of the most important medical equipment exports of the Dominican Republic.

Figure 7: Export and Import Upstreamness Changes at the Firm Level (2007-2012)

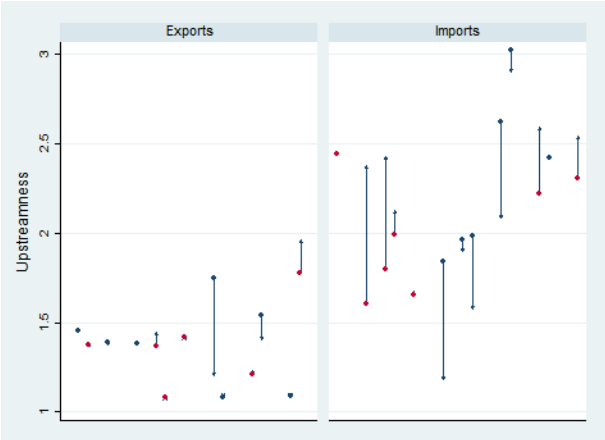
Clothing



Note: This figure shows the upstreaness indicator for 2007 and 2012. The set of firm considered are those exporting products classified under the 2-digit HS codes 50-63

Source: authors' calculations using customs data.

Medical Equipment



Note: This figure shows the upstreaness indicator for 2007 and 2012. The set of firm considered are those exporting products classified under the 2-digit HS codes 90-97. For SEZs these codes represent mainly Medical Equipment

Source: authors' calculations using customs data.

4. Evolution of Domestic Linkages as the Country Connects with Longer and more Sophisticated GVCs.

Foreign Direct Investment is an important element in a country development strategy because it can increase economic welfare by serving as a channel through which the host countries access foreign technology, improve the training of its workers, and generate productive linkages between the domestic firms and foreign enterprises. The Dominican Republic employed SEZs to attract a specific type of foreign investment: efficiency-seeking FDI, which seeks to use the country as an assembly and export platform to serve the U.S. market. Over the last 20 years, SEZs in the Dominican Republic witnessed a transformation in the type of activities taking place in them, from textiles-based production to a combination of more sophisticated goods including medical devices, circuit breakers, footwear, and pharmaceutical products. The connections with more sophisticated global production networks has deepening the belief that firms operating in SEZs operate in an enclave mode with few linkages to domestic firms. This chapter measures the extent and the evolution of domestic linkages within SEZs in the Dominican Republic and compares this to other countries.

The share of firms' total inputs that are imported provide an indication of the degree of backward linkages. Engel, Reyes, and Sanchez (2016), in a background paper commissioned for this report, assembled a series of supply-use tables that allow the computation of domestic value added embedded in exports for sectors operating mostly within the SEZ regime. On the basis of these, and for the first time, a series of symmetric sector-level input-output tables for the Dominican Republic were constructed, based on existing national accounts data covering the years 1993-2010.[6] This information allows for the calculation of value added in trade and backward linkages at the sectoral level over a 17-year-time period.[7]

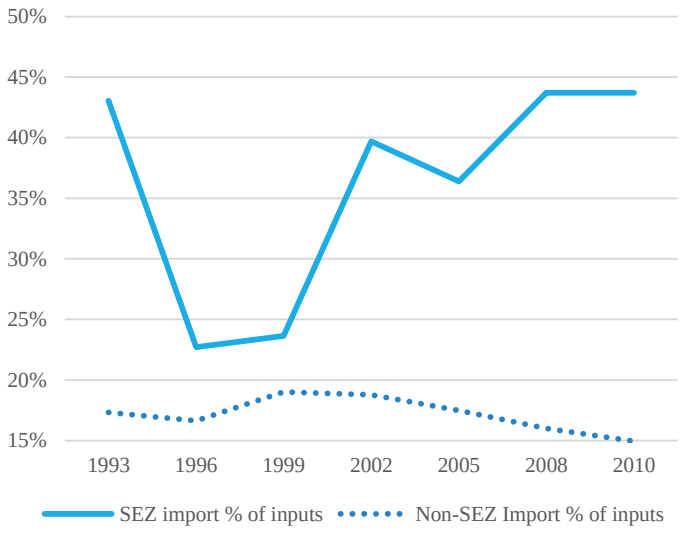
Over the past decade, the overall reliance on imports with respect to inputs increased in SEZs, indicating a reduction of domestic linkages. The share of SEZ imports in total inputs decreased sharply from 1993 (43 percent) to 1999 (approximately 23 percent), prior to increasing again over the past decade, before reaching 43 percent in 2010 (Figure 8). While the recent

[6] This analysis stops in 2010 because the Central Bank only reports supply-use tables until 2010. This period, however, captures the change in the sectoral composition of SEZs.

[7] The transformation of the data from supply-use tables into input-output symmetric matrices is subject to two caveats: first, there is a change in national accounts methodology in the Dominican Republic which results in two different sets of supply-use tables, for the years 1991-2005 and 2007-2010. Second, the differentiation of Special Economic Zones and non-Special Economic Zones in the national accounts is given only at the sector level, and not at the product level. For instance, food processing and manufacturing is classified as a SEZ sector, but in reality a large share of the food processing and beverage industry is located outside SEZs, while cigars production is located inside. The methodology applied to measure value-added from input-output tables is based on the work of Hummels, et al. (2001), who defined the measure of vertical specialization (or foreign value added in exports). Later, Koopman et al. (2008) refined the concept to take into account that the intensity in the use of domestic and foreign inputs is likely to be different when the final product is to be sold locally, and when it is part of export processing zone. This helps reflect the different nature of the activities taking place in Special Economic Zones. See Engel et al. (2016) for details.

product diversification SEZs brought more production stages into the country (more value addition), the technical sophistication nature of the new processes implied that more inputs were imported instead of being sourced domestically. Outside SEZs, the share of imported inputs is much lower, and declined to around 15 percent in 2010, whereas domestic value added in exports (which were primarily commodity-based) has remained stable at around 90 percent. In examining the difference between SEZ and non-SEZ exports it is worth noting that these significant gaps mirror the results found in other countries that have large SEZ-based processing sectors.

Figure 8: Evolution of Imports as a Share of Total Inputs

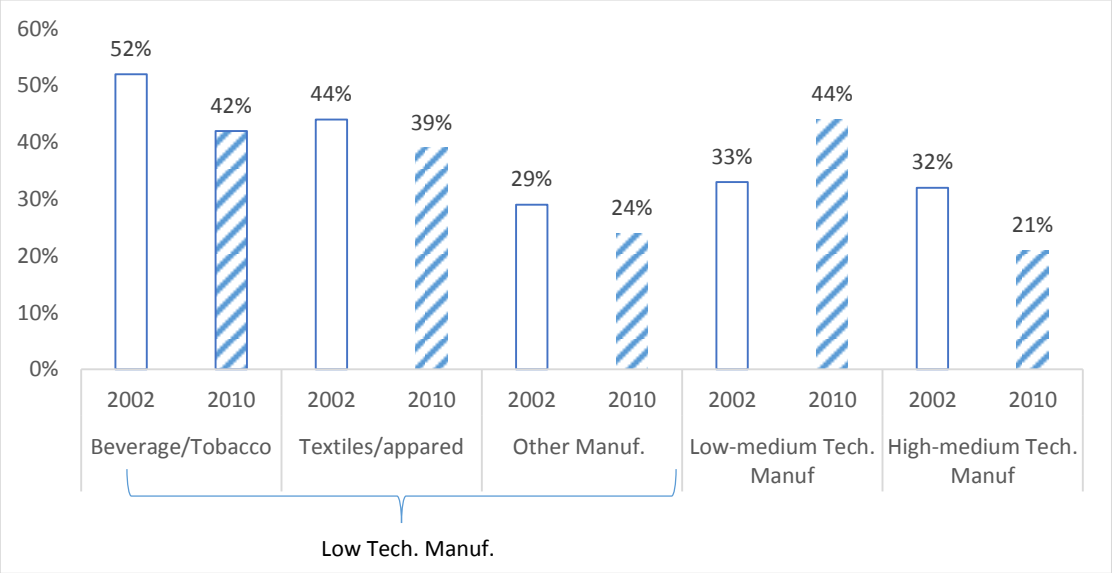


Note: This figure presents the importance of imported inputs as a share to total inputs, differentiating sectors by their tax regime.
Source: World Bank staff calculation using National Accounts of the Dominican Republic

The reduction in domestic linkages in SEZ seems to be widespread across all sector, with the exception of low-medium technological manufacturing. The low degree of domestic linkages is also evident when the measures of linkages are computed using total production instead of exports (Figure 9).[8] As a share of total production, between 2002 and 2010 the use of domestic inputs declined in beverage and tobacco, textiles, and high-medium technological manufacture. More recent data collected by the Central Bank indicates that the share of domestic inputs have continue to decline after 2010 (see Box 4). One important caveat is in order: There are firms that move to SEZ to become supplier of exporting firms. The methodology employed here do not take them into account because there is not information about transaction within SEZ firms. Therefore, the estimates presented in this report should be considered as a lower-bound to the level of domestic linkages.

[8] Given than mostly all production in SEZs is exported, it should not come as a surprise that the analysis using exports or total production is very similar.

Figure 9: Domestic Inputs in SEZs as a share of Total Output (2002 and 2010)



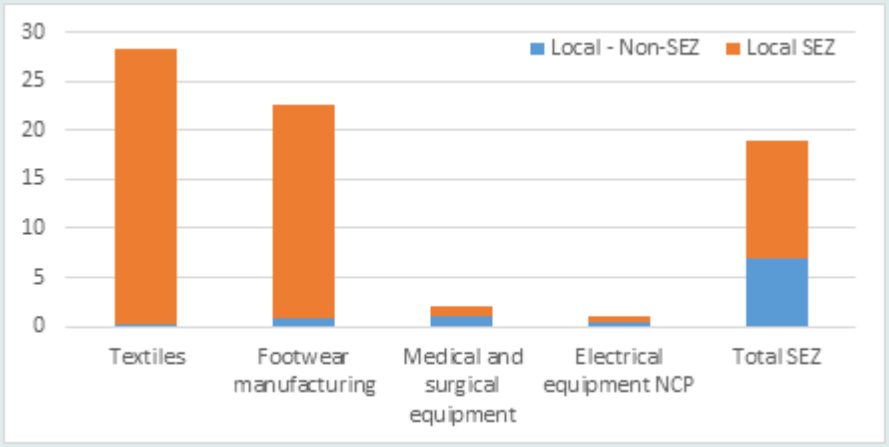
Note: This figure decomposes sectoral output for 2002 and 2010 into value added, imported inputs, and domestic inputs for some selected industries. The decomposition of tobacco and textiles is presented while the rest of activities are pulled according to their technological intensity. The sectors are classified using the NACE classification and categorized by technology levels using the EUROSTAT aggregation of the manufacturing industry.
Source: Engel et at (2016).

Box 4 . Backward Linkages based on the Economic Census of Companies in SEZs

In 2014, the Central Bank published the results of a census of companies operating under SEZs. The main objective was to depict the landscape of the characteristics of the firms operating within the special tax regimen. One of the issues that was covered was the extent of backward linkages, measured mainly by the source of inputs. The results indicate that the **headquarters or affiliated companies outside the Dominican Republic supply 81% of the raw materials** used by firms located in SEZs. The remainder of domestic input is divided between 7 percent of inputs purchased from Dominican companies outside SEZs and 12 percent inside SEZs. The census also found significant variation between the sourcing patterns of traditional zone industries like textile & clothing and footwear (which source 28 percent and 22 percent of their inputs domestically, respectively) and newer industries like medical and surgical equipment and electrical equipment (which source less than three percent of their inputs domestically).

Few manufacturing linkages have been created between firms inside the zones resulting in very few forward linkages that could benefit the domestic economy. The majority of firms that sell a large percentage of their output inside zones are not other manufacturing firms but ancillary services companies in sectors like construction, civil engineering, manufacturers of plastic, paper and wood containers, and cleaning companies – all of which report at least 85 percent of their sales to other firms within zones.

Share of Local Inputs in Total Inputs



Source: Banco Central dela República Dominica (2014)

The small size of backward linkages is also compounded by the fact that most SEZs companies also import the majority of their machinery (87 percent). Footwear manufacturing imports 94 percent of its machinery, finishing of textile products imports 90 percent, while manufacture of pharmaceuticals, medicinal chemicals and botanical products sector imports 75 percent of its machinery.

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Relatively low reliance on domestic inputs may be due to the fact that, similar to Mauritius, the Dominican Republic is more integrated in global value chains than other economies. Overall domestic value added in Dominican exports, at 68 percent, seems to be lower than in other CAFTA countries. A caveat is that the Dominican National Accounts and EORA data may present different definitions for the components of domestic value added, so these comparisons have to be taken with a pinch of salt. In addition, if we compare the Dominican Republic with other countries that have more sophisticated manufacturing sectors such as China and Mexico, requiring far more inputs, domestic value added in manufactured exports is around or below 40 percent (Koopman et al., 2008; De la Cruz et al., 2011; Fujii-Gambero and Cervantes-Martinez, 2013). Thus, further decline in the share of domestic value added in exports could be expected should the Dominican Republic eventually move into sectors that are even more integrated in global value chains, such as the automotive or electronics.

The Government identifies the development of domestic linkages as a vital component to enhance the role of SEZs as promotor of economic growth. The national commission for SEZs (CNZF) has identified the production of plastics, paper, and packaging services as items with large potential to create linkages with SEZ firms. To promote domestic linkages, the CNZF organized in 2015 a match-making round in which more than 60 business to business meetings took place. In 2016, this effort is being scaled up by bringing other institutions, such as the national association of exporters, representatives of chamber of commerce, and other industry representatives. Currently, the CNZF is training domestic producer on the quality certifications needed to become suppliers of SEZ firms.

5. Strategic Sectors and the Challenge to Comply with Multilateral Commitments

The current regulatory framework governing SEZs in the Dominican Republic dates from the beginning of the 1990s. The Law 8-90 of January 1990, which established the regulatory framework governing SEZs, stated that its objectives were to attract local and foreign investment, provide training, and foment the transfer of technology and know-how in order to create employment, particularly in economically deprived areas, such as the border with Haiti. To achieve these objectives, the law granted a generous array of fiscal incentives to firms located in SEZs**.** These included duty-free access to imported inputs and capital goods for 15-year after they start to operate in SEZs or for 20 years if the firm is located in border zones, as well as 100 percent exemption for taxes on registration, construction, gross sales and transfer of industrial goods (the so-called ITBIS). In return for these generous incentives, firms located in SEZs face significant limitations to sell their output domestically. They had to pay the full import duty on goods sold in the Dominican Republic, and crucially, were required to export at least 80 percent of their sales outside the Dominican Republic customs territory. In other words, firms operating in SEZs faced an 80 percent export share requirement (ESR).[9]

The General Council of the World Trade Organization established December 2015 as the final deadline for the elimination of export subsidies in the Dominican Republic. Due to its per-capita income level, the Dominican Republic, along with 18 other developing countries, had been exempt from complying with the Agreement on Subsidies and Countervailing Measures (ASCM)**.**[10] The mandate from the WTO implied that export-related subsidies and fiscal incentives to firms operating in SEZs needed to be scrapped.

In an effort to make SEZs compliant with the WTO's disciplines, the country reformed the SEZ regime in 2007 and declared the textile, footwear and leather industries, 'national priority' sectors. Due to the importance of these industries in terms of job creation, Law 56-07 sought to provide support to firms operating in priority sectors in response to adverse external circumstances such as China's entry into the WTO and the end of the MFA in two distinct ways. Firstly, it extended the tax concessions and duty-free access to imported inputs to firms operating outside SEZ. Secondly, the 80 percent ESR was removed for firms located in SEZ, thus leveling the playing field between producers located within and outside the SEZs. The law maintained the ESR for SEZ firms producing non-priority goods but offered SEZ firms in non-priority sectors duty-free access to the domestic market provided that either the good in question was not

[9] Firms located outside SEZ — which in turn exported through the national customs regime — were not subject to any performance obligations regarding their export behavior. Defever and Riaño (2016) show that imposing ESR on export subsidies makes them substantially more distortive; unlike unconditional subsidies, subsidies subject to ESR provide greater protection to low-productive firms from international competition.

[10] The ASCM addresses multilateral disciplines regulating the provision of subsidies and the use of countervailing measures to offset injury caused by subsidized imports. They are enforced through invocation of the WTO dispute settlement mechanism. Countervailing duties are a unilateral instrument, which may be applied by a Member after an investigation by that Member and a determination that the criteria set forth in the SCM Agreement are satisfied.

produced in the Dominican Republic, or, that it incorporated at least 25 percent of locally-sourced intermediate inputs in value terms. The latter measure sought to foster backward linkages between the SEZ and the rest of the economy, which were quite limited before 2007. Tax concessions available to SEZ firms in both priority and non-priority sectors did not change with this reform. Firms producing non-priority goods and located outside SEZs were not directly affected by Law 56-07. Table 2 presents the main incentives provided to firms located in SEZs compared with firms exporting through the national customs regime and highlights the subsequent reforms introduced in the regulatory framework

In 2011, Law 139-11 fully eliminated export share requirements for all SEZ firms regardless of their sector of operation in accordance with the compromises signed under the CAFTA-DR free trade agreement. SEZ firms in priority sectors retain their duty-free access to the Dominican market whereas their non-priority SEZ counterparts are required to pay the customary import tariffs mandated by the national customs regime in order to sell in the domestic market. All SEZ firms are now required to pay a 3.5% gross sales tax and 18% VAT on their domestic sales. Non-SEZ firms were not directly affected by this law (Table 2).

Table 2: Changes in SEZ Regulations in the Dominican Republic, 2006-2014

<table>
<tr><th colspan="2"></th><th>National Priority Sector</th><th>Non-Priority Sector</th></tr>
<tr><td rowspan="3">SEZ firms</td><td>2006-07</td><td colspan="2">80% ESR; duty-free imports of intermediate inputs and capital goods; full exemption of gross sales, registration, construction, export and re-export and transfer of industrial goods (ITBIS) taxes for 15 years (20 years for firms in border SEZ)</td></tr>
<tr><td>2008-11 Law 56-07</td><td>ESR fully removed; duty-free access to domestic market</td><td>80% ESR remains; duty-free access on domestic sales if product in question is not produced in Dominican Republic or has at least 25% of local input content</td></tr>
<tr><td>2012-14 Law 139-11</td><td>Domestic sales remain free of import duties but are subject to 3.5% tax on gross sales and 18% VAT</td><td>ESR fully removed; Domestic sales are subject to import duty, 3.5% tax on gross sales and 18% VAT</td></tr>
<tr><td rowspan="3">Non-SEZ firms</td><td>2006-07</td><td colspan="2">No ESR; subject to national customs regime</td></tr>
<tr><td>2008-11 Law 56-07</td><td>Duty-free access to 126 'priority' intermediate inputs; exemption of tax on industrial transfer of goods (ITBIS)</td><td>No change</td></tr>
<tr><td>2012-14 Law 139-11</td><td colspan="2">No change</td></tr>
</table>

Source: Laws 8-90, 56-07 and 139-11.

The implications of these externally anchored regulatory reforms in SEZs on the competitiveness of Dominican exporters is important from a policy perspective. While nowadays there is a broad agreement on the fact that the current regulatory environment is

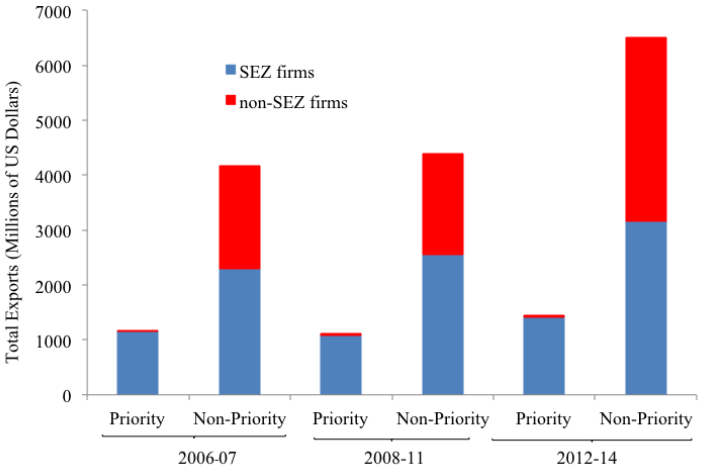
WTO-compliant, measuring the impact of a de-facto nationalization of incentives around priority sectors in export performance is crucial to evaluating the existing framework for export promotion in the Dominican Republic. As the foregone fiscal revenue is sizeable, it is crucial to rigorously measure the trade impact of these reforms. Defever, Reyes, Riaño, and Sanchéz (2016), in a paper commissioned for this report, measure the impact of these regulatory changes on export performance at the product and firm level.

The elimination of the ESR for SEZ firms and the extension of fiscal incentives to non-SEZ firms in priority sectors mandated by Law 56-07 did not have a strong impact on export performance. Figure 1 shows the export perfomance of priority and non-priority sectors over the last decade in terms of export value and number of exporting firms.[11] The textiles and apparel, leather and footwear industries accounted for about one-fifth of the Dominican Republic's aggregate exports, almost all of which originated from SEZs prior to the 2007 reform. Since the beginning of the 2000s, exports of these products had experienced a secular decline due to more intense competition from low-wage producers at the regional (e.g. Haiti, Honduras and Nicaragua) and global level (e.g. Bangladesh, China and Vietnam), which resulted in Dominican exporters experiencing substantial market share losses in the United States. In terms of the composition of export flows, SEZ firms still account for the overwhelming majority of priority sector exports in terms of value (the share of non-SEZ exports increased by 1 percentage point from 1.5 to 2.5 percent). Extending the fiscal incentives available in SEZs to producers exporting under the national regime does not appear to have reoriented exports away from SEZs in priority sectors.

Following the full elimination of ESR across the board in 2012, however, there is a substantial surge in the number of exporting firms among non-SEZ producers in non-priority sectors. This pattern is consistent with a longer-term trend of greater export dynamism for firms operating outside SEZs identified by Burgaud and Farole (2011) and World Bank (2014). Although there is little mobility of continuing exporters into or out of SEZ status, a significant share of firms moved out of SEZs into the national customs regime after 2012, especially in non-priority sectors (Figure 11). The number of exporting firms in priority sectors located outside SEZs increased noticeably in 2012-2014, compared to the previous period, while the share in total export volume remained modest.

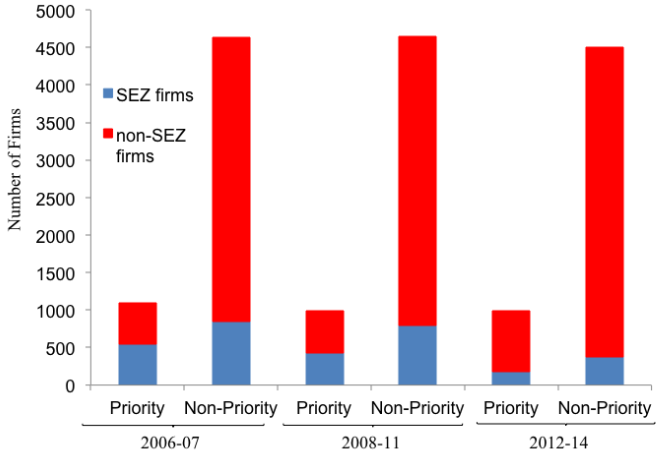
[11] Export perfromance is of course influenced by the global financial crisis in 2008-09, which was subsequently followed by a quick recovery in 2010.

Figure 10: Export Volume by SEZ and Priority Status over Time



Note: This figure shows the volume of total exports according to firms' SEZ status and whether they produce national priority products.
Source: authors' calculations.

Figure 11: Number of Exporting Firms by SEZ and Priority Status over Time

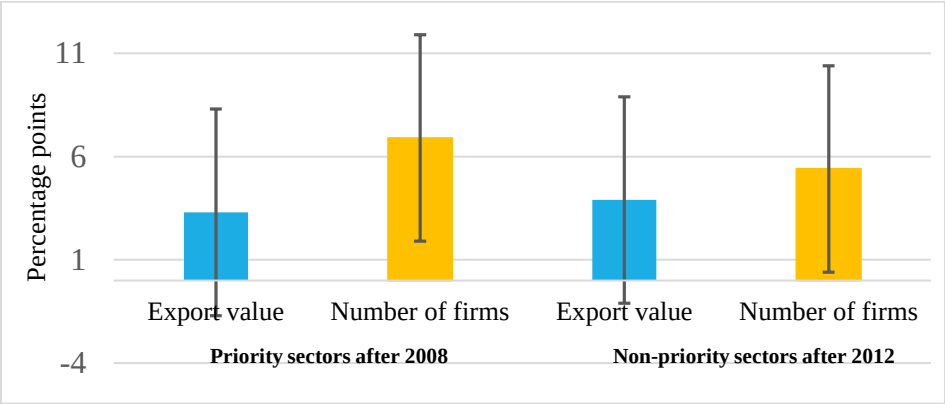


Note: This figure shows the number of exporting firms according to their SEZ status and whether they produce or not national priority products.
Source: authors' calculations.

While the regulatory reforms did not statistically increase exports, it encouraged more firms to be established in SEZs. Defever, Reyes, Riaño, and Sanchéz (2016) shows that the elimination of the ESR constraint on SEZ firms increased the attractiveness of exporting from SEZs. The elimination of ESR in 2007 and 2011 increased the share of exports in terms of value originating from SEZs for narrowly-defined products (at HS-6 level of disaggregation).[12] Scrapping the ESR had a positive and significant effect on the share of exporting firms operating in SEZs. More precisely, the share of firms operating in SEZs in priority sectors, relative to non-priority sectors, increased by 7 percentage points on average following Law 56-07 over the period 2006-2011. Law 139-11, in turn, led to an increase of 5.4 percentage points in the share of SEZ exporters on average in non-priority sectors vis-à-vis the situation with ESR (Figure 12).

[12] It is important to note that this effect is not statistically significant because the larger exporters — both in priority and non-priority sectors — have historically operated in SEZs.

Figure 12: How did the Removal of ESR in 2007 and 2011 affected the Share of SEZ in terms of Export Value and Number of Firms at the HS-6 Product-level?



Note: The bars are the estimated coefficients of a regression in which the dependent variable is the share of SEZ exports (in terms of value in blue and in terms of number of firms in yellow) on interaction terms for priority and non-priority sectors after 2008 and 2012 respectively. All specifications include HS-6 product and year fixed effects and HS-2 product-specific linear trends. Robust standard errors clustered at the HS-6 product level. Vertical lines denote confidence intervals.
Source: authors' calculations.

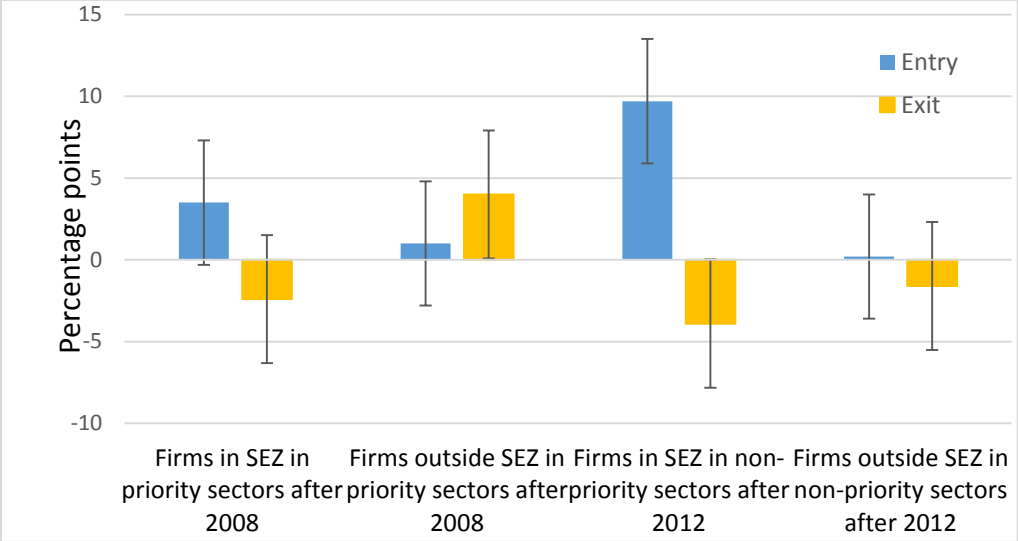
Although the reforms allow firms operating in SEZs to sell products to the domestic market, very few of them actually do this. The majority of firms are still primarily engaged in exporting, and only sell domestically on very rare occasions, either to fulfill small orders, to sell surpluses of export orders or units that do not comply with international standards. Only firms in the pharmaceutical sector sell most of their production domestically. Many textiles, apparel and footwear firms interviewed for this report, which belonged to the so called national priority sectors established under Law 56-07, were not even aware that this law had eliminated the 80 percent ESR. Moreover, the firms also feel that the customs procedures involved in selling domestically are unduly confusing, and therefore do not justify the hassle of selling domestically given the small market size. Furthermore, new firms wishing to operate within SEZs need to be approved by the *Consejo Nacional de Zonas Francas* and this public-private body seems keen to only authorize firms that are focused on exporting activities rather than those focused on serving the domestic market. In summary, although the *de jure* ESR has been removed, the interviews with firms and regulatory bodies suggest that there is currently a *de facto* ESR in place.

Law 139-11 induced firms located in SEZs and those producing non-priority products to export new 'varieties' (combinations of new products and/or new destinations). More specifically, there is a 9 percentage point increase in exports of new varieties originating from non-priority SEZ firms relative to the pre-reform situation. Law 56-07, on the other hand, seemed to have triggered the exit of export varieties for non-SEZ firms in priority sectors, despite the fact that this law was more generous towards non-SEZ firms than Law 139-11. These results are illustrated in Figure 5. Neither the 2007 nor the 2011 reform appeared to have

produced a significant effect on the value of exports or the number of destinations served by established exporters – i.e. those firms that export in every year of the period of analysis.

The results overall show that removing the ESR for firms operating in SEZs without altering the fiscal incentives available to them has made SEZs in the Dominican Republic a more attractive location for firms to operate in. In terms of export performance, this means that in a given HS-6 industry, firms in SEZs account for a larger share of exporters following the scrapping of the ESR. This was the case both after the sector-specific policy change in 2007 and after the broad-based reform of 2011. Neither reform significantly affected the share of exports (in terms of value) accounted for by SEZ firms. There are two reasons which explain this finding: the fiscal incentives extended to non-SEZ firms in priority sectors were not sufficiently large to produce a substantial change in the composition of exports at the product level; particularly given that non-SEZ firms accounted for less than 2 percent of textiles and apparel, leather and footwear before the reform. In non-priority sectors, which were less dominated by SEZ firms prior to the policy change, firms operating outside the zones had to compete with SEZ firms domestically and do so without receiving the same fiscal incentives as SEZ firms following the elimination of ESR, which places them at a disadvantageous position.

Figure 13: Did the 2007 and 2011 Reforms Induce Entry or Exit of Exported Varieties?



Note: The bars are the estimated coefficients of a regression in which the dependent variable is a dichotomous variable taking the value 1 when a firm starts to export a new HS-6 product in a given year and 0 otherwise on interaction terms between a firm's SEZ and priority-sector status after 2008 and 2012 respectively. All specifications include HS-6 product x SEZ and year x SEZ fixed effects and HS-2 product-specific linear trends. Robust standard errors clustered at the HS-6 product level. Vertical lines denote confidence intervals.
Source: authors' calculations

6. Conclusions and Policy Directions

Over the past decade, the elimination of trade preferences in the garment industry has hit the SEZs in the Dominican Republic, but some revival in SEZs' activity has been observed since 2009. The sharp decline in export-oriented textile manufacturing in the aftermath of the MFA in 2005 is also reflected in a subsequent falling in export shares, prior to a modest recovery in 2010. The decline in garment manufacturing was accompanied by a decrease in garment imports, closure of companies in this sector and declining real wages. At the same time, a shift towards more capital-intensive manufacturing, accompanied by increasing wages in these sectors, is observed. Following the global slowdown in 2009, SEZs in the Dominican Republic started to accelerate their diversification into footwear, surgical equipment, electrical products, and pharmaceuticals. As of 2015, SEZs remain a main driver of export performance, concentrating around half of total exports, although their share has declined notably vis-à-vis increasingly dynamic local exports (mostly resource-based production).

An increasing reliance on imported inputs has been observed over the past decade in SEZs at the same time that the Dominican Republic joined more sophisticated global value chains and reduced its reliance on garment production. The emergence of more sophisticated sectors led to more production stages being carried out in the country, increasing the domestic value added embedded in exports. Even the clothing sector experienced more domestic value addition in exports. However, the degree of domestic linkages, proxied by the share of inputs acquired domestically, remain low. There is a widespread agreement that the current regulatory framework is compliant with WTO commitments, which the country was bound to meet in December 2015.

In order to leverage SEZs as a vehicle of inclusive and sustainable economic growth, this report suggests interventions focused around three priority policy areas:

1. **Policies aimed at encouraging domestic linkages:** A comprehensive strategy to support and develop linkages includes actions around three areas. Firstly, it prescribes a regulatory review to remove ineffective policies such as harmful local content requirements and protectionist non-tariff measures that restrict the ability of domestic firms to import key inputs that can be transformed and sold to SEZ firms. Other *de jure* or *de facto* regulatory barriers for supplying SEZ firm from national territory should also be removed.[13] Secondly, it involves connecting domestic suppliers by designing targeted programs for local suppliers, developing a supplier database, creating matchmaking services, and introducing incentives to encourage local sourcing from SEZ firms. Thirdly, it requires attracting competitive international suppliers and support the upgrading of domestic suppliers. A sector-specific analysis to assess the competitiveness and binding constraints of domestic

[13]A series of interviews conducted with local entrepreneurs point to connectivity problems and the administrative barriers of considering sales from the national territory to the SEZ as "exports" that need to go through customs, as factors that are potentially discouraging the emergence of local suppliers.

suppliers in a value chain with potential to develop domestic linkages is warranted. Footwear and electrical products can be good candidates. Anecdotal evidence suggests that the low scale as well as the inability to meet string technical standards greatly limit the ability of domestic suppliers to connect with SEZs enterprises. Annex 1 provides example of successful suppliers' development programs in Chile, Costa Rica, and Hungary.

2. **Support policies that ameliorate labor adjustment costs accrued by the structural change in sectoral specialization in SEZs:** The Government should consider social assistance programs designed to accelerate worker employment transitions to lower labor-intensity industries. These programs include vocational training in new skills demanded by SEZ firms, job search assistance, and transitional income support. Because open-ended financing for skills upgrading that is not targeted may have little if any financial returns, training programs need to be carefully designed, targeted, and incentivized, for example, through cost sharing by the worker (see Hollweg et al. 2014).

3. **Improve the institutional coordination across multiple actors working on the overall support framework for trade and FDI competitiveness:** The lack of institutional coordination is pervasive in the Dominican Republic. In the case of trade and competitiveness, there are multiple actors involved in trade and investment promotion. On the one hand, public entities, such as the export and investment promotion agency (CEI-RD), have the mandate to delineate the policy and strategy but in reality their work is limited due to thin budgets. On the other hand, private or mixed entities, such as the national commission of SEZ (CNZFE), work with more resources to attract FDI into the multiple parks. Additionally, the fact that many parks are privately-owned generates incentives for private actors to attract international investors. A national export and investment strategy coordinated and vetted by the different actors in conjunction with an empowered CEI-RD could improve the overall support framework for trade and competitiveness. This strategy should include a robust cost-benefit analysis of the SEZ framework.

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Annex 1: Supplier Development Programs

Costa Rica

The Supplier Development Project for High-Tech Multinational Companies of Costa Rica was established in 1999 as a pilot project, aimed at (i) helping to increase domestic added value in the output of high-tech transnational corporations; (ii) improving the competitiveness of small and medium-sized enterprises (SMEs); and (iii) enhancing the technological capacities of SMEs. The overall aim of the project was to enable SMEs to attain the technology levels necessary for their vertical integration into high-tech transnational corporations' production chains. The pilot project was funded by the Foreign Trade Promotion Agency of Costa Rica, the Costa Rican Coalition of Development Initiatives, the Chamber of Industry, transnational corporations and SMEs.

Following successful completion of the pilot project in 2003, a domestic-supplier development office (Costa Rica Provee) was created, which has been integrated into the Foreign Trade Corporation of Costa Rica (PROCOMER). The project supports the manufacture of products by SMEs for high-tech transnational corporations' production chains. It selects, according to motivation and quality criteria, SMEs to be admitted to the program. A methodology is then drawn up by an international expert, on the basis of analysis of product demand from the high-tech multinational companies and on the technical and entrepreneurial status of the SMEs. According to Intel-Costa Rica's business development manager, within its first three years, this program helped to increase the number of suppliers Intel used by a factor of ten (Villalta 2005). Costa Rica Provee increased the number of linkages it facilitated with all companies, overall, from 18 in 2003 to 150 in 2006 (Cordero and Paus 2008).

The project fosters the development of the selected SMEs through technical assistance and training activities. There is also an information-gathering system in operation to provide the enterprises involved in the project with access to sources of supply of and demand for products and services, to establish links with SME support institutions and to guide the SMEs in their search for funding and venture capital.

Source: UNCTAD (2009)

Chile

The Suppliers Development Program (SDP) was launched by CORFO (*Corporación de Fomento a la Produccción*) in 1998. The program was motivated by the trade agreements signed by Chile that created the need for compliance with international production standards by Chilean exporters and potential exporters. The SDP aimed at improving and stabilizing the commercial linkages between small and medium-sized suppliers and their large firm customers –potential

exporters– as to achieve higher levels of flexibility and adaptability and guarantee the quality of products and services at different stages of production.

The government program subsidizes projects aimed at strengthening the management of SME that are suppliers of large firms; which in turn are the ones that sponsor the projects. The program also subsidizes additional activities complementary to the activities these large firms – the sponsor firms– normally run: specialized services, professional advice, training, technical assistance, and technology transfer. SME appropriate the benefits of the development projects achieving a stable market for their products and services, while the sponsor firm ensures a continuous supply of quality products and services.

For a large firm to be eligible to participate in the program and sponsor the SME that make up its supply chain, its net annual sales must be greater than or equal to 100,000 *Unidades de Fomento* –equivalent to US$42.6 million in August 2010. Each project must include at least 20 SME in the agriculture and forestry sector or a minimum of 10 SME in other economic activity sectors such as manufacturing, industrial services and others; these SME must have net annual sales up to 100,000 UF. Once the sponsor firm approaches an intermediary agent, who helps the sponsor firm prepare the project, the firm can present its project to a CORFO regional bureau that decides to reject, approve, or request the reformulation of the project submitted according to the eligibility requirements and the technical quality of the application.

After the project is approved the program is implemented in two stages: a diagnostic stage and a development stage. The diagnostic stage lasts up to six months after the signing of the contract and aims at identifying areas of intervention that the sponsor wishes to develop with its suppliers. The result is a development plan designed by a consultant or consulting firm. CORFO pays for up to 50% of its cost with a ceiling of US$16,000 (August 2010). The development stage is the implementation of the development plan designed in the diagnostic stage and can last up to three years. CORFO pays for up to 50% of the cost of this stage with annual ceilings of US$110,000, US$5,000 per supplier firm (August 2010). CORFO assesses annually the renewal of project financing depending on the implementation progress. The implementation of the development plan is responsibility of the sponsor firm and can be carried out by a consultant or consulting firm or by the sponsor's in-house staff.

A project subsidized by the program, then, must be sponsored by a large firm and include a minimum number of SME that comprise this firm's supply chain. The project co-finances a diagnostic stage and then the actions designed to implement a development plan, which depends on the needs assessed in the diagnostic, aim to strengthen the suppliers and consequently benefit the suppliers and the buyer.

Source: Arráiz et al (2011)

Hungary

To increase the FDI benefits, the Hungarian government launched the Supplier Target Program (STP) in 1998. The first phase was marked by implementation difficulties. After two years, some principles were reconsidered and the program was re-launched in 2000 as a cluster scheme. The basic idea of the new Program is that existing supplier networks can be further developed as a nucleus of a bigger and more colorful cooperation network, a local cluster. The ISP gives priority to relatively advanced supplier firms.

The ISP focuses on some existing supplier networks. In the center of these, there is a core company, the Integrator. The Integrator firm is the primary partner of the state agent. The already chosen Integrators are Suzuki, General Electric, Audi, Opel and Raba. The promotion activity starts with identifying the needs and requirements of MNCs and other integrator firms. The Integrators actively contribute to the planning and creation of a cooperation network, a business cluster.

The state partner of the Integrators is the local office of the Regional Development Corporation (RDC), a venture capital firm. However, new Supplier Agencies are to be established. A new institution, the Supplier Employment Company, was also established to do the trainings. The program originally focused on the automobile industry, electronics and rubber, but it subsequently added textiles, furniture, building materials, services and retail trade. Matchmaking events are also continuously organized, and there are plans to update the established database of 1500 potential qualified suppliers to some 4-5 thousands. The Program also plans long-term finance for necessary investment in supplier firms. This would include both loans and equity participation (venture capital function).

According to the UNCTAD interviews with Hungarian representatives, the ISP reached an extensive network of firms. In mid-1999, the program covered 1438 supplier firms. The value of deals contracted and signed through the then National Subcontracting Information Network reached US$ 6 million in 1999. Between 1998 and 2000, the key foreign affiliates (as mentioned above) signed 76 supplier contracts under the program. The value of 21 contracts publicly announced was US$ 24.5 million per annum.

Source: UNCTAD (2001) and Szanyi (2002)