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# **Dominican Republic**

## **Review of Trade and Labor Competitiveness**

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Caribbean Country Management Unit  
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## **Dominican Republic**

### **Government Fiscal Year**

January 1 – December 31

### **Currency**

Currency Unit = Dominican Peso

Period Average Market Exchange Rates

### **RD\$ per US\$**

1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
13.60	13.77	14.27	15.27	16.03	16.42	16.95	18.61	30.83	42.12

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## Abbreviations and Acronyms

ACT	Agreement on Textiles and Clothing
APORDOM	Autoridad Portuaria Dominicana
CBI	Caribbean Basin Initiative
CBTPA	Caribbean Basin Trade Promotion Act
CEI-RD	Centro de Exportación e Inversión de la República Dominicana
CNZFE	Consejo Nacional de Zonas Francas de Exportación
CPI	Consumer price index
DR	Dominican Republic
EC	European Commission
EU	European Union
FDI	Foreign direct investment
FENATRADO	Federación Nacional de Transporte Dominicano
FTA	Free trade area
FTZ	Free trade zone
GATT	General Agreement on Tariffs and Trade
IFC	International Finance Corporation
ILO	International Labor Organization
ITBIS	Value-added tax ( <i>Impuesto a la Transferencia de Bienes Industrializados y Servicios</i> )
LAC	Latin America and the Caribbean
MFA	Multifibre Agreement
MFN	Most favored nation
SITC	Standard International Trade Classification
SMART	Software for Market Analysis and Restrictions on Trade
SPS	Sanitary and phyto-sanitary
TRAINS	Trade Analysis Information System
UNCOMTRADE	United Nations Commission for Trade and Development [check]
UNCTAD	United Nations Conference on Trade and Development
USAID	United States Agency for International Development
WDI	World Development Indicators
WITS	World Integrated Trade Solutions
WTO	World Trade Organization

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# **Dominican Republic**

## **Review of Trade and Labor Competitiveness**

### **EXECUTIVE SUMMARY AND POLICY IMPLICATIONS**

1. This report addresses a range of themes related to trade and competitiveness in the Dominican Republic. The analysis examines past trade performance and the many factors contributing thereto, and the policy environment in which these trade outcomes occurred. It also looks forward to imminent changes in trade policy and their potential impact. The conclusions drawn from this work have important policy implications that could be useful to policymakers in the Dominican Republic as well as development practitioners in general.

2. One of the key messages emerging from the analysis is that changes in the external trade environment will necessitate a shift in the way the Dominican economy operates in order to remain competitive. Trade liberalization in the form of the phase-out of the Multifibre Agreement is coming in January 2005, and the Dominican Republic recently negotiated a free trade agreement with the US and Central America. Together with the forthcoming WTO restrictions on export support policies currently embodied in the free trade zones (FTZs), these policy changes can be viewed in terms of their static short-run effects, their dynamic implications for the medium term, and the transition elements bridging the short and medium terms. The immediate effect of trade liberalization will be reduced protection and therefore greater competition for Dominican producers, which will in turn create pressure for raising productivity and increase demand for a more skilled work force. The resulting reduction in tariff revenue will be offset in part by trade creation, and the economy will experience a certain degree of turnover due to shifting factor allocations and churning in terms of firm start-ups and exits, and job creation and destruction, as producers transition to the new trade environment.

3. But new market opportunities will emerge following trade reform, and numerous, complementary policy options are available to help firms take advantage of these new opportunities. For example, strengthening institutions and improving trade infrastructure efficiency will reduce the cost of doing business and lay the groundwork for increasing competitiveness in the long run. In a similar vein, upgrading the education and training systems and increasing their alignment with employer demand will lead to a more efficient labor market that provides appropriate incentives for human capital accumulation, raising labor productivity in the long run and enabling a shift in comparative advantage towards higher value-added production. Imminent trade reform will fundamentally change the incentive structure currently in place in the Dominican economy, but firms have the capacity to face the related challenges and opportunities, and the government has a key role to play in facilitating the transition to and maximizing the potential gains from increased integration into the global economy.

#### **I. Winners and Losers under the Old Trade Policy**

4. The analysis of trade performance in Chapter 3 points to several key trends over the past two decades. Trade openness was flat and in fact declined slightly as a share of GDP during a period of trade liberalization in which neighboring competitors such as Mexico and Costa Rica increased their trade openness. Dominican trade relies heavily on the US market for both exports (nearly 90 percent) and to a lesser degree imports (about half), taking advantage of preferential access under the Caribbean Basin Initiative (CBI) and its successor Caribbean Basin Trade Partnership Act (CBTPA),

but leaving the Dominican economy vulnerable to shifts in US demand, as seen in the post-September 11<sup>th</sup> economic slowdown. Although diversifying export markets appears to be a rational strategy for reducing Dominican vulnerability to changing US demand, it is unlikely to produce significant changes given existing trade patterns and the preferential US market access that will continue under the new free trade agreement, DR-CAFTA.

5. The composition of merchandise exports shifted markedly from tropical agricultural goods in the 1980s to labor-intensive products, reflecting a change in comparative advantage that today centers on relatively cheap but productive labor in the manufacturing sector, particularly in FTZs. This shift was accompanied by a concurrent move towards services exports, particularly tourism. The sustained merchandise export boom was not the primary driver of economic growth, however, although certainly FTZ employment increased (while total industrial manufacturing jobs lost market share), as did indirect trade-related employment and demand. The observed growth in imports – not only in intermediate goods that are key to FTZ growth but also imports of final goods – reflects the declining importance of domestic producers despite the sufficiently large and growing domestic market, concurrent with income growth that fueled consumption spending.

6. Tariff reform in the early 1990s did little to reduce the significant protection in place, which in fact increased over the course of the decade, resulting in a weighted average tariff of nearly 20 percent in 2000. The FTZ regulation simplifications introduced in the early 1990s were followed by an expansion of FTZ firms, exports and employment; the ensuing agreements providing preferential access to the US market also boosted exports, contributing to economic growth throughout the decade. But the heterodox policy that promoted FTZ exports while protecting import-substitution industries effectively limited the potential trade contribution to economic growth in two ways: (i) through limiting backward linkages by incentivizing FTZ over-consumption of imported rather than domestic inputs, and (ii) by reducing domestic demand for imports among non-FTZ producers in protected industries, which inhibited more efficient production and the positive interaction between exports and imports, and thus the positive feedback from trade openness to growth. A sharp reduction in protection rates under the customs reform of 2000 immediately preceded the post-September 11<sup>th</sup> global economic slowdown. The potential reform impact also suffered from recent setbacks related to the fiscal difficulties facing the country, the deterioration of the macroeconomic situation and the importance of trade revenues to the government's overall fiscal position. These factors led to backtracking on import liberalization through the introduction of several new taxes including an 4.75 percent foreign exchange commission on all imports (subsequently raised to 10 percent), and a 2 percent supplemental import tax and 5 percent export tax (FTZs are exempt). These fiscal policies further harmed the competitiveness of the domestic economy and in effect continued to promote FTZ firms, thus perpetuating the dual nature of economic growth.

7. Those benefiting most from these trade policies and the resulting outcomes, i.e., the winners, are numerous. FTZ investors and producers benefit from the preferential tax status, public provision of infrastructure, and the availability of inexpensive labor. Dominican exporters receive higher prices from US importers, and US importers capture higher rents as a result of the CBI/CBTPA access policies, while US producers of intermediate inputs into Dominican goods benefit from higher demand due to ceilings on third-party content (i.e., non-domestic, non-US content) for Dominican exports.<sup>1</sup> Firms and workers in the protected import substitution sectors benefit from the competition limits effected through high tariffs and non-tariff barriers, but this ultimately raises the cost of domestic goods of potentially inferior quality, to the detriment of demand and consumers. The influx of foreign exchange from export sales, tourism receipts and remittances kept the domestic currency over-valued, effectively increasing purchasing power across the economy. Workers benefit from the

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<sup>1</sup> This was true to a lesser extent for Central American inputs.

creation of new jobs, both through direct FTZ job creation and in ancillary activities, including in the informal sector. The trade logistics weaknesses relating to customs and port operations sustain large numbers of redundant APORDOM workers as well as customs agents and other inspectors receiving off-book payments.

8. The economic agents who bear the costs of these policies, i.e., the losers, include exporters outside the FTZ system who are heavily taxed (in part to compensate for FTZ tax advantages) and suffer excessive administrative burdens. The lack of competition in import substitution sectors results in higher prices for consumers. Many farmers of tropical agricultural goods unable to compete in the liberalized environment went out of business and laid off agriculture laborers, although surviving producers benefit from continued protection in key products. Dominican traders – particularly importers – face high freight costs due to the various trade logistics inefficiencies and distortions which delay customs clearance and increase the unpredictability of customs charges, ultimately harming competitiveness. In addition, importers and exporters sustain significant merchandise damage and losses as a result of poor port conditions regarding sanitation and security.

9. The heterodox policy framework of domestic protection and FTZ facilitation reinforced trends of FTZ-driven trade and increasing integration into the global markets – especially the US – while draining investment and dynamism in the domestic economy due to high costs and lack of competition. But FTZ export growth is inadequate to sustain overall economic growth now or in the future, due to inadequate linkages with the domestic economy and the existing concentration in low-skilled production techniques and labor. Nevertheless, the flourishing FTZ sector has significant positive effects with respect to dynamic export growth, attracting FDI inflows for firm and job creation, increased competitiveness in niche markets, and higher public investment in infrastructure, resulting in increased provision of roads, ports (albeit of mediocre quality), and communications for the economy as a whole.

## **II. Impact of New Trade Policies**

10. The forthcoming changes in trade policy – DR-CAFTA, the recent Multifibre Agreement (MFA) phase-out, and FTZ export subsidy elimination – alter the trade incentive structure, generating new winners and losers relative to the status quo. There is a strong correlation between trade liberalization and growth, and recent lessons from international experience, and NAFTA in particular, illustrate the potentially large growth and welfare payoffs.

### **A. DR-CAFTA**

11. Given the Dominican Republic's trade performance over the last decade and the US role as its prominent trade partner, the recently signed DR-CAFTA which will eliminate US tariffs on Dominican goods is likely to raise US demand for Dominican exports by at least 10-20 percent, not accounting for the potential emergence of new product markets and technologies resulting from trade liberalization (as seen in Mexico, for example). The projected increase in Dominican exports, concentrated primarily in the FTZs, is conservatively estimated at US\$232-465 million. The reciprocal nature of the free trade agreement means that Dominican tariffs on imports from the US and Central America will also be eliminated – effective immediately for 80 percent of products, and reduced over a 20-year period for the remaining 20 percent of products. Opening the Dominican economy to US imports free of duties should spark increased import demand, potentially altering the structure of production, particularly for firms previously producing for the domestic market. On the negative side, however, the result of cutting tariffs could be a nearly 40 percent reduction in tariff revenues (60 percent of imports come from the US and Central America) and the replacement of domestic production by increased imports from the US. The resulting long-run trade creation (that is, the increase in US imports into the Dominican Republic displacing Dominican products) is estimated

at US\$368 million, and trade diversion (namely, the increase in imports from the US at the expense of lower imports from other countries) is projected at US\$101 million.

12. The net trade effect of DR-CAFTA – namely, the increase in net exports – is therefore likely to be on the order of US\$97 million, but if Dominican exporters do not adjust to meet the preferential access criteria and therefore continue to pay the MFN rate, the net gains will be smaller. The potential gains to trade liberalization could be significantly increased through a series of policy measures to address inefficiencies in trade facilitation, institutional and regulatory weaknesses, tax disincentives that stifle private sector development and innovation, and shortcomings in the labor market and education system. The positive impact of trade reform includes lower prices and/or higher quality goods that benefit Dominican consumers and producers (as inputs to production), and the positive feedback on growth from new foreign investment, technology and productivity increases. On the other hand, these gains will be offset somewhat by factor reallocation and job turnover, thereby reducing the net impact on domestic demand and employment.

13. A recent World Bank study on the agriculture sector (World Bank 2004f) concludes that DR-CAFTA will have a limited short-term impact on agriculture trade and prices, given that Dominican agriculture exports have preferential access to the US under existing trade agreements. On the import side, most prices already reflect foreign competition, except for protected products that will continue to be protected for another 15-20 years. But fiscal revenues on agriculture imports will decline by the equivalent of 5 percent of total current agriculture tariff revenue in the short run, and by 12 percent in 15 years. The medium-term impact could be expanded exports of tropical fruits, legumes and vegetables, assuming that sanitary and phyto-sanitary issues are resolved. Consumers will continue to lose out through distorted domestic prices, especially for rice, but future growth prospects in tropical fruits, legumes and vegetables could induce a shift from rice cultivation to these higher value-added products, thereby potentially preserving agricultural employment and livelihoods.

## **B. FTZ Export Subsidy Elimination**

14. By virtue of its membership in the WTO, the Dominican Republic will need to comply with the Agreement on Subsidies and Countervailing Measures which effectively rules out special treatment of exports as currently embodied in the fiscal and other advantages granted to FTZs in the Dominican Republic. Although FTZs are not defined or referred to explicitly in the WTO agreement, it is possible that even measures like publicly provided infrastructure could be contested under the new rules (English and de Wulf 2002). This equal treatment requirement will be fully binding in 2010 (although the phase-out schedule remains subject to re-negotiation under the WTO's Doha Development Agenda), providing five years for a gradual adjustment of the FTZ policy regime toward compliance.

15. This adjustment could take several forms. At the policy level, tax laws could be revised to extend existing FTZ import duty exemptions to all producers regardless of whether products are sold on the domestic market or exported. This option will certainly hurt fiscal revenues, but the impact will be mitigated by DR-CAFTA which will de facto extend duty-free treatment to all imports from the US, not just those entering FTZs. Equalizing access to a functioning duty drawback scheme is not adequate to meet WTO obligations, however, nor would it achieve the overarching objective to provide a level playing field. FTZ firms benefit from other tax advantages in addition to duty-free imports, namely exemption from the corporate tax, the value-added tax, foreign exchange commission, and the ad hoc export tax and import tax.

16. One option that would level the playing field is to open FTZs to all producers regardless of whether they are exporters by eliminating the minimum export requirement. But the most effective

method of eliminating forbidden export subsidies and creating stronger opportunities for backward linkages to the domestic economy is to ensure equal treatment of FTZ and non-FTZ sectors by extending the ITBIS to FTZs and applying identical corporate tax rates. The resulting change in incentive structure will need to be phased in gradually to avoid driving producers out of FTZs. And given the importance of the sector and the desire to avoid unnecessary disruption, the authorities will need to consider any proposed tax changes within the broader context of comprehensive tax reform, which could include broadening the ITBIS tax base and eliminating the foreign exchange commission altogether.

17. Under a scenario of sharp adjustment at the moment that WTO rules come into effect, FTZ firms could continue to take advantage of duty-free imports over the next five years, a not inconsiderable period of time. But the degree to which Dominican exporters can retain their competitive advantage without upgrading capital stock or training staff – investments that firms may be unwilling to make in light of investment return time horizons exceeding the interim period – is questionable. Moreover, the uncertain future policy environment is likely to discourage investment in new firm start-ups in traditional FTZ sectors such as textiles, thereby exacerbating the sector's weakened ability to compete.

18. Even with the necessary changes in the FTZ regime – whatever they may be – it is important to note that the Dominican Republic's FTZ sector has contributed more than just increased exports. Several enduring positive side-effects could outlive the WTO-imposed phase-out: better infrastructure, more efficient production (through imported technology), smoother trade transactions processing, and the capacity to expedite customs clearance.

### **C. MFA Phase-Out of Apparel Quotas**

19. The recent stage 4 MFA phase-out will greatly affect Dominican apparel manufacturers, given (i) the declining US market share already observed in the first 3 stages of phase-out, and (ii) the fact that 90 percent of Dominican apparel exports to the US fall into the final – and most binding – stage, which became effective on January 1, 2005. Although Chinese exports to the US will face import tariffs averaging 19 percent compared to the duty-free access of Dominican exports (subject to local content rules), the cost differentials and scale of Chinese production could easily overwhelm existing markets for comparable Dominican products. Regression analysis estimates that Dominican exporters will continue to capture two-thirds of the preference margin, with one-third going to US importers, but current prices could fall by some 15 percent following the quota removal, which could be sufficient to drive many Dominican apparel manufacturers out of business. Textile and apparel-related employment accounts for nearly 6 percent of the employed labor force, which means that up to 190,000 jobs are potentially at risk. According to recent estimates by USAID and Nathan Associates (2004), the MFA phase-out could reduce apparel exports to the US by some 30 percent and lead to direct job losses on the order of 37,000, although these would be partially offset by the projected 23,000 apparel jobs created under DR-CAFTA.

### **III. Moving the Trade and Development Agenda Forward**

20. The Dominican Republic's growth strategy of the past was rooted in the external sector, and although exports increased, the Dominican share of the global market – and the US market in particular – declined significantly. Looking ahead, new and very large competitive pressures in the framework of imminent trade policy changes will need to be addressed, and Dominican producers will need to maintain and increase competitiveness in order to take advantage of the opportunities associated with trade opening. The unwelcome alternative would bring job losses and bankruptcies as firms are driven out of the market by new competition. How can policymakers navigate these changes and at the same time protect fiscal balances, restore economic growth and mitigate losses?

The challenges are enormous, but many policy options are available, some easily implemented in the short run, others requiring more fundamental and therefore time-consuming reform.

21. As the government embarks on this journey, lessons from competitiveness programs implemented elsewhere in Latin America – many with the support of the donor community, particularly the World Bank, IDB and USAID – point to three key elements to increase effectiveness, namely a participatory approach to strategic planning that includes the smallest and largest actors, consensus between the private and public sectors, each playing a distinct role, with the private sector taking the lead while the public sector focuses on policy reforms, and programs that are demand-driven (Chrisney 2002).

#### **A. Trade-Specific Policies**

22. From the perspective of designing an optimal trade policy, it is important to recognize that a free trade agreement represents only a second-best policy, due to inefficiencies arising from potential trade diversion (such as when producers rely on more expensive domestic or within-FTA imports rather than cheaper third-party alternatives in order to meet the duty-free criteria), rules of origin (which are expensive to administer, limit effective access to the FTA, but are necessary to avoid trade deflection), and tariff charges on non-party countries and the resulting evasion efforts. Free trade – or alternatively a low uniform tariff – is most efficient if free to all countries and therefore unilateral, as confirmed in the literature. For example, a modeling exercise in Harrison, Rutherford and Tarr (2001) finds that regional FTAs – including the potential Free Trade of the Americas Agreement (FTAA) – yield only a fraction of the estimated total gains from global free trade.

23. The positive impact of the new trade environment on domestic producers and consumers is potentially large, although it will have mixed effects, generating both winners (through lower prices, higher quality imports, increased investment, inflow of technologies and therefore productivity growth, export expansion and job creation) and losers (through firm closures and job losses of uncompetitive producers). Having completed negotiations for DR-CAFTA, the authorities recognize that the changing global external environment will challenge the country's competitive position and existing development strategy that has been anchored in the external sector. The very tangible risk of losing market share in manufacturing exports in the coming years highlights the need to initiate measures to mitigate the losses and at the same time facilitate adjustment in the domestic market to respond to the opportunities and challenges created by the new external environment.

24. To reach the objectives of restored growth and increased trade and competitiveness will require: (i) harnessing the positive spillover effects through more backward linkages, stimulating closer ties between export sectors and the domestic economy, (ii) fostering continued innovation to retain competitiveness and expand market niches, and (iii) resolving the disparate treatment of FTZ and non-FTZ exporters in such a way as to meet future WTO obligations and facilitate trade. A first-best approach would be to adopt a low uniform tariff that applies to the economy as a whole, not just FTZ producers. This policy, which would simplify customs and other trade procedures and reduce distortions on domestic consumption and production, may not be particularly costly with respect to tariff revenues once the DR-CAFTA comes into effect, given the preponderance of imports from the US and Central America, and potentially will lead to more sustainable employment-generating growth that is more diversified in product and market, and with higher Dominican value-added content. In setting an appropriate uniform tariff level on third-party trade, the Dominican authorities would need to weigh the revenue impact as well as the implied pattern of effective protection that would be created by the dual (i.e., within DR-CAFTA vs. third parties) tariff treatment. This policy could be accompanied by introducing an effective duty drawback system to benefit both domestic and FTZ producers.

25. But providing a level playing field that is conducive to competition, increased linkages between the FTZ and domestic economies, and sustainable growth will necessitate other tax reforms to eliminate the separate treatment of FTZ and non-FTZ firms and thus comply with WTO regulations. These include eradicating disparities in the administrative procedures and infrastructure access between FTZ and non-FTZ firms, extending the ITBIS to FTZs, phasing out the foreign exchange commission, and applying identical corporate tax rates across the economy. These tax increases would need to be gradual, and should be considered in the framework of a comprehensive tax reform consistent with fiscal sustainability.

26. Trade liberalization as envisaged in DR-CAFTA should go some way toward reducing preferences for imported inputs and making domestic producers better able to meet the demands of FTZ and other producers at an attractive price and quality. Efforts to increase backward linkages between the FTZ manufacturing sector and the Dominican economy could be coupled with expanding the cluster concept, which aims to increase market information flows and supply-demand matching at the local and within-sector levels. Introducing incentives for better quality control and reliable supply of domestic inputs through general improvements to the business climate – such as through more effective and streamlined regulations, for example – would also be conducive to more backward linkages.

27. In terms of regional competition, Dominican producers risk losing market share to Haiti, Honduras and Nicaragua, where FTZs will remain exempt from WTO restrictions from 2010 onward on welfare grounds, because they fall below the per capita income requirements set by the WTO. Vis-à-vis Haiti in particular, there is scope for shifting Dominican investment to the economically depressed border areas near Haiti to foster co-production (i.e., providing inputs into Haitian manufacturing) in order to benefit from future comparative advantage. This would also meet DR-CAFTA's duty-free treatment if accumulation rules apply to Haiti, as expected.

28. A competitiveness strategy that will be effective in the new external environment following MFA phase-out and elimination of FTZ export advantages would encourage firms to identify market niches that rely on more customized products and just-in-time delivery to take advantage of the Dominican Republic's agility in adjusting production and its proximity to the US, its main export market. Both of these factors target higher value-added production and niche markets in order to compete, particularly with the major players like China. The case study on apparel estimates large potential losses following US elimination of apparel quotas, and these policy measures would help to differentiate the Dominican comparative advantage rather than trying to compete on the basis of cost. Moreover, measures that identify and promote the Dominican comparative advantage can be extended to the entire tradable sector, where it will be crucial to survival once existing protection is removed. Lessons from development the world over indicate that moving up the value chain and increasing productivity and education levels are key elements of sustained economic growth and poverty reduction, implying that there is scope for promoting more efficient resource use (both capital and labor) and increasing access to technology, knowledge, and credit. The experience of Taiwan provides an example of the feasibility of re-inventing production offerings, which they have effectively done every 5 years in response to changing international demand (Inter-American Development Bank 2004).

29. Another main component of a forward-looking competitiveness strategy would be to develop the export services market. Tourism already is a leading sector in the economy, but further market efforts could address the information services sector as well. There is great potential for developing a dynamic and internationally competitive trade logistics industry, as argued in Chapter 2, which could in fact operate within the existing FTZ framework (services are exempt from the WTO export subsidy

restrictions), as is the case for the new logistics center being developed at the new port, Caucedo. This area – covering both the concept of hub ports as well as distribution and packaging functions – has very broad potential, particularly in attracting shipments from Europe and Asia to the East Coast of the US.

30. The government is responsible for several key trade-supporting functions that will need to be strengthened as a pre-condition for effective implementation of DR-CAFTA. These include improving customs procedures, which are particularly burdensome and corruption-prone, streamlining export and import documentation for establishing domestic content for compliance with rules of origin, and introducing procurement rules that are transparent and eliminate excessive joint venture requirements and reduce maximum mandatory domestic content to levels that meet the provisions agreed under DR-CAFTA. In fact, the requirement to comply with DR-CAFTA terms may help to catalyze efforts within the government to introduce effective procurement regulations and monitoring capacity. The indirect implications of transparent and sound procurement practices include better relations with trading partners, greater confidence in the government and the economy, and increased FDI.

31. Specific measures to improve trade policy effectiveness include:

- introducing a low uniform MFN import duty for all Dominican producers (FTZ and non-FTZ) without minimum export requirements;
- implementing an effective duty drawback system for both FTZ and non-FTZ producers;
- eliminating disparities in the administrative procedures and infrastructure access between FTZ and non-FTZ firms, thereby increasing linkages between the FTZ and domestic economies;
- gradually increasing the corporate tax rate on FTZ firms, extending the ITBIS to FTZs and phasing out the foreign exchange commission altogether to ensure equal treatment in compliance with the WTO rules;
- drafting and issuing the implementation regulations necessary for DR-CAFTA;
- upgrading the government functions essential to implementing DR-CAFTA, such as customs procedures, rules of origin monitoring, standards upgrading and enforcement (including SPS), and procurement policies.

32. Other components of an effective, growth-generating competitiveness strategy are:

- expanding the cluster concept to increase market information flows and supply-demand matching at the local and within-sector levels;
- developing the export services market, particularly the areas of trade logistics (e.g., hub ports) and distribution and packaging functions;
- shifting Dominican investment to the economically depressed border areas near Haiti to foster co-production (i.e., providing inputs into Haitian manufacturing) to take advantage of future comparative advantage of FTZs in Haiti;
- fostering continued innovation to retain competitiveness and expand market niches, such as through promoting privately financed research and development;
- shifting into higher-value products, especially in the apparel sector, and making greater use of the Dominican Republic's geographical advantage and shorter turnaround time for orders by focusing on "just-in-time" flexible production that can be custom tailored to specific market niches.

33. A summary of all policy recommendations and complementary elements of an effective competitiveness strategy is contained in Table 1.

## **B. Trade-Related Factors**

34. Trade outcomes in the Dominican Republic and the country's competitive position within the region and the larger global market depend on a variety of factors, including numerous behind-the-border issues that affect production processes and import, export and investment decisions. For example, the country's institutional and regulatory setting are key determinants of the investment climate. Other issues that affect trade and competitiveness through the domestic economy and FDI include tax policy, availability of local inputs, especially labor, the macroeconomic environment, particularly the management of the economy and the exchange rate, and trade logistics. Each of these factors is central to encouraging trade, and recent research by the World Bank and others indicates the importance and large potential payoffs of this trade-related agenda.

35. Institutions and regulations. Despite the robust trade performance of the past two decades, the Dominican Republic suffers from institutional weaknesses relating to governance and transparency. International comparisons rank the Dominican Republic below average – both worldwide and within the LAC region – with respect to political stability, government effectiveness, rule of law and control of corruption (Kaufmann et al. 2003). Surveys of foreign investors cite concerns over the legal protections available to investors and the past record on contract enforcement. And corruption such as through bribes is prevalent (Foreign Investment Advisory Service 2002), consistent with the discretion observed in customs operations. On the positive side, intellectual property rights – essential for attracting FDI and promoting innovation – have reasonable protection in the Dominican Republic, but there is room for improvement (World Economic Forum 2003).

36. From the perspective of competitiveness, the Dominican Republic's ability to attract new investment will require improvements in the institutional and regulatory environment to raise investor confidence. Improving the business climate through more effective and streamlined regulations will increase incentives for better quality control and reliable supply of domestic inputs. For foreign investors in particular but also local investors shopping for an investment market, competing countries in the region – notably Costa Rica and Mexico – have an institutional and regulatory climate that is more supportive in terms of governance indicators (namely, voice and accountability, political stability, government effectiveness, regulation quality, rule of law and corruption), business start-up and exit procedures, and labor regulations. This suggests that the Dominican Republic may lose out to competitors, particularly those in the region whose similarity in other aspects will cause the Dominican Republic to suffer by comparison. Recent work by the World Bank and other donors have identified measures that would address various facets of accountability, government effectiveness, regulation and corruption issues; for a discussion, refer to the Public Expenditure Review (World Bank 2004a) and the Fiduciary Assessment Report (World Bank 2004b).

37. Priority measures to improve the regulatory environment that could in turn improve investors' perceptions include:

- streamlining business start-up procedures, particularly registering a company name (which currently takes 60 days, or three-fourths of the total time);
- reducing export requirements and increasing access to one-stop windows (there are only 2 one-stop windows in the entire country);
- easing land titling and registration processes, potentially through updating and automating the land registry (approvals for property development and confirmation of zoning currently take about eight months each).

38. Tax policy and the macro-economy. Dominican traders are taxed under a multi-layered tax system that is not only costly but is administratively burdensome to fulfill the various tax obligations. In addition to the profit sharing requirement with workers, the new 1.5 percent turnover tax on gross

receipts (which effectively replaces the 25 percent corporate tax rate), is distortionary and imposes unintended liquidity constraints, despite being refundable. The value-added tax (ITBIS) has a relatively narrow base due to a long list of exceptions and a required minimum level of gross sales. Additional taxes particularly harmful to importers are a 2 percent import tax (until January 1, 2005) and a 13 percent commission on foreign exchange purchases (excluding FTZs). Although past trade liberalization decreased the government's dependence on trade taxes, this trade-tax reliance was gradually restored to its previous level. The temporary 5 percent export tax was lifted in July 2004, but additional tax relief – or at least a less explicitly trade-penalizing tax policy – to spur trade and growth will need to be offset by other revenue measures in order to achieve fiscal sustainability.

39. The current macroeconomic crisis gripping the Dominican Republic had its origins in major institutional and regulatory weaknesses and a loss of confidence stemming from the banking and electricity crises, but this was exacerbated by ineffective economic management. Exchange rate policy in particular has created great uncertainty for doing cross-border business. And the deteriorating macroeconomic balances and mounting debt may discourage investment due to the perceived risks of recession, for example. A sound macroeconomic environment will be crucial for attracting FDI and thus promoting exports. Although the exchange rate depreciation significantly increased Dominican export price competitiveness and led to a surge in FDI in 2003, the growth implications of this investment will be muted owing to limited backward linkages.

40. The tax reform package recently passed into law calls for extensive changes in current tax policy that would increase revenue by 1.7 percent of GDP, but additional non-distortionary measures will be needed to restore fiscal balance and reduce future debt. Some policy options that merit consideration relating to tax policy and the macro-economy are to:

- remove distortionary taxes that discourage the production of exportables, especially outside the FTZs;
- reduce and ultimately eliminate the foreign exchange commission;
- expand the tax base of the ITBIS by reducing exemptions.

41. In order to be effective, policy measures should be accompanied by efforts to improve macroeconomic management through more efficient tax collection, fiscal spending controls, less discretionary spending by the President's office, a resolution of the electricity crisis, and a sustainable debt strategy consistent with the Paris Club rescheduling and IMF agreements. The impact of these efforts would be complemented by better governance and increased regulatory effectiveness across the various government functions (e.g., monetary authority and banking supervision, electricity sector regulation, budget procedures and controls, customs operations, and procurement). Any proposed tax reform will need to consider the potential impact on competitiveness and future growth, but equally important the impact on the poor, so that adequate mitigating measures can be adopted.

42. Trade facilitation. The transport and trade facilitation audit carried out as part of this report (summarized in Chapter 2) concludes that the Dominican Republic performs relatively poorly compared to leading regional competitors, particularly in the areas of port services and customs. The primary weaknesses – deficient port infrastructure and equipment, poor operational management and important institutional shortcomings – together with pervasive discretion and long delays in customs clearance create unpredictability and greatly increase inventory and transactions costs, thereby raising production costs and consumer prices, creating difficulties along the supply chain and making exports more costly, thus hurting Dominican competitiveness.

43. The system's inefficiencies have led to high freight costs that are not competitive within the region. Moreover, given the growing market for trade logistics services and increased reliance on transshipment along key trade routes passing through the Caribbean, the Dominican Republic cannot

afford to be surpassed by neighboring hub ports and logistics centers, with the risk of losing not only future growth opportunities but also the existing level of competitiveness and market share. The Dominican Republic is ideally situated to exploit new market demand for transshipment and logistics services, and the recent inauguration of Caucedo Port, with its large capacity and top-of-the-line infrastructure, will place it in a very competitive position with the other state-of-the-art ports that dominate the region, namely Miami and Panama. The minimum conditions for promoting a Dominican trade logistics industry and hub ports are competitive infrastructure, a local market with adequate production capacity, transparent legislation, and local capacity to lay the groundwork for developing new markets.

44. Despite its enormous capacity, Caucedo will never service all Dominican maritime trade, and therefore policy reform is needed to address the identified shortcomings and reduce excessive costs associated with trade logistics. Specific policies to be considered are to:

- eliminate the consular invoice requirement;
- reduce the share of containers physically inspected or scanned in line with international norms on the order of 5 percent;
- improve security and controlled access to ports, including removing restaurants and parking areas from within port yards, improving vehicle and personnel identification, and prohibiting vehicular and pedestrian traffic not directly port-related;
- improve management of port yards to better coordinate among multiple operators;
- revise APORDOM's legal framework by separating the operator and control functions, converting APORDOM into a regulatory agency only, reinforcing its autonomous role through reduced government influence, and rationalizing personnel in line with its new focused mandate;
- liberalize the internal transport market through better government regulation of land transport contracting, such as through a decree supporting the free choice of ground transport service providers (which may have security implications);
- modernize the legal framework for customs;
- automate customs operations through an information system that links the entire trade logistics community (i.e., e-commerce), which would facilitate information sharing among traders and customs authorities and cross-checking between customs declarations and companies' financial statements, and reduce document requirements and the human element that created opportunities for discretion and corruption;
- further upgrade security to internationally acceptable levels.

45. Ancillary efforts to complement policies aimed at facilitating trade include increased investment in upgrading loading equipment and docks (note that Caucedo's private financing reflects sufficient private sector demand to obviate the need for public financing). APORDOM's current operating structure is not sustainable or competitive; reductions in personnel (particularly in light of reduced services at Haina) and greater expenditure on capital investment and maintenance of infrastructure including port access and sanitation will help restore financial solvency to APORDOM.

46. The potential cost savings to efficiency improvements are enormous: reducing the number of days of container use by 3 days would save an estimated US\$7.5 million per year, fee savings from automation (excluding the cost of implementing the information system and the significant savings from reduced corruption and personnel costs) could amount to US\$40 million annually, and streamlined inspection procedures could save another US\$50 million per year. This implies considerable potential for lower trade-related costs and therefore increased competitiveness.

### **C. Labor-Related Policies**

47. It is through the lens of job creation and labor market efficiency that this analysis seeks a better understanding of the role of trade policy – past and future – in promoting development and welfare improvements in the Dominican Republic. The employment analysis identifies a long-term shift in sector composition from agriculture to service jobs including commerce, government services and tourism, which was accompanied by stagnation in manufacturing employment despite the growth of FTZs. Overall labor productivity increased in real terms since the mid-1990s, and labor productivity in FTZs grew even faster, averaging 4 percent growth per year. The jobs created in the tradables sector tend to be in basic occupations requiring little education. In addition to the direct impact of trade outcomes on employment growth (e.g., in tourism and FTZs), the economy’s robust job growth is indirectly linked to trade growth through services and goods supplied to the tourism industry, transportation, communications and retail services. The rapid expansion of the informal sector – dominated by low skill, low education jobs – served as a residual to absorb labor supply not met by formal sector demand, but also provided dynamic work opportunities, particularly in the area of services increasingly in demand. Skilled workers with higher levels of education tend to work in formal sector jobs, particularly in the public sector.

48. The labor analysis concludes that wages are market determined and effectively signal quality, given increasing returns to education, downward real wage flexibility (despite extensive labor regulation and multi-sector minimum wages), and markedly lower wages in small firms and among rural workers. FTZ firms pay wages 17 percent lower than firms outside of FTZs for comparable work and generally require longer working hours, which explains part of the success of FTZ competitiveness. Women – who face a negative wage premium estimated at 20 percent – are over-represented in FTZ and tourism jobs, which also tend to pay less. Rural workers and own account workers suffered disproportionately in the period of weak labor demand between 2000 and 2003. Given the lower wage structures and lack of worker protections in these two sectors, the observed employment patterns have significant poverty implications.

49. Dominican labor as a whole is competitive relative to Caribbean and Central American countries, both in terms of price and in terms of investors’ perceptions of availability, productivity and a flexible regulatory environment. But despite Dominican labor competitiveness, the economy’s past reliance on trade in low value-added products, especially apparel manufacturing, will no longer be tenable once Dominican producers face full competition from China. In order to shift to higher value-added activities, a certain production reengineering will be critical, but this will necessitate skills upgrading through higher educational attainment, curriculum orientation towards productive and competitive sectors and increased university-firm linkages to stimulate innovation more broadly, and retraining existing workers. These capacity building efforts will in turn have positive feedback effects for technology transfer and knowledge creation. The types of workers sought by employers will change, implying the need for better job matching in the new trade environment.

50. The analysis finds that job growth kept pace with labor force growth, such that the unemployment rate remained fairly steady over the past decade. The rising educational attainment of women led to an increase in female participation and a rise in female returns to education. Nevertheless, the data provide evidence of some degree of education-occupation mismatch, for both men and women. Additional skills mismatch is evidenced by the large number of discouraged workers, and the long time it takes new entrants to find employment. This can be explained in part by unrealistic expectations on the part of job seekers, voluntary unemployment while workers queue for better work opportunities, poor education quality despite official credentials, and insufficient employer demand for higher skilled labor. Inequitable access to schooling affects the long-term prospects for increasing labor quality and productivity across the labor market, confining Dominican

labor to basic skills that do not meet the demands of skill-intensive new technologies, with the result of limiting future competitiveness (particularly in higher value-added activities) and economic growth.

51. The new trade rules will likely bring considerable churning regarding firm entry and exit concurrent with job creation and destruction and factor reallocation within and across industries. But the Dominican labor market exhibits substantial flexibility, which in theory allows employers to adjust production to maximize opportunities rather than preserving existing employment at a potentially unaffordable cost. There is already an adjustment mechanism in place to help negatively affected workers transition to new market realities, namely through severance pay (i.e., *cesantía*). But not all workers are covered and enforcement is lax. There are provisions under the new social security program to provide consumption-smoothing income support to laid off workers, but the program is not yet operational.

52. The functioning of the Dominican labor market could be improved through both specific measures relating to labor legislation as well as more general policies and strategies to reduce mismatch and raise labor productivity. Specific labor policy measures to be considered for implementation in the short run include:

- enforcing labor regulations and eliminating inconsistencies in child labor rules, sending a clear message of no tolerance;
- resolving the overlap of the *cesantía* and social security regulation;
- revisiting the planned introduction of the new social security system and the associated large jump in payroll tax rates to ensure a phased transition that does not over-burden employers but provides adequate financing (including the payment of government payroll contributions for public sector workers).

53. Improving labor market efficiency through reducing mismatch between labor supply and demand could be facilitated through promoting the creation of employment services firms that improve job search effectiveness. Although the regulatory environment is not overly restrictive on Dominican labor, existing policies nevertheless affect labor demand and supply decisions through raising the cost of labor, thus affecting efficient matching. Introducing optional alternative protections for informal workers (including voluntary insurance mechanisms) would provide a safety net to currently unprotected workers, and rationalizing the regulatory requirements for businesses could encourage increased formal sector employment.

54. Components of a broader strategy to increase labor productivity, labor quality and labor market efficiency include: reducing investment disincentives that limit labor demand for higher skills in the private sector; expanding access to education in rural areas; improving the quality of basic education; expanding secondary education opportunities, especially for talented students from low socio-economic backgrounds who would be otherwise excluded; increasing the use of internships and apprenticeships during formal education to develop employer confidence in hiring new graduates; establishing pre-service training and programs targeted to less educated workers; encouraging a shift toward 2-year degree-based programs similar to US community colleges with a focus on skills upgrading to increase technology transfer and higher value labor opportunities, and re-directing public higher education budget resources to support these public or private efforts; and continuing to promote the expansion of private higher education, particularly in the disciplines of accounting, administration, marketing, foreign languages, and the innovation-linked disciplines of ICT, electronics and engineering. INFOTEP's over-subscribed services partly reflect the fact that they are tax-financed, but they nevertheless provide useful training for upgrading skills. Expanding in-service training – either through increasing INFOTEP's capacity or through private institutions – and

developing training programs and/or technical assistance in business management areas that help firms respond to the challenges inherent to the changing trade environment (e.g., international marketing) would raise productivity, thereby helping workers and firms to be competitive.

**Table 1: Summary of Policy Recommendations and Competitiveness Strategy Components**

Thematic Area	Policy Recommendations	Strategy Components
<b>Trade policy</b>	<ul style="list-style-type: none"> <li>• introduce a low uniform MFN import duty for all Dominican producers (FTZ and non-FTZ) without minimum export requirements</li> <li>• implement an effective duty drawback system for both FTZ and non-FTZ producers</li> <li>• eliminate disparities in the administrative procedures and infrastructure access between FTZ and non-FTZ firms</li> <li>• gradually increase the corporate tax rate on FTZ firms, extend the ITBIS to FTZs and phase out the foreign exchange commission altogether to ensure equal treatment in compliance with the WTO rules</li> <li>• draft and issue implementation regulations necessary for DR-CAFTA</li> <li>• upgrade the government functions necessary for implementing DR-CAFTA, such as customs procedures, rules of origin monitoring, standards upgrading and enforcement (including SPS), and procurement policies</li> </ul>	<ul style="list-style-type: none"> <li>• expand the cluster concept to increase market information flows and supply-demand matching at the local and within-sector levels</li> <li>• develop the export services market, particularly the areas of trade logistics (e.g., hub ports) and distribution and packaging functions</li> <li>• shift Dominican investment to the economically depressed border areas near Haiti to foster co-production (i.e., providing inputs into Haitian manufacturing) to take advantage of future comparative advantage of FTZs in Haiti</li> <li>• foster continued innovation to retain competitiveness and expand market niches, such as through promoting private research and development</li> <li>• shift into higher-value products, especially in the apparel sector, and make greater use of the Dominican Republic's geographical advantage and shorter turnaround time for orders by focusing on "just-in-time" flexible production that can be custom tailored to specific market niches</li> </ul>
<b>Institutions and regulations</b>	<ul style="list-style-type: none"> <li>• streamline business start-up procedures, particularly registering a company name</li> <li>• reduce export requirements and increasing access to one-stop windows</li> <li>• ease land titling and registration processes, potentially through updating and automating the land registry</li> </ul>	<ul style="list-style-type: none"> <li>▪ increase incentives for better quality control and reliable supply of domestic inputs through an improved business climate</li> <li>▪ strengthen contract enforcement such as through streamlining judicial procedures</li> </ul>
<b>Tax and macro policy</b>	<ul style="list-style-type: none"> <li>• remove distortionary taxes that discourage the production of exportables, especially outside the FTZs</li> <li>• reduce and ultimately eliminate the foreign exchange commission</li> <li>• expand the tax base of the ITBIS by reducing exemptions</li> </ul>	<ul style="list-style-type: none"> <li>▪ maintain a sound macroeconomic framework and improve macroeconomic management through more efficient tax collection, fiscal spending controls, less discretionary spending by the President's office, addressing the electricity crisis, and a sustainable debt strategy consistent with the Paris Club rescheduling and IMF agreements</li> <li>▪ assess the impact of proposed tax reform on future competitiveness and the poor, and adopt mitigating measures targeted to the poor</li> <li>▪ improve governance and increase regulatory effectiveness across the various government functions (e.g., monetary authority and banking supervision, electricity sector regulation, budget procedures and controls, customs operations, and procurement)</li> </ul>

**Table 1: Summary of Policy Recommendations and Competitiveness Strategy Components  
(continued)**

Thematic Area	Policy Recommendations	Strategy Components
<p><b>Trade facilitation</b></p>	<ul style="list-style-type: none"> <li>• eliminate the consular invoice requirement</li> <li>• reduce the share of containers physically inspected or scanned in line with international norms</li> <li>• improve security and controlled access to ports, including removing restaurants and parking areas from within port yards, improving vehicle and personnel identification, and prohibiting vehicular and pedestrian traffic not directly port-related</li> <li>• improve management of port yards to better coordinate among multiple operators</li> <li>• revise APORDOM's legal framework by separating the operator and control functions, converting APORDOM into a regulatory agency only, reinforcing its autonomous role through reduced government influence, and rationalizing personnel in line with its new focused mandate</li> <li>• liberalize the internal transport market through better government regulation of land transport contracting, such as through a decree supporting the free choice of ground transport service providers</li> <li>• modernize the legal framework for customs</li> <li>• automate customs operations through an information system that links the entire trade logistics community</li> <li>• further upgrade security to internationally acceptable levels</li> </ul>	<ul style="list-style-type: none"> <li>▪ promote (but do not subsidize) investment in upgrading loading equipment and docks (note that Caucedo's private financing reflects sufficient private sector demand)</li> <li>▪ restore financial solvency to APORDOM through reductions in personnel (particularly in light of reduced services at Haina) and increase expenditure on capital investment and maintenance of infrastructure including port access and sanitation</li> </ul>
<p><b>Labor-related policies</b></p>	<ul style="list-style-type: none"> <li>• enforce labor regulations and eliminate inconsistencies in child labor rules</li> <li>• resolve the overlap of the <i>cesantía</i> and social security regulation</li> <li>• revisit the planned introduction of the new social security system and the associated large jump in payroll tax rates to ensure a phased and not overly burdensome transition and adequate financing</li> </ul>	<ul style="list-style-type: none"> <li>▪ reduce investment disincentives that limit labor demand for higher skills in the private sector</li> <li>▪ promote employment services activities to improve job search and matching</li> <li>▪ expand access to education in rural areas</li> <li>▪ improve the quality of basic education</li> <li>▪ expand secondary education opportunities</li> <li>▪ increase the use of internships and apprenticeships during formal education</li> <li>▪ establish pre-service training and programs targeted to less educated workers</li> <li>▪ re-direct public higher education funding to 2-year degree-based programs focused on skills upgrading to increase technology transfer and higher value labor opportunities</li> <li>▪ promote expansion of private higher education, particularly in accounting, administration, marketing, foreign languages, ICT, electronics and engineering</li> <li>▪ promote university-firm linkages to stimulate innovation</li> <li>▪ invest in INFOTEP's capacity to upgrade skills in key industries with unmet demand and design training programs and/or technical assistance in business management areas to help firms respond to the challenges inherent to the changing trade environment</li> <li>▪ introduce optional alternative protections for informal workers including voluntary insurance mechanisms</li> </ul>



# **Dominican Republic**

## **Review of Trade and Labor Competitiveness**

### **CHAPTER 1. INTRODUCTION AND HISTORICAL CONTEXT**

#### **I. Introduction**

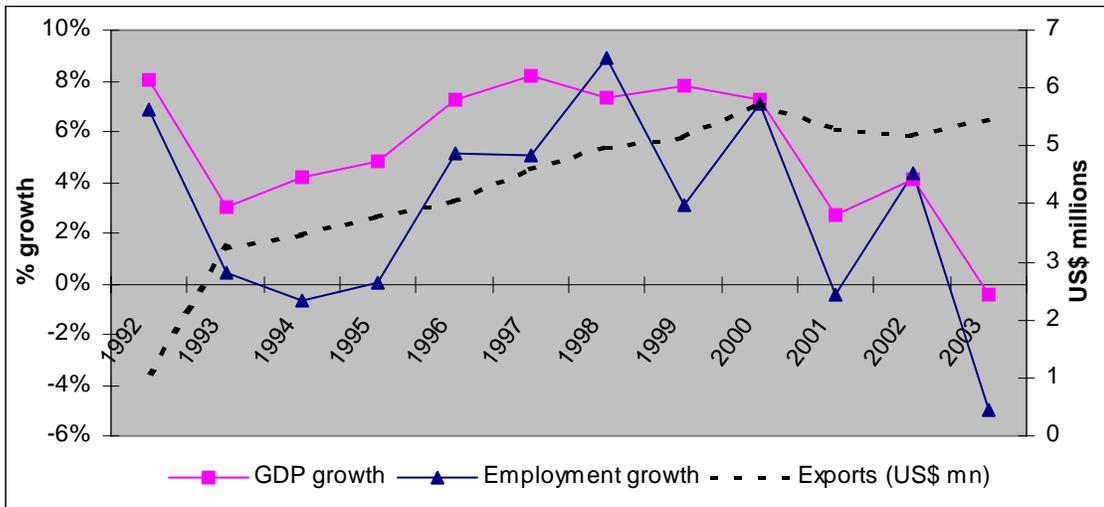
1. In the early 1980s, the Dominican Republic pursued trade policies and structural reforms that laid the groundwork for the robust and sustained economic growth experienced throughout the decade of the 1990s. Key policy measures of this economic strategy included macroeconomic stabilization, tax exemptions on free trade zones to promote expansion of the export sector, the removal of FDI restrictions (such as sectoral restrictions and limitations on profit repatriation), a series of public enterprise privatizations (e.g., sugar, flour, tobacco, and airports), and greater integration into global markets – at least with respect to exports – through bilateral and regional trade agreements.

2. Taken together, these reforms had the effect of segmenting the export and import competing sectors in the Dominican economy. Free trade zones grew in number and size as extensive incentives were provided to export activities, including for example duty-free access to imported inputs, a variety of tax incentives, and no limits on profit repatriation. And the Dominican Republic entered preferential trade agreements with the US and others which increased demand for certain manufactured goods and in effect spurred the expansion of free trade zone (FTZ) exports. At the same time, the import substitution sectors continued to enjoy significant trade protection in the form of high tariffs, and quotas on particularly sensitive goods – primarily agriculture products.

3. This heterodox approach to trade policy, namely aggressively promoting exports while protecting local industry (described in other country contexts in Rodrik 1999 and Subramanian and Roy 2003) had the effect of separating the FTZ export sector from the rest of the economy, thereby isolating it from the negative effects of trade restrictions on import-competing activities. The result is a dual economy characterized by high returns to the non-traditional export sector, which in effect squeezes the domestic import-competing sector by drawing resources to their more efficient use.

4. Although the country experienced robust GDP growth averaging 6 percent per year during the 1990s, as well as substantial job creation and export growth (as depicted in Figure 1.1), the contribution of goods trade played a relatively modest role. As will be demonstrated in the analysis that follows, commerce, construction, and the traditional sectors of agriculture and non-FTZ manufacturing account for the largest shares of GDP, while commerce and service sector jobs comprise the largest portion of total employment. FTZ production, by contrast, accounts for less than 4 percent of GDP despite two decades of dynamic growth, because of the import-intensive production structure and vertical integration encouraged by the fiscal advantages granted to FTZ firms.

**Figure 1.1. Growth, Employment and Exports**



Source: Dominican Republic Central Bank, CEI-RD

5. Both physically and economically separate from the rest of the Dominican economy, FTZ firms have successfully developed market niches in products in demand by US consumers – the destination for over 90 percent of FTZ exports – and exhibited flexibility in adjusting to changing external circumstances, which belies their competitiveness. Free trade zones also made dynamic contributions to economic development in terms of infrastructure and efficient management and trade facilitation systems. These export-oriented FTZ production patterns stand in stark contrast to the contracting traditional agriculture sectors and the protected domestic industries that turn out inferior quality products at relatively high prices.

6. This brief characterization of the Dominican Republic’s heterodox trade policies that simultaneously promote FTZ exports and protect domestic industries is extended and analyzed in depth in this report. One of the main objectives of this analysis is to understand Dominican producers’ competitive position with respect to other exporters to the US market, and particularly vis-à-vis competitors and trading partners in neighboring Caribbean and Central American countries. This study makes a detailed examination of the trade and trade-related policies in place, their evolution over time, and their impact on trade outcomes. The analysis uses a range of rigorous methodological tools to assess trade trends, their contribution to growth, the impact of trade policy changes, and the links with job creation. The focus on employment and wages provides a deeper appreciation of the ties between demand for traded goods, the availability and cost of productive inputs including labor, and the response of labor supply to this derived demand. And by analyzing the functioning of the labor market and the characteristics of workers and the labor force more broadly, we gain some understanding of the welfare impact of trade-related job creation and insight into the competitive prospects for Dominican industries in the future.

## II. Responding to Global Trade Developments

7. The joint policies of export support measures and trade barriers to import-substitution sectors are complemented by the Dominican Republic’s extensive preferential access to the markets of its major trading partners and to mutual free trade agreements with regional partners. Over the course of two decades, Dominican economic authorities have recognized the ascendant trend of globally integrated markets and responded by pursuing a strategy of trade integration with the rest of the world, albeit with a focus on the US.

8. Dominican trade integration has been managed through: (i) unilateral preferential access agreements with the US, EU and the broader group of developed countries; (ii) regional agreements with Caribbean and Central American trading partners; and (iii) the recent free trade agreement with the US; with the potential for (iv) a hemispherical trade agreement in the future. Whereas most of the Dominican Republic's past export growth and FTZ sector development was tied to preferential market access agreements, these are inherently one-sided because they do not require reciprocal treatment, and as such are subject to policy reversals or alterations at the behest of the granting country in response to political pressures or changing economic objectives.

9. Although existing regional trade agreements between the Dominican Republic and CARICOM and the Central American countries are negotiated and include reciprocal treatment subject to agreed lists of excluded products, they have effectively achieved little in terms of regional trade creation and diversion away from the dominant US market. The free trade agreement (FTA) with the US – which was integrated into the US-Central American FTA – has not yet been implemented, but is anticipated to affect the Dominican Republic's dual economy status quo by liberalizing imports, thereby introducing competition to formerly protected industries which will face a new set of production parameters as a result.

### **III. Challenges for the Future**

10. The Dominican Republic's changing trade landscape extends beyond the FTA with the US. The preferential external environment that determined Dominican FTZ and non-FTZ trade in the past will face increased competition on several fronts. The indirect advantages enjoyed by Dominican producers as a result of US-imposed textile and apparel quotas under the Multifibre Agreement (which were binding on large exporting countries such as China) disappeared with the quota phase-out on January 1, 2005. Furthermore, the export promotion effected through the Dominican Republic's FTZ policies will no longer be allowable under the WTO's Agreement on Subsidies and Countervailing Measures.<sup>2</sup> The Dominican Republic therefore faces fundamental challenges in its trade regime that will critically affect prospects for trade growth, fiscal revenues and development in future years.

11. The forthcoming FTA with the US and Central America would improve existing trade terms by making US market access provisions permanent, and the associated opening of the Dominican economy will lead to a realignment of production, lower tariff revenues, and a certain degree of churning vis-à-vis firm entry and exit and job creation and destruction. In addition to these externally driven pressures, most firms in the Dominican Republic are presently struggling to maintain their competitiveness in the face of domestic constraints such as the ongoing and prolonged macroeconomic crisis, soaring public debt following the banking crisis, rising interest rates, inadequate regulatory environment, and increasing electricity costs and blackouts witnessed in the past year. This has been offset to some degree by increased competitiveness of exports following the sharp depreciation of the peso against the US dollar in 2003. But the volatile macroeconomic environment is unlikely to stabilize in the immediate run, given the fiscal pressures linked to the macroeconomic crisis and electricity sector difficulties.

### **IV. Report Scope and Structure**

12. The report focuses on trade in non-agriculture goods, although many of the issues affecting goods trade are also relevant for agriculture and services trade and competitiveness in general. In areas of overlap – such as the regulatory framework, tax and macroeconomic environment, and employment trends – the report employs a broader multi-sector treatment. However, extensive

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<sup>2</sup> Technically, 2008 and 2009 are transition years, and all adjustment must be completed by end-2009.

analysis by the World Bank and others has been concluded recently on the agriculture and tourism sectors in particular, and as such this report will draw on and complement those efforts. Although this report considers the potential welfare effects of past trade policies through the angle of employment, a detailed poverty analysis by the World Bank currently underway will address these issues in greater depth. Finally, several systemic factors that have reduced Dominican competitiveness – most notably the recent and ongoing banking and electricity sector crises – are not analyzed in this report but merit further research.

13. This report is structured as follows. Chapter 2 describes the existing trade policy framework, level of protection, and related institutional, regulatory, macroeconomic, logistics and facilitation issues guiding trade outcomes. Chapter 3 analyzes recent trade patterns and trends, the experience of free trade zones, and the role of trade in the economy's growth. The analysis in Chapter 4 considers the potential impact of the new trade environment – namely the free trade agreement with the US – using a simulation model to estimate the impact on trade volumes and revenues. The chapter will also look at the textile and apparel sector in particular, and the likely impact of the Multifibre Agreement phase-out. Chapter 5 provides a detailed assessment of employment trends, labor competitiveness and the links to trade, and how the labor market responds to externally-induced changes in labor demand. These findings are then compared with the recent evolution in labor supply and matching, and an analysis of the nature of unemployment, the extent to which mismatch is skills-based or the result of other factors, and the implications for future sector growth and labor competitiveness.

## CHAPTER 2. TRADE POLICY ENVIRONMENT

14. The Dominican Republic – like much of Latin American – was particularly affected by the debt crisis in the early 1980s, and faced huge challenges associated with inward-looking development policies that generated inefficient industrial sectors unable to compete in external markets, as well as unsustainable internal and external macroeconomic imbalances. Dominican policymakers addressed the challenges with a combination of orthodox and heterodox policies, especially with respect to trade. On one hand, the Dominican Republic pursued a strategy of economic opening through export promotion, namely through preferential access to the US market under the Caribbean Basin Initiative and its successor Caribbean Basin Trade Partnership Act, and by establishing FTZs. This was accompanied by measures to attract FDI, such as maintaining a stable macroeconomic environment and adopting legislation to ensure equal treatment of national and foreign investors. This trade opening was accompanied by significant protection, however. Some sectors remained very protected using high tariffs and non-tariff barriers, particularly textiles and apparel, but also agriculture. Prior to the trade liberalization adopted in 2000, tariffs averaged 20 percent for goods entering the Dominican Republic, and exceeded 30 percent in the textile and apparel sector. Despite tariff reform, import-related fiscal revenue (including tariffs, VAT and excise on imports, and the foreign exchange commission) still accounts for nearly a third of total fiscal revenue. This mix of orthodox and heterodox policies resulted in a dual economy characterized by robust and sustained export growth and broad economic expansion during most of the 1990s.

15. As will be illustrated in this chapter, many other factors affect competitiveness and therefore trade performance. The institutional setting in the Dominican Republic is fairly weak, especially regarding governance issues; potential investors are also discouraged by the onerous regulatory framework which gives rise to evasion and further corruption. The time and procedural requirements of starting a business do not compare favorably to competitors in the region and elsewhere, and exit costs are similarly high. The regulatory and tax regimes favor FTZ exporters, to the detriment of local producers. Temporary taxes imposed on imports, exports and foreign exchange transactions are costly for producers and importers, and payroll tax rates – which are projected to rise significantly – raise the cost of doing business and diminish labor demand. The macroeconomic situation suffered a major shock in 2003 with the banking crisis and subsequent bail-out by the Central Bank, which led to major capital flight, a sharp currency depreciation, high inflation and significant fiscal pressures (exacerbated by the ongoing electricity crisis), together creating large macroeconomic imbalances and an environment of uncertainty and perceived risk. The cost of trading is also affected by trade logistics such as port operations, customs procedures and distribution, all of which have underperformed the leaders in the region – in terms of both cost and lengthy delays – thereby imposing additional costs that reduce competitiveness and dissuade potential investment.

### I. Current Trade Policy

16. The performance of the Dominican Republic's external sector is shaped by the economic policies in place, institutions, macroeconomic performance, trade logistics environment, and in particular the country's trade policies, which are examined here. The trade policy framework underwent significant change during the last 20 years.

#### A. Free Trade Zones

17. Probably the most salient feature of the Dominican Republic's external sector was the creation of FTZs with the 1955 Law 4315, modified in 1990 by Law 8-90, which permitted duty-free treatment of imported inputs to FTZs and other tax incentives. Free trade zones flourished by the end of the 1980s and currently account for more than four-fifths of total goods exports from the Dominican Republic. Other than FTZ policy, there is no direct fiscal subsidy to exports, although a

duty drawback scheme was established in 1999 through the Export Promotion Law 84-99 to promote non-FTZ exports. Fiscal policies in effect limited export promotion for the non-FTZ economy.

## B. Trade Agreements with External Partners

18. Dominican trade policy today is reflected in a series of trade arrangements with external partners, a key element of the authorities' global integration strategy. The Dominican Republic joined the WTO in 1995, and is a party to three main preferential schemes, summarized in Table AI.1. These preferential programs are unilateral in that they grant preferential access to Dominican goods without requiring reciprocal treatment. The Cotonou Accord with the European Economic Community was recently renewed, and allows preferential access to Dominican goods without quantitative restrictions (these provisions are set to expire in 2007 and new negotiations are underway to define a new European Partnership Agreement). Goods must meet rules of origin requirements, which range from complete production within the Dominican Republic to sufficient transformation in the Dominican Republic and/or in conjunction with other signatories of the Cotonou Accord, the European Economic Community and South Africa (i.e., accumulation rules), and transshipment of goods is not allowed.

19. The US and Puerto Rico grant preferential access to Caribbean-produced or transformed goods under the Caribbean Basin Trade Partnership Act (CBTPA) adopted in 2000, which was an extension of the Caribbean Basin Initiative (CBI) in effect since 1984. The CBTPA grants better access – i.e., terms identical to those of NAFTA – for many products previously excluded from the CBI. Textile and apparel products are subject to rules of origin criteria (some products are excluded altogether), and there are additional benefits (again consistent with NAFTA rules of origin) for shoes, tuna, petroleum products, and watches. Sufficient transformation – typically defined by a certain threshold domestic value-added – will qualify goods, and can be achieved with other partner countries through accumulation rules. The positive impact of the CBTPA – relative to its predecessor CBI – is illustrated in Table 2.1: the share of exports from the Dominican Republic to the US entering under these programs increased significantly, from about 20 percent in 2000 to 60 percent in 2003. Central American exports to the US under preferential terms also increased markedly. The fact that close to 90 percent of Dominican exports are destined for the United States suggests that the CBTPA significantly benefits Dominican exporters. From the US perspective, by contrast, only 0.2 percent of its total imports entered through CBI in 2000 and 0.8 percent under CBTPA in 2003, while nearly 80 percent of US imports do not enter under special programs.

**Table 2.1: US Imports Entering Under Special Programs (%)**

	1996	1997	1998	1999	2000	2001	2002	2003
<b>By Country (% of source country exports to US entering under special programs):</b>								
<b>Costa Rica</b>	35.6	35.4	29.5	18.1	19.5	36.5	37.2	34.7
<b>Dominican Republic</b>	<b>27.9</b>	<b>29.1</b>	<b>30.1</b>	<b>19.8</b>	<b>20.6</b>	<b>57.2</b>	<b>64.5</b>	<b>60.1</b>
<b>El Salvador</b>	9.1	6.8	5.2	4.3	5.0	54.3	58.4	60.0
<b>Guatemala</b>	17.3	16.1	15.4	14.0	12.0	29.8	38.1	38.2
<b>Honduras</b>	12.3	12.5	10.9	7.7	9.6	53.9	61.2	66.2
<b>Nicaragua</b>	34.2	32.8	16.8	10.8	10.8	25.3	31.6	32.5
<b>By Program (% of US imports):</b>								
<b>No program claimed</b>	76.5	76.3	75.7	78.9	80.3	78.8	78.3	78.5
<b>NAFTA</b>	17.0	16.8	19.0	17.5	16.3	16.5	16.8	16.1
<b>CBI and CBTPA</b>	0.4	0.4	0.4	0.3	0.2	0.7	0.9	0.8
<b>Memo item:</b>								
<b>Total US imports (US\$ billion)</b>	818	899	945	1,060	1,258	1,180	1,202	1,305

Sources: U.S. Department of Commerce, U.S. Treasury, and U.S. International Trade Commission

20. The third preferential trade arrangement benefiting the Dominican Republic – although more restrictive than the CBTPA or Cotonou agreements – is the Generalized System of Preferences granted by developed countries such as the US and EU to developing countries, including the Dominican Republic. The objectives of these accords are to promote economic development in the exporting country and at the same time provide less expensive goods to importers and consumers.

21. These preferential agreements are complemented by regional accords to increase trade with neighboring countries. The policy decision to pursue greater regional integration gained momentum from competitive pressures following the 1994 signing of NAFTA, which gave Mexican textile and apparel exports special market access to the US and thus a major advantage over Dominican products. In 1998 the Dominican authorities signed a Free Trade Agreement with other Caribbean islands (CARICOM), and beginning in 2001, the Dominican Republic negotiated a series of bilateral FTAs with Central American partners. As described below in Table AI.2, a free trade agreement grants duty-free access to member countries' exports, except for products on an agreed negative list that face Most Favored Nation (MFN) tariff rates.<sup>3</sup> Certain products face interim MFN status which will be phased out once the FTA comes into effect and tariffs fall to zero. The exclusion of transshipments is intended to guard against tariff evasion through false claims of origin (in other words, trade deflection). Trade within the Central American and Caribbean common markets has grown, but its importance for the Dominican Republic remains relatively limited, representing only 3 percent of total imports.

22. Given the preponderance of US-based trade – the Dominican Republic is currently the fourth largest US trading partner in Latin America (after Mexico, Brazil and Colombia) – most Dominican exports are governed by the US's CBTPA, which is scheduled to expire in September 2008. Following the conclusion of negotiations between the US and Central American countries on a free trade agreement, CAFTA, the Dominican Republic launched its own negotiations for an FTA with the US, but these efforts were subsumed into the regional free trade agreement, renamed DR-CAFTA. In August 2004, the Dominican authorities signed the DR-CAFTA treaty with the US and other Central American countries (excluding Panama), creating the second largest US trading partner in Latin America.<sup>4</sup> Under DR-CAFTA, preferences would no longer be granted unilaterally (and thus subject to potential policy reversals in response to political or other developments affecting the American policy landscape); the new FTA entails a longer-term relationship that offers a more stable set of negotiated rules that are expected to provide an attractive environment to investors and thus encourage foreign direct investment and exports. Although the preferences granted to Dominican exports through DR-CAFTA would not substantially exceed those already granted through the CBTPA, the reciprocity of an FTA means that US goods would have duty-free access to the Dominican Republic, thus expanding the choices available to consumers but disrupting the protection currently enjoyed by domestic producers. The scope and potential impact of DR-CAFTA is explored in detail in Chapter 4 below.

23. From the perspective of designing an optimal trade policy, it is important to recognize that a free trade agreement represents only a second-best policy, due to inefficiencies arising from potential trade diversion (such as when producers rely on more expensive domestic or within-FTA inputs rather than cheaper third-party alternatives in order to meet the duty-free criteria), rules of origin, which are expensive to administer but necessary to avoid trade deflection, and tariff charges on non-

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<sup>3</sup> MFN status is conferred on all exporting countries not in alternative preferential arrangements with the importing country.

<sup>4</sup> The Dominican Republic must re-negotiate its bilateral free trade agreements with Central America, given that existing terms preclude giving the US better access than Central American countries.

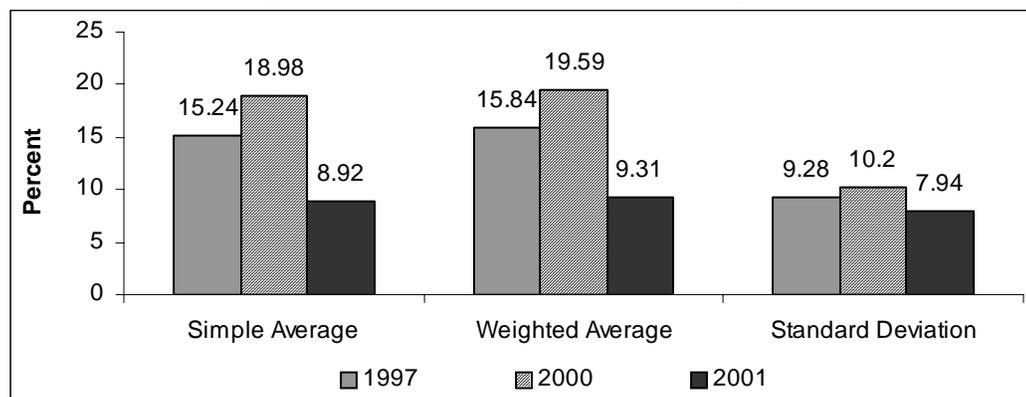
party countries and the resulting evasion efforts. Free trade – or alternatively a low uniform tariff – is most efficient if free to all countries and therefore unilateral, as confirmed in the literature. For example, a modeling exercise in Harrison, Rutherford and Tarr (2001) finds that regional FTAs – including the potential Free Trade of the Americas Agreement (FTAA) – yield only a fraction of the estimated total gains from global free trade.

### C. Tariff Structure and Trade Protection

24. Dominican trade policy during most of the 1990s can be characterized as protectionist through reliance on high import taxes, as efforts to simplify the tariff structure and eliminate most import quotas and licenses failed to reduce significantly the protectionist bias of the Dominican economy. High rates of protection are blamed for fostering economic inefficiency and a lack of dynamism in the domestic (non-FTZ) industrial and agriculture sectors, which led to their declining share of total economic output. Up-to-date data are not available to estimate the effective rates of protection during the most recent period, and the Central Bank is in the process of revising the structure of its national accounts database. The latest information available estimates protection rates between 123 and 188 percent in 1993 (ECLAC 2000), and between 60 and 100 percent in the mid-1990s (World Bank 2000), which ranks the Dominican Republic among the most protectionist trade regimes in the region. But both of these estimates rely on an input-output matrix dating to the early 1990s, which is an inappropriate base for calculating current protection rates, given that the structure of the Dominican economy has undergone fundamental changes. This analysis therefore focuses on other indicators to assess the extent of protection.

25. The political pressures that kept domestic industry protected through high tariffs during the 1990s gave way to a tariff reform in 2000 (Customs Law Reform 146-00), which resulted in a significant reduction of MFN tariffs from a weighted average of 19.6 percent in 2000 to an average of 9.3 in 2001 (see Figure 2.1), below the regional average for Latin America. The effective rate of protection is thus likely to have declined sharply from earlier estimates. Although some tariff peaks were cut as part of the reform – reducing tariff dispersion from 10.2 to 7.9 percent – some highly protected goods remain. For instance, tariff peaks of 30 percent apply to capital goods, 35 percent for consumer goods, and 40 percent for intermediate goods and raw materials.

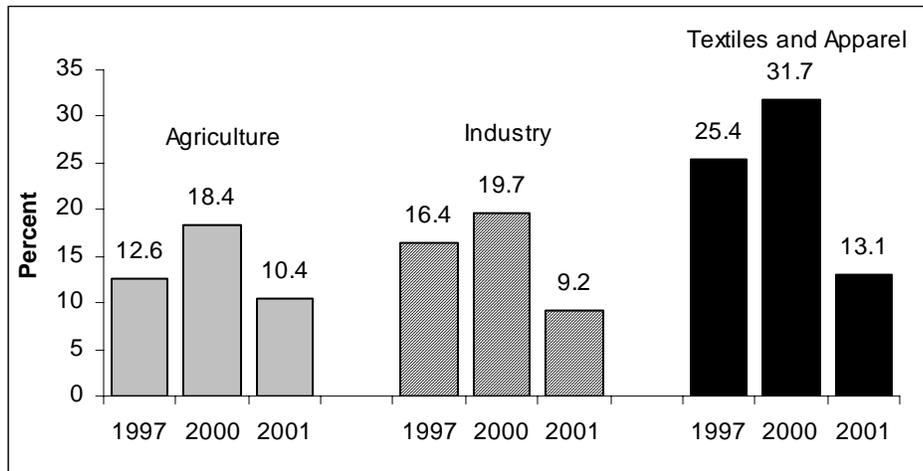
**Figure 2.1. Tariffs in the Dominican Republic**



Source: UNCTAD-TRAINS

26. Looking at protection by sector, the 2000 tariff reform substantially reduced protection for agricultural and industrial products (by an average 8 and 10 percentage points respectively), but the largest drop – averaging almost 20 percentage points – occurred in textiles. Nevertheless, textiles and apparel remain the most protected sector (see Figure 2.2).

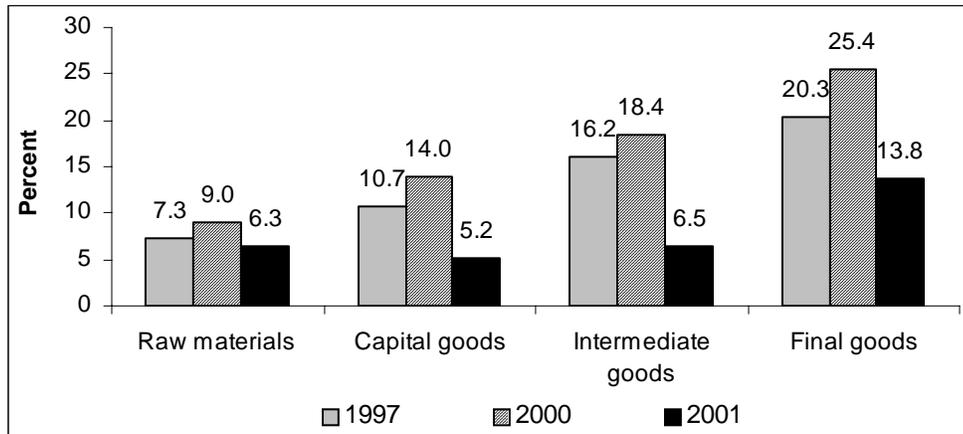
**Figure 2.2. Weighted-Average Tariffs by Sector**



Source: UNCTAD-TRAINS

27. In addition to reducing overall tariff rates, the 2000 reform smoothed the degree of tariff escalation, a protectionist measure under which processed commodities are levied more heavily than unprocessed goods. Weighted-average tariffs for raw materials, capital goods and intermediate goods levels were set around 6 percent, compared to nearly 14 percent for final goods, although this represents a substantial reduction from 25 percent in 2000 (see Figure 2.3).

**Figure 2.3. Tariff Escalation**

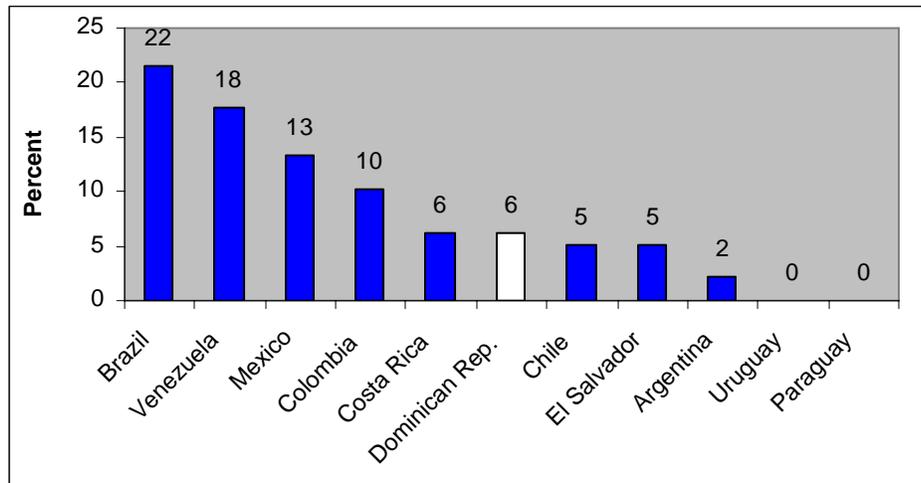


Source: UNCTAD-TRAINS

28. The preceding evidence illustrates that although recent tariff reform greatly reduced trade barriers, tariff protection remains, particularly for import-substitution goods. With respect to non-tariff barriers, the Dominican Republic compared favorably to (i.e., had fewer non-tariff barriers than) other countries in the region in the mid-1990s, especially Brazil, Venezuela, and Mexico, but was on par with Central America (see Figure 2.4).<sup>5</sup> Thereafter, the Dominican Republic further decreased its non-tariff barriers: in 1998, Decree No. 114-98 greatly simplified and in fact eliminated most non-tariff barriers, implying a lower share than depicted in Figure 2.4. Today, the Dominican Republic maintains imports quotas on eight agriculture products: garlic, rice, sugar, poultry, onions, beans, powdered milk, and corn.

<sup>5</sup> Non-tariff measures are calculated as a frequency ratio in percentage terms for all HS 2-digit product categories. Core non-tariff measures include licensing, prohibition, quotas and administered prices.

**Figure 2.4. Non-Tariff Measures in LAC Countries 1995-1998**



Source: Michalopoulos (1999)

29. The potential impact of trade policy reform since 2000 has suffered major setbacks, primarily in response to the fiscal difficulties facing the country and the importance of trade revenues to the government's overall fiscal position (discussed below). This led to backtracking on import liberalization through the introduction of several new taxes. In 1999, the Central Bank raised the commission on foreign exchange transactions for purchasing imported goods from 1.75 to 4.75 percent; this was subsequently raised to 10 percent in 2003, and to 13 percent at the beginning of 2005. Also in 2003 a temporary import duty of 2 percent was imposed on all imported goods (excluding those entering FTZs). Furthermore, a blanket tax on exports was increased to 5 percent in 2003, although FTZ firms successfully lobbied for exempt status. The import tax will be phased out on January 1, 2005, and the export tax expired in July 2004 (the tax regime is discussed further below).

30. Although the recent fiscal reforms eliminated most non-tariff barriers and achieved significant tariff cuts, Dominican producers still benefit from a degree of protection, which provides a significant source of fiscal revenue. The Dominican government relies heavily on trade taxes, although the degree of dependence is falling. Revenues from all trade-related taxes – including tariff revenues, VAT (or ITBIS) on imported goods, export taxes, and the foreign exchange commission – accounted for about 40 percent of total revenues until 2000, the time of the Customs Reform Law, and about 30 percent thereafter (see Table 2.2). Following the reform, import tariff revenue fell from 28 percent of total fiscal revenues in 1999 to 16 percent in 2001, a loss equivalent to 1.8 percent of GDP. In order to compensate for lost revenue, the Dominican authorities raised the ITBIS from 8 to 12 percent under the 2000 Tax Reform Law 147-00. According to calculations in the World Bank's recent Public Expenditure Review (World Bank 2004a), the Dominican Republic's high long-term import price elasticity of -1.39 implies that the long-term increase in demand due to lower import prices should generate more revenues than those lost due to the reduction in tariffs.

**Table 2.2: Import-Related Fiscal Revenue**

	1995	1996	1997	1998	1999	2000	2001	2002	2003
<b>Share of Fiscal Revenue:</b>									
<b>Tariffs</b>	25.6	25.7	25.3	26.3	28.1	26.2	15.6	16.1	13.4
<b>ITBIS on imports</b>	8.2	8.3	8.6	9.0	9.4	9.0	9.6	10.2	8.7
<b>Excise taxes on Imports</b>	1.9	2.0	1.7	1.6	2.5	3.0	3.3	na	na
<b>Foreign exchange commission</b>	0.0	0.0	0.0	0.0	1.6	6.6	5.4	4.7	6.2
<b>Total import-related fiscal revenue</b>	36.2	36.5	36.2	37.6	40.8	39.0	29.0	30.8	32.4
<b>Total fiscal revenue</b>	100	100	100	100	100	100	100	100	100
<b>Share of GDP:</b>									
<b>Tariffs</b>	3.9	3.7	4.1	4.2	4.4	4.2	2.5	2.7	1.8
<b>Total import-related fiscal revenue</b>	5.6	5.3	5.9	6.0	6.4	6.2	4.7	5.2	4.3

Sources: WTO, Dominican Republic Central Bank

31. Current Dominican trade policy retains significant levels of protection, but this is complemented by export promotion efforts – not only through agreements like the CBTPA which increase export market access, but through extensive incentives to free trade zone exporters. The Dominican Republic’s trade performance is a product of this two-pronged, heterodox trade policy.

32. The preceding discussion describes the country’s trade policy environment that promotes FTZ exports and preferential access to the US market while protecting domestic industry through trade barriers. But numerous factors beyond trade policy – including policies indirectly affecting trade and the functioning of trade-supporting services and trade logistics infrastructure – are important for trade outcomes as well. This remainder of this chapter addresses these related issues.

## II. Non-Tariff Incentives and Disincentives

33. Issues of trade and competitiveness are far-reaching, given that firms’ ability to trade externally on competitive terms depends on a wide variety of factors. These factors have a border component, affecting the entry and exit of goods and services, and a behind-the-border component, affecting production processes and import, export and investment decisions. For example, tariffs act as a tax incentive at the border, but behind-the-border incentives include the corporate tax rate, labor taxes, and capital controls, inter alia. Other issues that affect trade and competitiveness through the domestic economy and FDI include institutional effectiveness, governance, property rights, political stability, quality of labor and skills matching, and the regulatory framework. The macroeconomic environment and in particular the management of the economy and the exchange rate, are essential to encouraging trade, and trade in turn has a potentially important role in stimulating production, employment and welfare improvements. This section of the analysis provides an assessment of these behind-the-border issues and their implications for competitiveness.

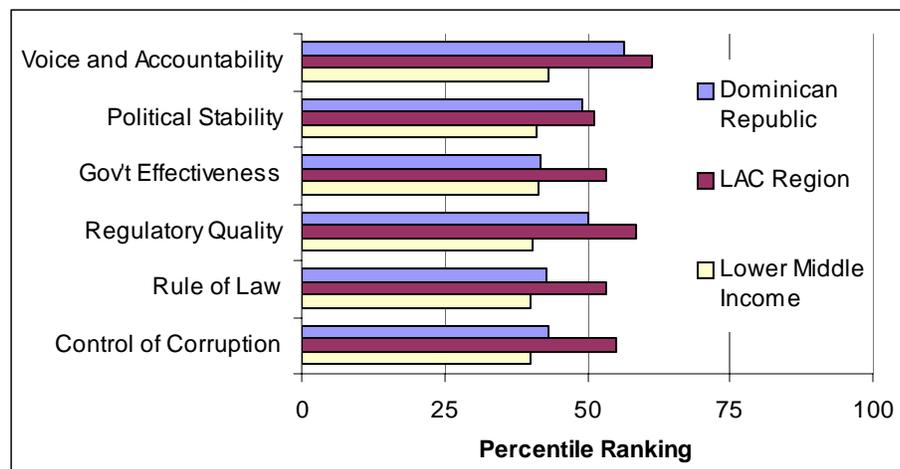
### A. Institutions

34. There is a growing literature on the links between growth and institutions. Institutions that support markets and reinforce incentives for growth are wide-ranging. They act through defining and enforcing contracts and property rights, supplying information to economic agents with respect to market conditions and quality of goods, and they promote competition (World Bank 2002a). Institutions – whether formal and public such as laws and the legal system to enforce them, or informal and private such as norms and implicit contracts for credit provision – can contribute positively to growth by increasing market efficiency, encouraging new entry and investment through reduced risk and lower transactions costs, and minimizing uncertainty. Highly industrialized countries are characterized by “a strong state that can support a formal legal system that complements

existing norms and a state that itself respects the laws and refrains from arbitrary actions” (p. 4 of World Bank 2002a). Cross-country evidence suggests that the institutional setting is key to enhancing or sabotaging growth outcomes in the context of trade liberalization or other reforms. For example, Rodrik et al. (2002) find empirical support for the fundamental contribution of institutions to national income levels, and conclude that institutions relating to property rights and the rule of law are more important than geography and integration into world markets.

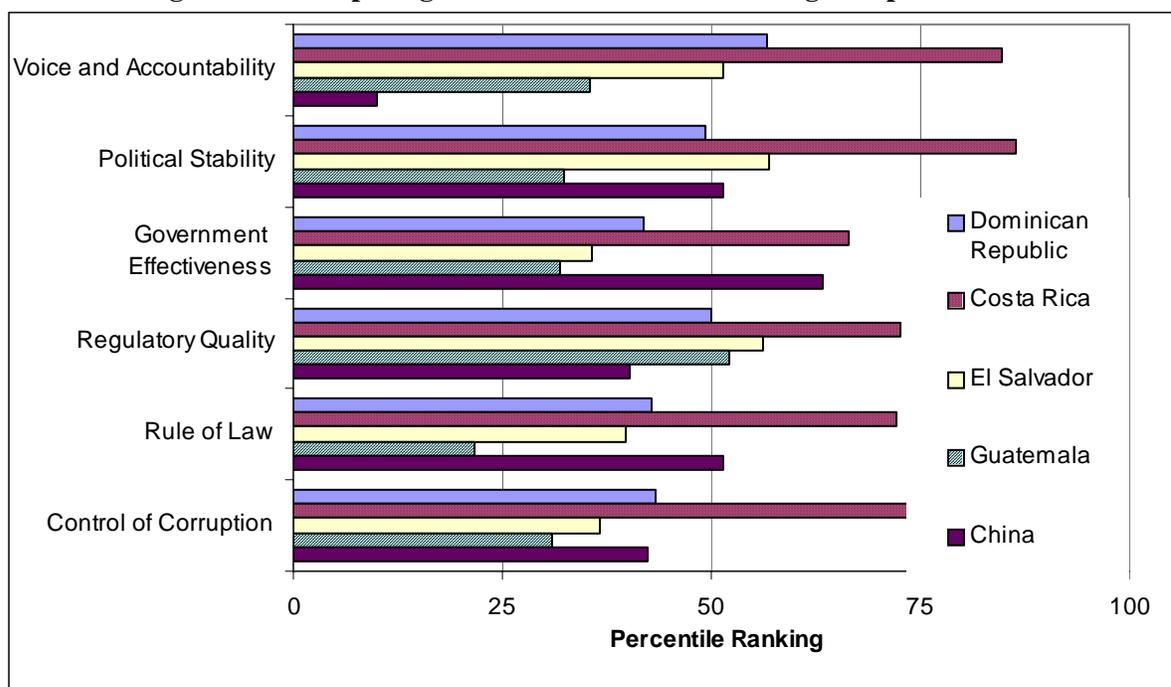
35. The institutional setting in the Dominican Republic can be compared to other countries through a benchmarking exercise using a series of governance indicators developed by Kaufmann et al. (2003). These indicators are based on a range of surveys conducted in 199 countries by a host of organizations, the results of which are aggregated into a comparative index (see Kaufmann et al. 2003 for details). Six perception-based indicators provide guidance in assessing the institutional framework: voice and accountability, political stability, government performance, regulatory quality, the rule of law, and the control of corruption. As illustrated in Figure 2.5 below, the Dominican Republic in 2002 scored between the 43<sup>rd</sup> and 57<sup>th</sup> percentiles of the entire sample of 199 countries (a higher ranking indicates better performance). The Dominican Republic ranks above its lower middle income comparators, but below the LAC region. Comparing the Dominican Republic’s institutional environment to some of its competitors in Central America (see Figure 2.6), Costa Rica far outperforms the Dominican Republic and all its neighbors, ranking in the 72<sup>nd</sup>-87<sup>th</sup> percentiles worldwide, but the Dominican Republic mostly comes out ahead of the other Central American countries. In each category, Mexico is perceived to have a better institutional setting than the Dominican Republic, although still falling short of Costa Rica. And finally, although China’s political environment greatly limits voice and accountability, at the same time it facilitates political stability, government effectiveness and the rule of law, all of which reflect growth-promoting institutions.

**Figure 2.5. Governance Indicators 2002**



Source: Kaufmann et al. (2003)

**Figure 2.6. Comparing Governance Indicators among Competitors 2002**



Source: Kaufmann et al. (2003)

36. Firms' productivity and ultimately their ability to compete are directly affected by the quality of institutions that intersect with commercial operations. Consider, for example, the role of the judiciary in enforcing contracts. A 2001 survey of a sample of 95 foreign and domestic investors operating in the Dominican Republic highlighted concerns about the quality of the judiciary in supporting and enforcing commercial legal agreements. Although only a small percentage reported that the court system was a major obstacle to their operations, about half of respondents rated the courts ineffective in handling litigation and enforcing decisions (Foreign Investment Advisory Service 2002). According to the World Bank's Doing Business comparative indicators on contract enforcement (World Bank 2004c), some twenty-nine procedures are required between the time a plaintiff files a lawsuit to the actual payment of the final settlement, with associated costs in court and attorney fees equivalent to 35 percent of the debt value, and taking an average of 580 days to complete. In this last regard, the Dominican Republic compares poorly with the LAC regional averages (462 days) and with other regions.

37. The Executive Opinion Survey conducted annually by the World Economic Forum to assess competitiveness in the global context reveals a below-average performance of the Dominican Republic's public institutions, ranking the country 64th out of 102 countries in the 2003 survey (World Economic Forum 2003). This reflects little change from 2002's ranking of 60 out of 80 countries, given the expanded survey coverage (Vial 2002). Weak public institutions can be particularly harmful to economic growth and competitiveness by counteracting reform efforts through delays and discontinuity, a major issue in the Dominican Republic. Other institutions, namely property rights, have implications for attracting investment and promoting technology and innovation. Intellectual property provisions affecting foreign investors (as measured by the technology transfer index) compare well globally, ranking 13<sup>th</sup> overall and 5<sup>th</sup> in Latin America and the Caribbean (behind Brazil, Mexico, Costa Rica and Panama and just ahead of Trinidad and Tobago). Under the forthcoming free trade agreement with the US and Central America (DR-CAFTA), the Dominican Republic agreed to provisions that will protect trademarks and intellectual property rights (discussed

in Chapter 4). With respect to legal protections and contract enforcement, however, investors perceived the Dominican Republic to lie in the middle of the sample, ranking 53<sup>rd</sup> out of 102 in 2003. The prevalence of bribes, impact of crime and police effectiveness also rank the Dominican Republic in the bottom third – a marked decline from 2002 – suggesting that foreign investors are likely to look elsewhere, other things being equal (World Economic Forum 2003, Vial 2002). These findings are consistent with the 2001 survey of investors conducted by the Foreign Investment Advisory Service (FIAS): 26 percent of respondents reported that corruption impedes operations, and more than half made regular off-the-books payments, or bribes.

## **B. Regulation**

38. One particular aspect of the institutional setting that has direct implications for growth is the regulatory environment. Whereas the regulatory function of the state is crucial to ensure service delivery quality, equitable access, worker and consumer protections, and sound financial practices, achieving the right mix of regulations – in other words, balancing protection and facilitation – is very difficult. Certain regulations prove onerous to producers, and as such act as a disincentive to entry or investment. Regulations are costly, both directly through fees and administrative requirements, and indirectly through evasion, corruption and/or the unproductive use of resources for lobbying efforts. This impact is contrary to the beneficial role of institutions that promote the rule of law. Indeed, Bolaky and Freund (2004) document a negative correlation between regulation and the rule of law.

39. The investment environment survey cited above found that government regulations and taxes posed the greatest obstacle to Dominican firms' competitiveness (for firms outside the free trade zones). And among the plethora of rules governing private sector producers, the following were identified as most restrictive: land titling and registration, customs and other trade rules, business licensing, tax regulations and administration, and construction permits (Foreign Investment Advisory Service 2002).

40. Whereas it is important to consider the business climate in the Dominican Republic in an absolute sense, understanding how the Dominican Republic compares to other countries is critical, since this analysis is looking through the lens of competitiveness. This analysis compares the regulatory requirements and procedures associated with firm entry, operation, and exit, with a view to understanding whether the Dominican Republic offers investors an attractive environment vis-à-vis its competitors. This is relevant both for attracting foreign investment as well as the efficient provision of domestic inputs and services.

41. Entry costs. This comparative exercise relies on the World Bank's Doing Business indicators. Table 2.3 below summarizes country performance with respect to the number of procedures needed to set up a new business and the time and money required to complete them. With respect to procedural and time requirements, the Dominican Republic rates around the regional average for Latin American and the Caribbean, but is less conducive to entry compared to other regional averages. Although the number of entry procedures fell from 20 to 10 in the Dominican Republic in the past few years, the number of days remains high at 78, compared to only 39 in Guatemala, 31 in Jamaica, and 58 in Mexico.

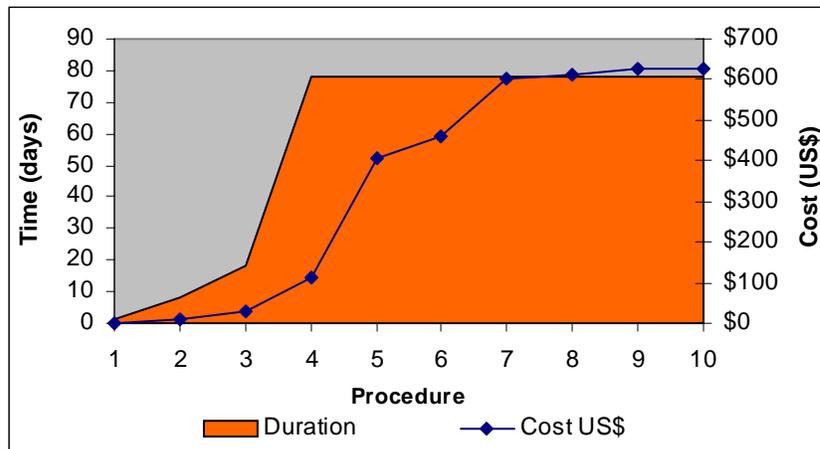
**Table 2.3: Starting a Business**

	Number of Procedures	Number of Days	Cost (% GNI per capita)
East Asia & Pacific	8	52	47.1
Europe & Central Asia	9	42	15.5
Latin America & Caribbean	11	70	60.4
Middle East & North Africa	10	39	51.2
OECD: High income	6	25	8.0
South Asia	9	46	45.4
Sub-Saharan Africa	11	63	225.2
Dominican Republic	<b>10</b>	<b>78</b>	<b>25.4</b>
Costa Rica	11	77	25.7
El Salvador	12	115	128.0
Guatemala	15	39	62.8
Haiti	12	203	176.1
Honduras	13	62	72.9
Jamaica	7	31	15.4
Mexico	8	58	16.7
Nicaragua	9	45	170.1

Source: World Bank 2004c

42. Figure 2.7 delineates the types of procedures and the time and cost associated with each step. Note that procedures 8-11 can be completed concurrently with previous steps.

**Figure 2.7. Procedures to Start a Business in the Dominican Republic**



- |                                       |   |
|---------------------------------------|---|
| 1 Deposit paid-in capital in the bank | 6 Notarize documents                    |
| 2 Check company name                  | 7 Register with Mercantile Registration |
| 3 Publication of company name         | 8 Register with DGII                    |
| 4 Register company name               | 9 Register with department of labor     |
| 5 Payment of taxes                    | 10 Register with social security        |

Source: World Bank 2004c

43. This benchmarking exercise follows the chronology of establishing, operating and closing a business. Once a firm is established, its productivity level is the result of both firm-specific factors

(e.g., quality of inputs, technology, management effectiveness) and the broad regulatory environment in which it operates.

44. Export requirements. The logistical requirements for exporting and importing goods and the bottlenecks related thereto are discussed in detail below. It is also informative to examine the administrative and financial costs faced by Dominican producers, particularly those in the protected sector (i.e., outside the free trade zones). According to the Association of Dominican Exporters (ADOEXPO), exporters are required to obtain numerous documents – beginning with the commercial bill, sworn declaration of goods, certificate from the relevant ministry, CEDOPEX request for inspection, certificate of origin, various customs inspections forms depending on export destination, establishing an account at a commercial bank, and requesting the peso counterpart of foreign exchange from the Central Bank to be deposited into the exporter’s commercial bank account – belying burdensome administrative procedures at a substantial costs estimated at US\$150 on average, excluding internal transport and freight costs. Although the authorities have tried to implement a one-stop window to streamline export procedures, there are only 2 functioning for the entire country. On this basis, the Dominican Republic is at a competitive disadvantage with respect to Central American competitors: ADOEXPO estimates that the numerous steps required of Dominican exporters add up to a full day, compared to the efficient one-stop windows and substantially lower fees in Costa Rica (10 minutes, US\$21), El Salvador (5 minutes, US\$15), Guatemala (30 minutes, US\$16), Honduras (40 minutes, US\$14), and Nicaragua (1 hour, US\$14). The regulatory framework for firms in the free trade zones is markedly simpler, since even customs clearance is handled within the zones and the various fees are waived (discussed more below).

45. Import requirements. Importers also face considerable obstacles. Delays on shipments in port arising from customs clearance procedures are documented in detail below. It is particularly notable that for all shipments valued over US\$100 (except for imports into the FTZs), importers must obtain a consular invoice from the Dominican consulate in the country of origin, or pay US\$400 for countries with no consulate. The Dominican Republic is among very few countries in the world that have retained the consular invoice requirement which predates the information age.

46. Land titling. According to a 1998 investor roadmap study (The Services Group 1998) and the 2001 FIAS survey (Foreign Investment Advisory Service 2002), land titling and registration requirements and delays associated thereto represent one of the greatest impediments for investors looking to start new businesses in the Dominican Republic (23 percent of FIAS survey respondents report it to be a major obstacle, with another 21 percent asserting it as a moderate obstacle). Reforms are ongoing, but the challenges are many, given the out-of-date paper land registry, manual searches for title or zoning confirmation, average 8-month delay for property development approval, and up to 8 months to confirm a property’s zoning. The impact of these delays goes beyond direct uses of land to indirect uses such as collateral for credit. Although land courts are in place to resolve disputes, they are ineffective. Weak land titling and registration systems are evidenced by the fact that up to a third of Dominican property lacks certain titles, giving rise to a significant informal real estate market (Foreign Investment Advisory Service 2002).

47. Investment laws. In 1995, Foreign Investment Law 16-95 was adopted which generally eased foreign investment requirements by reducing red tape, allowing the equal treatment of foreign and national investors, and eliminating restrictions on profit “repatriation”, thereby promoting FDI (discussed further below).<sup>6</sup>

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<sup>6</sup> See WTO (2002) Table II.1 for a list of laws and regulations related to foreign trade.

48. Labor regulations. Within the period of reforms initiated in the early 1990s, a labor code was passed into law in 1992 after considerable tripartite consultation. The laws defined in this code are fairly comprehensive, covering working time requirements, maximum number of hours in a normal workweek, premium for overtime work, mandatory payment for annual leave and holidays, and minimum wage legislation (Secretaría de Estado de Trabajo 1999).<sup>7</sup> Minimum wages are set about every two years, and are defined for 16 different sectors (hotels and restaurants, FTZs, FTZs in economically depressed areas, agriculture, heavy machinery operators in construction, heavy machinery operators in agriculture, carpenters, electricians, plumbers, painters, sugar industry, brick layers, other construction work, vendors, non profit organizations, shoe and belt maker/repair, and other private sector) and for different occupational, regional and firm-size categories, giving rise to a plethora of legislated minimum wages.<sup>8</sup> The degree of compliance with minimum wage laws is relevant, however, and the labor force survey data from April 2003 indicate that nearly 9 percent of those reporting wages earn less than the agricultural minimum wage of RD\$8/hour in effect (the economy-wide average wage was RD\$32/hour).<sup>9</sup> This is considerably higher than the 4 percent earning minimum wage estimated by Sánchez-Fung (2000) for the mid-1990s.<sup>10</sup> A recent study suggests that the impact of minimum wages in Latin America and the Caribbean is ambiguous, reducing labor demand and increasing unemployment and shifts into the informal sector, but potentially raising welfare through higher wages in the informal sector by providing a benchmark for wage setting (World Bank 2003a).

49. Most other countries in Latin America and the Caribbean have multiple legal minimum wages. The degree to which minimum wages affect wage levels in the rest of the economy varies from country to country. In the Dominican Republic, minimum wages have risen in real terms since the early 1990s, although they dipped lower in 2003 concurrent with the economic crisis and sharp rise in inflation (see Figure 2.8). In the sectors for which it is possible to make the comparison – namely agriculture and industry – real average and minimum wage movements are closely correlated, both tracking inflation, but average wage fluctuations are much more volatile.

50. Because employers and potential investors care not only about labor cost but also labor quality, availability, and flexibility of hiring and firing, it is important to understand how Dominican labor compares internationally in these aspects. A foreign investor's perception survey carried out in 2004 ranked the Dominican labor force as the most attractive in the Caribbean, ranking first with respect to availability of skills ranging from professional to unskilled, labor productivity, labor relations, and labor market flexibility (Foreign Investment Advisory Service 2004). Another comparative indicator of hiring and firing conditions – part of the World Bank's Doing Business indicators – ranks the Dominican Republic as one of the least rigid countries for hiring, and slightly more rigid for firing, although both indices are below the LAC average (see Figure 2.9). With respect to rigidity of hours and firing costs, however, the Dominican Republic ranks worse than East Asia and the Pacific.

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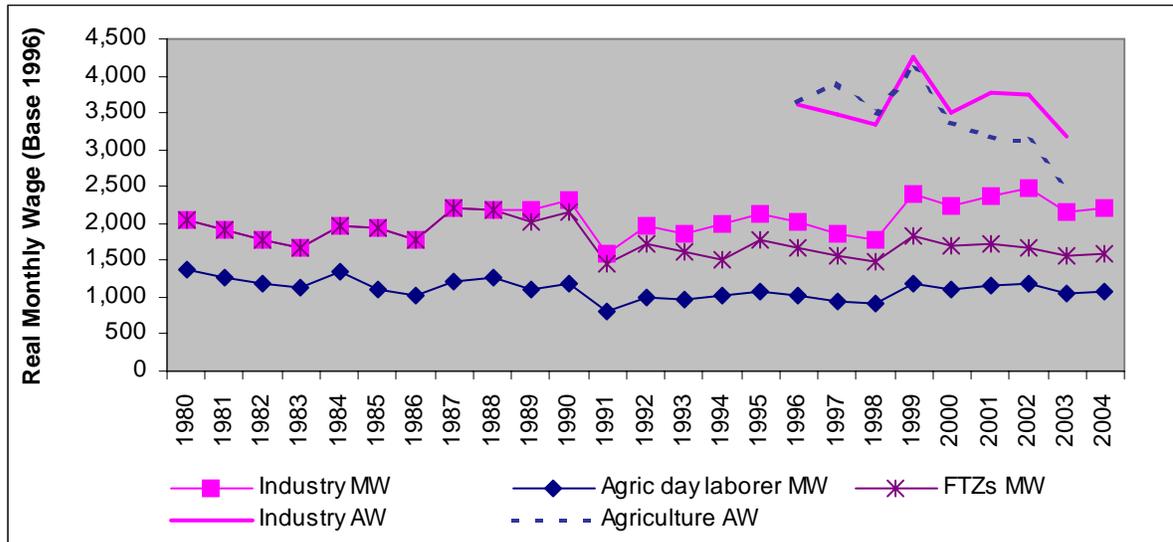
<sup>7</sup> The government is currently working on a White Book – part of a regional cooperation exercise with Central American countries – to review its regulatory stance and foster better compliance.

<sup>8</sup> As of July 2004, the following monthly minimum wages were in effect: RD\$4,920 for an industry worker in large firms with assets over RD\$500,000, RD\$3,380 for medium-sized firms, and RD\$3,000 for small industry-sector firms with less than RD\$200,000 in assets, RD\$2,383 for agriculture day laborers (equivalent to RD\$10/hour), RD\$4160 for private security guards, RD\$3,561 in FTZs, RD\$1,690 for FTZs in economically depressed areas, RD\$3,975 in large hotels or restaurants (i.e., assets over RD\$500,000), RD\$2,835 in medium hotels or restaurants, RD\$2,560 in small hotels or restaurants, and RD\$1,580 for agriculture sugar workers. In October 2004, a 30 percent increase in the industry-sector minimum wages was approved, and the minimum for agriculture day laborers was raised to RD\$13/hour.

<sup>9</sup> Note that this is a lower bound, since the minimum wage in other sectors is higher.

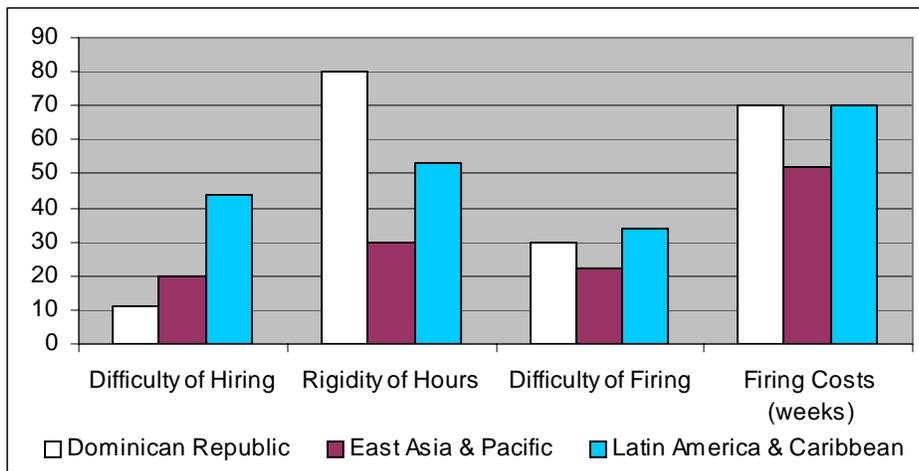
<sup>10</sup> Different methodologies mean that these calculations are not strictly comparable.

**Figure 2.8. Evolution of Real Wages (Minimum and Average)**



Source: Secretaria de Estado de Trabajo

**Figure 2.9. Comparing Employment Indices**



Source: Doing Business (World Bank 2004c)

51. Other labor regulations that affect Dominican competitiveness by raising the cost of labor include social protections such as social security, emergency benefits (e.g., for family death, sick leave, maternity leave), accident insurance, and the training tax equivalent to 1.5 percent of payroll (1 percent paid by the employer, 0.5 percent paid by employees) which goes to finance the government's in-service training institute INFOTEP. A new social security system was recently introduced – passed in 2001 with a multi-year phase-in period – which provides for contributory pensions and health insurance, survivor benefits, disability, sick leave and maternity leave. The pension system is based on individual savings accounts but also makes provision for a minimum pension, financed through solidarity contributions. Shared by employers and employees (divided 70 percent: 30 percent), the total pension payroll contribution currently amounts to 7.5 percent of a workers' salary, and will rise to 10 percent when fully implemented.<sup>11</sup> Contributions are capped at salaries of 20 times

<sup>11</sup> The Social Security Law stipulates that contribution rates would be phased in over a period of 5 years, starting at 7 percent in year 1 (1.98 percent by the employee, 5.02 percent by the employer), and finishing at 10

the minimum wage. The new pension system replaces the severance/retirement benefit (*cesantía*) previously paid by employers to separated workers, as stipulated in the labor code (equivalent to one month's salary per year of tenure). However, there remain questions of legality, and many employers continue to pay both, implying a double burden on the employer, which proves extremely costly, even if only for a transitional period. Operational weaknesses of the new system include poor compliance on contributions, inadequate enforcement, and information shortcomings regarding firms' personnel and pay records.

52. The health insurance program covers medical costs, prescriptions (partial coverage), sick pay, maternity leave, and infant and pre-school child benefits. As with the pension scheme, contributions are to be shared by employers (70 percent) and employees (30 percent), with a total contribution rate equivalent to 10 percent of a worker's salary.<sup>12</sup> Contributions will be capped at salaries of 10 times the minimum wage. Accident insurance is fully financed by employers under a separate scheme, at a cost ranging from 1 percent to 1.6 percent of the payroll, depending on the risk profile of the sector, and averaging 1.2 percent of payroll.

53. Total mandatory payroll charges for social security and related programs amount to 22.7 percent in the Dominican Republic (excluding the *cesantía*).<sup>13</sup> Although this represents a large increase since the introduction of the Social Security Law, which will certainly hurt labor demand by raising labor costs, the ultimate level of payroll contributions actually compares quite favorably to those prevailing in Central America, which range from 30.2 percent in El Salvador to 45.6 percent in Costa Rica (Centro Internacional para el Desarrollo Humano 2004).

54. Additional labor costs arise at the end of the calendar year when employers pay an extra month's Christmas bonus known as the *salario doble*; this practice is prevalent throughout the economy. Other costs borne by many employers – but not stipulated in the labor code – include food support (about 10 percent of workers received food payments in April 2003), housing (1.4 percent) and transportation allowances (6 percent).

55. Taken together, the various social insurance mechanisms – once fully implemented – are comprehensive in the types of coverage they provide, but at a substantial cost. It is not surprising therefore that many firms evade charges by operating in the informal sector, and we may observe additional shifts to informality as the social security law comes on board. As will be seen in Chapter 5 below, two-fifths of workers are self-employed (comparable to Central American levels), and more than half of all workers work in very small firms of 1-4 workers, leading to the conclusion that although investors do not perceive Dominican labor regulations to be burdensome, there is nevertheless significant evasion.

56. Exit costs. Another factor affecting investment decisions of both foreign and domestic investors as well as the competitiveness of domestic firms concerns the time and costs associated with shutting down operations such as for example through bankruptcy, which in turn affects the productive use of capital. Based on a survey of lawyers, accountants and judges involved in bankruptcy proceedings, the Doing Business indicators assess the effectiveness of bankruptcy laws and any bottlenecks emerging as a result of procedural requirements or the administration thereof (for more detail on methodology, see World Bank 2004c). The average Dominican business is estimated

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percent in year 5 (2.88 percent by the employee, 7.12 percent by the employer). The phase-in has been delayed, however.

<sup>12</sup> The health insurance contribution system is not yet functional.

<sup>13</sup> Seventy percent of these charges are borne by employers, but the resulting high cost gets passed on to workers in the form of lower salaries.

to require 3 and a half years to achieve insolvency, at a cost of 8 percent of the estate (considerably less costly than most countries in the survey) and with a low estimated recovery rate of 17 cents on the dollar. With respect to reaching the three goals of insolvency established in Hart (2000), the Dominican Republic ranks below average for the LAC region, and on par with the regional averages for South Asia and Sub-Saharan Africa.

57. Recent empirical research by Bolaky and Freund (2004) finds a significant negative impact of regulation on economic growth. Creating an index of observed regulations using the World Bank's Doing Business indicators, the authors test the degree to which trade, country size, geographic factors, the rule of law (i.e., institutions) and the regulatory framework affect per capita income growth. Cross-country regressions on a sample of 108 countries indicate an important threshold effect, namely that not only do regulations lower growth, but in countries with the most regulation, trade openness also inhibits growth. On the other hand, the trade-specific contribution to growth is much more positive when controlling for the regulatory environment. Plugging in the results for the Dominican Republic, which ranks in the 60<sup>th</sup> percentile for quality of regulations, a 1 percent increase in trade openness results in a 0.1 percent *decline* in GDP (recent calculations by Bolaky and Freund). To consider the potential growth impact of improving the regulatory environment, we simulate an improvement in the regulatory burden to a level comparable to that of Chile (which ranks in the top third in terms of regulatory ranking); the results indicate the trade impact on growth would be positive and on the order of 0.1 percent.

### C. Taxes

58. The analysis that follows examines the incentive regime in which Dominican producers operate, whether for export or the domestic market. Both types of producers are subject to a range of taxes, in addition to the import tariffs discussed above, that reduce profit margins and thus diminish competitiveness.

59. Corporate tax. The corporate tax rate on firm profits net of expenses, depreciation and interest payments is 25 percent (lower rates apply to firms with annual sales under RD\$6 million). In 2001, a monthly turnover tax was introduced, which effectively facilitated consistent revenue flows to the treasury and acted as a pre-payment of the profit tax. Equivalent to 1.5 percent of assumed annual sales over RD\$6 million<sup>14</sup>, the tax limits firms' liquidity – particularly when sales fall short of preceding year levels and/or when sales are on the basis of credit rather than cash. Moreover, the 1.5 percent tax effectively becomes a final tax in cases in which the corporate tax liability is less. The turnover tax design is distortionary on several fronts: the marginal tax rate imposes a relatively high cost for high-volume, low value-added firms; the demand for upstream products declines since each subsequent transaction is taxed, thus encouraging vertical integration rather than promoting intra-industry trade and specialization; and the tax imposes liquidity constraints particularly for long-term investments such as technology upgrades that become even more expensive because short-term sunk costs are not eligible for tax relief (Freund 2002). On the other hand, the tax is simple to administer and reduces incentives for evasion, particularly since the tax is effectively passed on to consumers through higher prices.

60. ITBIS. A value-added tax on the transfer of industrialized goods and services (ITBIS) was introduced in 1983 and raised from 8 percent to 12 percent in 2001, and subsequently raised to 16 percent in October 2004. Exports are not subject to the ITBIS, nor is a long list of exceptions, whether imported or produced locally – including many agriculture products and inputs, books,

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<sup>14</sup> Lower tax rates apply to smaller firms: 0.75 percent of sales up to RD\$2 million, 1 percent for annual sales equivalent to RD\$2-4 million, and 1.25 percent for annual sales equivalent to RD\$4-6 million.

petroleum products and medicine, as well as goods imported by public agencies and imported machinery and equipment into the FTZs (see Cury et al. 2004 for more detail). Moreover, many small and micro firms are excluded from the ITBIS because they fall below the minimum level of gross sales equivalent to RD\$2 million. The administration of the ITBIS collection suffers from deficiencies, including refund mechanisms – particularly relevant for exporters who are owed duty refunds on imported inputs but are not compensated in practice. This not only violates the WTO equal treatment clause due to come into effect in 2010, but also puts exporters at a competitive disadvantage. A duty-drawback system created in 1999 (under Law 84-99) but still not operational was intended to refund ITBIS charges as well as duties and customs taxes on raw material imports used to produce exported goods (Freund 2002).

61. Excise tax. Selective taxes apply to particular consumption goods, primarily alcohol, tobacco, oil, cars, and jewelry, inter alia. These excise taxes range from zero to 80 percent, with rates for alcohol and tobacco falling between 25 and 50 percent, and the highest rates applying to luxury vehicles (Cury et al. 2004). Excise taxes typically apply to imports only. For alcohol and tobacco products, however, mark-ups of 20-30 percent are applied for calculating the tax burden, thereby equalizing the value on which the tax is paid to ensure equal treatment of imports and domestically produced goods, as required under WTO membership (Cury et al. 2004).

62. Other trade-related taxes. Several trade-related taxes are in effect, some of which were introduced as temporary measures to mitigate declining fiscal revenues following trade reform. For example, until recently all foreign exchange purchases – primarily from the Central Bank – were subject to a 4.75 percent commission fee. This fee was originally introduced in 1991 at a much lower 1.75 percent rate, and subsequently raised to 5 percent in 1999. In August 2002, this commission was effectively limited to import purchases, and in October 2003, the rate was raised to 10 percent, and subsequently to 13 percent.

63. All exports outside of the FTZs were subject to a 5 percent export tax introduced in October 2003, for a temporary period that ended July 6, 2004. And finally, as mentioned above, a supplemental 2 percent import duty was introduced in July 2003 as a temporary fiscal measure (set to expire December 31, 2004).<sup>15</sup> Taken altogether (Table 2.4 contains a summary), the tax regime affecting producers outside the free trade zones imposes a significant burden (see Box 2.1 for a counterexample of a non-FTZ firm successfully competing). These taxes – cumulatively creating a large wedge – act as a non-tariff barrier to trade that hinders the capacity of Dominican firms to compete on the world stage.<sup>16</sup>

64. Free-trade zones. As the name implies, free trade zones – or *zonas francas* – do not fall under the above-described tax regime. Created to promote the non-traditional (i.e., non-agriculture) export sector, the FTZs attract investors by reducing the cost of imported inputs, facilitating production and exports through streamlined procedures including on-site customs clearance, and providing easier access to land, quality infrastructure and related services within the industrial parks. As a result, FTZ producers – whether foreign or domestically owned – are insulated from the protectionist framework facing domestic producers. Tax exemptions defined by Law 8-90 are as follows: corporate income tax; construction, loan agreement, real property recording and transfer taxes; company incorporation and capital increase taxes; municipal taxes; import duties and related taxes on raw materials, equipment, construction materials, parts for buildings, office equipment, etc.

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<sup>15</sup> FTZ imports are excluded.

<sup>16</sup> Traditionally defined non-tariff barriers in the sense of import quotas are also present in the Dominican Republic, providing protection for domestic producers of 8 agricultural products: sugar, corn, onions, garlic, rice, poultry, milk, and beans.

### **Box 2.1: Keys to Competing at Home and Abroad**

Multiquímica is a privately held group of five separate companies that produce chemicals and plastics for industrial uses, primarily for paint and varnish products (long, medium and short alkyds, polyester resins, plasticizers (e.g., to make PVC), and acrylic dispersions), as well as final products such as metal storage barrels targeting other industrial producers, and warehousing facilities. Established in 1985, the company became the main supplier of raw materials to Dominican paint manufacturers. In 1992, Multiquímica started targeting external markets, expanding into Haiti and Puerto Rico initially, but subsequently penetrating markets in the Caribbean and Central America.

Several factors have contributed to Multiquímica's competitive position:

- regular upgrading of sophisticated technology
- products have many industrial applications and occupy a key market niche
- low overhead
- small structure, enabling strong client orientation, support and rapid response
- high quality of labor and good entry-level compensation (recruit new hires with at least a secondary education, compensate them at RD\$8,000 per month (nearly twice the minimum wage), and provide in-house and external training)
- identified and developed external demand for Multiquímica's products (most Dominican firms have difficulty doing this), thereby diversifying risk away from domestic market shocks

Located on the edge of Santo Domingo outside of any free trade zones, Multiquímica was accepted for FTZ status in 1999 but delayed joining until 2003, when the imposition of the 5 percent export tax made it sufficiently advantageous. Although its offsite location required hiring a full-time customs clearance agent stationed within Multiquímica's physical plant, advantages of FTZ membership have included duty-free entrance of raw materials, customs clearance of imports in 24 hours compared to 3-4 days under the national regime, and no profit tax or 1.5 percent turnover tax.

intended for construction, preparation or operation within the FTZs; export or re-export taxes; business tax on inventory or assets and the ITBIS; consular charges on imports; import duties on materials and equipment for housing or staff facilities, and transportation vehicles. These fiscal incentives are available for 15 years, and 20 years in border region FTZs near Haiti, although in practice, tax-free treatment has been extended beyond these time limits (consistent with stipulations in the law). Firms located within the FTZs are permitted to sell up to 20 percent of total production on the domestic market, but must pay the relevant import duties and other taxes on these sales.<sup>17</sup> Law 8-90 – passed in 1990 – also tried to strengthen the links between domestic and FTZ firms by exempting from duties raw material imports by domestic firms which are transformed into inputs for FTZ producers (Lizardo and Guzman 2001). In reality, however, the extent of linkages remains low, as discussed in Chapter 3, in large measure because preferential access to US markets requires US-sourced inputs, particularly for apparel exports.<sup>18</sup>

<sup>17</sup> In 2002, only 2 percent of FTZ output was sold domestically. New firms seeking entrance into the FTZs are required to export 95 percent of their total output in the first year, a new requirement not stipulated in the law but rather imposed by the approving agency. This in effect precludes existing domestic producers from obtaining the same fiscal advantages available to FTZ firms.

<sup>18</sup> Recall that rules of origin under the new DR-CAFTA agreement will be expanded to include Canadian and Mexican inputs.

**Table 2.4: Policy Framework Variations and the Dual Economy**

	<b>Industry</b>	<b>FTZs</b>	<b>Tourism</b>	<b>Telecoms</b>	<b>Agriculture</b>
<b>Labor Legislation</b>	Min. wage: RD\$4920/mo.; less for smaller firms <sup>1</sup>	Min. wage: RD\$3561/mo.	Min. wage: RD\$3975/mo.; less for smaller firms <sup>2</sup>	Min. wage: Same as Industry	Min. wage: RD\$100/10-hour day
	Profit sharing 10% (up to 2 mos. salary)	No profit sharing	Profit sharing 10%	Profit sharing 10%	Profit sharing 10% (except entities with <RD\$1mn registered capital); agro-industry firms exempt for 3 years
	6.57% Social security tax, employer's portion; to be raised to 15.32% for employers and 5.88% for employees <sup>3</sup>	6.57% Social security tax, employer's portion; to be raised to 15.32% for employers and 5.88% for employees <sup>3</sup>	6.57% Social security tax, employer's portion; to be raised to 15.32% for employers and 5.88% for employees <sup>3</sup>	6.57% Social security tax, employer's portion; to be raised to 15.32% for employers and 5.88% for employees <sup>3</sup>	6.57% Social security tax, employer's portion; to be raised to 15.32% for employers and 5.88% for employees <sup>3</sup>
	INFOTEP 1.5% <sup>4</sup>				
	Pre-aviso	Pre-aviso	Pre-aviso	Pre-aviso	Pre-aviso
	Severance = 1 month salary/year of tenure				
	Salario doble				
	<b>Tax Regime</b>	25% Corporate income tax/ 1.5% Minimum tax on gross receipts (refundable)		25% Corporate income tax/ 1.5% Minimum tax on gross receipts (refundable)	1.5% Minimum tax on gross receipts (refundable)
16% ITBIS, some exemptions <sup>5</sup>			16% ITBIS, some exemptions <sup>5</sup>	16% ITBIS, some exemptions <sup>5</sup>	16% ITBIS, some exemptions <sup>5</sup>
			10% service tax (earmarked for labor)		
13% Foreign exchange commission on imports <sup>6</sup>			13% Foreign exchange commission on imports <sup>6</sup>	13% Foreign exchange commission on imports <sup>6</sup>	13% Foreign exchange commission on imports <sup>6</sup>
5% Export tax (expired July 2004)			5% Export tax (expired July 2004)	5% Export tax (expired July 2004)	5% Export tax (expired July 2004)
2% Supplemental import tax, expired end-2004			2% Supplemental import tax, expired end-2004	2% Supplemental import tax, expired end-2004	2% Supplemental import tax, expired end-2004
			Some tax holidays		
<b>Competition and Protection</b>	High tariffs	Highly competitive	Highly competitive	Highly competitive	High tariffs
	Import quotas				Import quotas
	State-owned enterprises				Gov't import monopoly of some products
					Gov't intervention in distribution and retail channels

<sup>1</sup> RD\$3000/mo. in firms with net worth<RD\$200,000; RD\$3380/mo. in firms with net worth RD\$200,000-500,000).

<sup>2</sup> RD\$2560/mo. in firms with net worth<RD\$200,000; RD\$2835/mo. in firms with net worth RD\$200,000-500,000).

<sup>3</sup> When Social Security Law is fully in place, charges will cover pensions (10% total), health (10% total), and accident insurance (1.2%, paid fully by employers).

<sup>4</sup> Employers' contribution=1%, employees contribution=0.5%.

<sup>5</sup> Raised from 12% under the new tax reform law effective October 2004.

<sup>6</sup> Recently raised from 10%.

Sources: World Bank (2000), Cury et al. (2004), Ministry of Labor

65. These tax incentives are heightened by market access to the US, particularly for the textiles and apparel sector (which accounts for half of all FTZ activity), under the CBI and successor agreements in which US duty-free access requires US-sourced inputs. This special status discourages backward linkages to the rest of the Dominican economy, however, thereby limiting the growth impact of FTZs. For example, an FTZ firm desiring to expand its plant can get less expensive raw

materials and better quality equipment from abroad rather than purchasing them domestically. This is further exacerbated by the import-competing protection measures that keep domestic products uncompetitive. This combination of incentives reinforces the dual nature of the Dominican economy and inhibits greater linkages with the domestic economy that could otherwise transmit growth-promoting external demand impulses. Although the expansion of FTZ exports over the past two decades has been impressive, the contribution to overall GDP growth has been limited, given that by 2003, FTZ exports accounted for less than 3 percent of GDP. The growth decomposition analysis presented below examines in more detail the role of FTZs in generating economic growth.

66. Whereas the Dominican Republic's FTZ-based export-promotion strategy was successful in increasing export volumes and outward orientation, the degree of trade openness measured by trade flows as a share of GDP did not rise, suggesting that the anticipated growth gains from trade (i.e., dynamic increasing returns) did not materialize. Instead, the economy developed a dualistic structure, with most of the foreign direct investment (outside of telecoms) flowing into the FTZs, but effectively relying on Dominican labor to add value to imported inputs. Employment creation in itself has important linkages with aggregate demand in the domestic economy, particularly for non-tradable services, but the potential is far greater than that being realized today.

67. Looking forward, therefore, it will be essential to reorient the country's growth strategy beyond the FTZ-based approach of the past. Moreover, the Dominican Republic is bound by its membership in the WTO to eliminate special treatment of exports. Other countries – notably Mauritius – have been successful with an FTZ-based strategy, but complimentary factors such as institutions were important in explaining growth rather than simply trade (Subramanian and Roy 2003). Mauritius also benefited from very large preferential margins among the African countries, a vestige of the pre-globalization era which is not replicable today. To take a contrasting example from a different region of the world, Rao (2000) concludes that the restrictive and uncompetitive policy environment prevalent in the Middle East contributed to mediocre performance of free trade zones there.

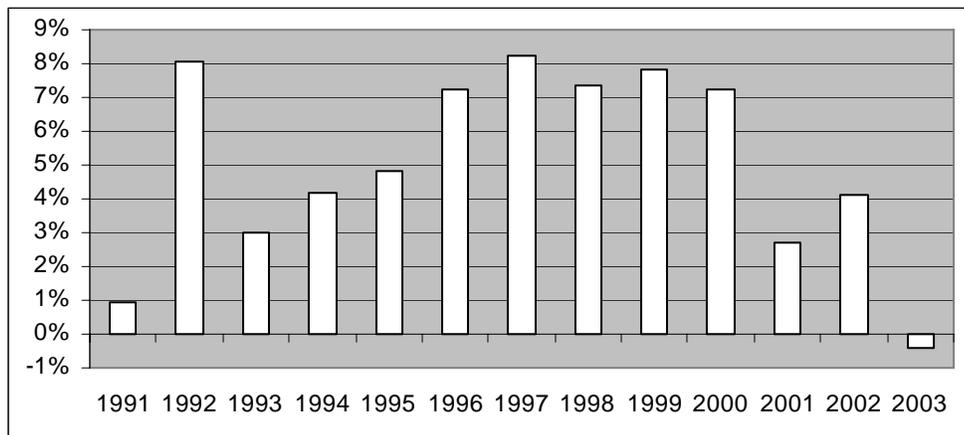
#### **D. Macroeconomic Environment**

68. The macroeconomic setting is relevant for trade performance, notably through its key role in attracting investment, particularly foreign investment, and the pricing of traded goods through the exchange rate. Stable economic performance and moderate inflation, interest rates and public debt levels comprise some of the factors considered by potential investors. Trade also has a direct impact on macroeconomic variables such as economic growth, the current account balance, international reserves (which in turn relates to monetary policy), and the fiscal balance through trade tax revenues. As will be shown in the analysis that follows, the 1990s was a decade of macroeconomic stability that created an environment conducive to foreign investment and trade promotion in the Dominican Republic. But a series of negative shocks – the post-September 11<sup>th</sup> global economic downturn, the major bank failures, and the electricity crisis – caused a major slowing of GDP growth and the emergence of severe macroeconomic imbalances, concurrent with deteriorating export performance.

69. Growth. The Dominican Republic experienced a golden decade of growth in the 1990s, becoming one of the fastest growing economies in Latin America (see Figure 2.10). Many factors contributed to this growth, including extensive structural reforms in the early part of the decade and solid macroeconomic management through stable monetary policy. Reforms consisted of tariff reform (discussed above), tax, financial and labor reforms, gradual adjustments in the price of oil and oil derivatives, and interest rate liberalization, creating the internal conditions for rapid and sustainable economic growth and price stability. In 1995, the Dominican Congress passed a foreign investment law that dismantled various restrictions on foreign direct investment, and ensured the

equal treatment of investors regardless of nationality. The government subsequently undertook various privatizations of state enterprises and the non-hydroelectric power generation and distribution segments of the national electricity company, the *Corporación Dominicana de Electricidad* (CDE), and at the same time opened other public enterprises to private investment and adopted measures to facilitate foreign investment.

**Figure 2.10. GDP Growth 1991-2003**



Source: Dominican Republic Central Bank

70. With the expansion of the industry and service sectors in the 1990s, the Dominican economy became less dependent on agriculture, as primary production (agriculture, livestock, mining and forestry) accounted for only 13 percent of GDP in 2000, down from 25 percent in 1970. A detailed discussion of the determinants of economic growth is presented in Chapter 3, but tourism played a major role (see Box 2.2), both through attracting FDI and through the extensive linkages to the domestic sector.

### **Box 2.2: The Booming Tourism Sector**

The tourism industry in the Dominican Republic has grown exponentially in the past 15 years, with tourist arrivals tripling between 1989 and 2003 to reach 3.5 million air arrivals per year. Average daily expenditure per person rose from US\$88 in 1993 to US\$101 in 2003, and foreign exchange receipts surpassed US\$3 billion in 2003. The expansion of tourism services brought not only substantial FDI for hotel construction, but was accompanied by major investment in upgrading infrastructure such as roads, airports, electricity service, and water and sanitation (although major deficiencies remain due to inadequate environmental management that has not kept pace with sector growth).

Whereas the sector contributes directly to growth through the provision of tourism services and jobs in hotels, bars and restaurants, accounting for 12 percent of GDP in the 1990s, the indirect linkages to the rest of the economy are much more extensive, despite the preponderance of all-inclusive packages. Based on the national accounts input-output table from 1991, tourism accounted for one-fourth of total service demand (11 percent of water and energy, 30 percent of transport and communications, and 11 percent of construction) while its direct share of GDP was a modest 7 percent. After some post-September 11<sup>th</sup> slowdown, the sector's growth rebounded in 2003 and 2004 in large part as a result the peso depreciation.

Sources: Dominican Republic Central Bank, Lizardo and Guzman (2001)

71. Growth slowed in 2001 and beyond – in part owing to the post-September 11<sup>th</sup> weakened US demand – which led the government to increase public spending, resulting in higher deficits primarily financed by foreign borrowing. The economy deteriorated in 2003 with a massive banking crisis; the Central Bank intervened, guaranteeing all Baninter deposits and providing liquidity to two other

failing banks at a total cost to the budget equivalent to 21 percent of GDP. At the same time, the country suffered a deepening of the long-standing energy sector crisis, with frequent blackouts and skyrocketing electricity costs, which interrupted production and proved a particularly severe burden on the private sector. In 2003, two distribution companies were renationalized (see Box 2.3). The banking and electricity sector crises represent systemic weaknesses that increase the cost of doing business and diminish Dominican competitiveness.

### **Box 2.3: Electricity Sector**

During the 1980s and early 1990s the Dominican Republic had substandard electricity service, marked by frequent power cuts. Poor service created a culture of non-payment of electricity bills, leaving the power company, Corporación Dominicana de Electricidad (CDE), with insufficient funds to make the necessary investments – especially in generation – to improve power availability.

Sector reforms began in the mid-1990s, with the entry of independent power producers (IPPs) to supply CDE under power purchase agreements. The result was greater capacity but at high prices. In 1998, the government spun off from CDE two thermal generation companies, Itabo and Haina, and three distribution companies, Edenorte, Edesur and Edeste. But there was no comprehensive regulatory framework in place. A new Electricity Law was approved in July 2001, creating the National Energy Commission (CNE) in charge of policy, the Electricity Superintendence (SIE) in charge of sector regulation, and the Coordinating Body (OC) responsible for dispatch and administration of the wholesale power market. Soon after the restructuring, world oil prices climbed, following which the government intervened to keep retail electricity prices low by compensating the distribution companies for oil price increases, inflation and the foreign exchange components of the tariff.

This obligation and the payment of the power purchase agreements became unsustainable for the government. At the same time, the privatized distribution companies continued to post large losses and poor collection rates. Despite subsidies, the increase in oil prices eroded the distribution companies' income, and the non-payment by both the government and the distribution companies led the IPP's to suspend production. The result – a major electricity crisis – led the government to eliminate the generalized subsidy, which provided only short-lived breathing space.

As world oil prices climbed still higher in the aftermath of the Iraq invasion and the government faced increasing fiscal pressures arising from the banking crisis, large subsidies were reinstated (under the title of Stabilization Fund) for the first 300 kWh consumed (recently reduced to 200 kWh), and consumer price adjustments were made with a two-month regulatory lag. This, in turn, created financial difficulties for the distribution companies, which failed to pay the generation companies, causing blackouts to reemerge. The large peso depreciation put additional upward pressure on the cost of generating electricity, and the fiscal crisis constrained the government's ability to pay subsidies to the sector. As a consequence, generating companies have been unable to purchase fuel to produce electricity and provide reliable supply. This situation was exacerbated by the government's repurchase of Edenorte and Edesur from Union Fenosa in September 2003 (and Edeste expressed willingness to sell back its shares as well).

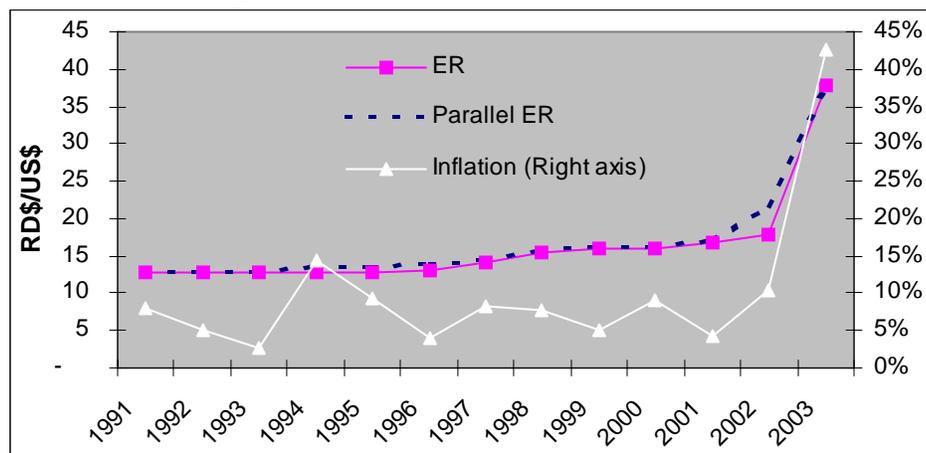
The electricity sector remains at a crossroads, requiring an injection of resources to recover financial solvency, and the implementation of a financial recovery plan based on a program for loss reduction, improved bill collection and better subsidy targeting. A reorganization of the sector, with some form of public-private partnership in distribution activities, will also be necessary to guarantee long-term sustainability.

Source: World Bank (2004d)

72. Prices. Price stability in the 1990s gave way to large CPI and exchange rate fluctuations following the banking crisis and bailout-induced influx of liquidity and loss of confidence, which drove up inflation and led to capital flight. Accustomed to single-digit inflation for most of the 1990s, inflation spiked to 43 percent in 2003 (see Figure 2.11) and climbed higher still in the first

months of 2004. Monetary policy during much of the last decade was conducted within a framework of limited central bank autonomy and a managed floating exchange rate regime. A key objective of the Central Bank was price stability in conjunction with real output growth and reserve accumulation, such that the stock of Central Bank net domestic assets became the targeted policy instrument. Liquidity was managed directly through credit controls and freezing excess reserves. The Central Bank also intervened in the private foreign exchange market, smoothing the volatility of the exchange rate. However, the monetary authorities recently moved towards the interest rate as its indirect monetary policy instrument, namely through issuing central bank paper (*certificados de participación*), with prices determined at auction (prior to 2001, the interest rates for various financial instruments was set unilaterally by the Central Bank). The Central Bank issued a large quantity of certificates of deposits to account holders of Baninter, and the monetary authorities have also issued large quantities of certificates of investment to address excess liquidity, thus increasing domestic debt. By end-2003, the stock of Central Bank certificates amounted to RD\$60 billion or 12 percent of GDP, compared with 1.5 percent of GDP at end-2002. Interest rates reached 35 percent (annualized) in late 2003 for short maturities of 28-91 days, and long-term credit effectively dried up altogether, creating a severe credit crunch for an already struggling private sector.

**Figure 2.11. Evolution of Prices 1991-2003**



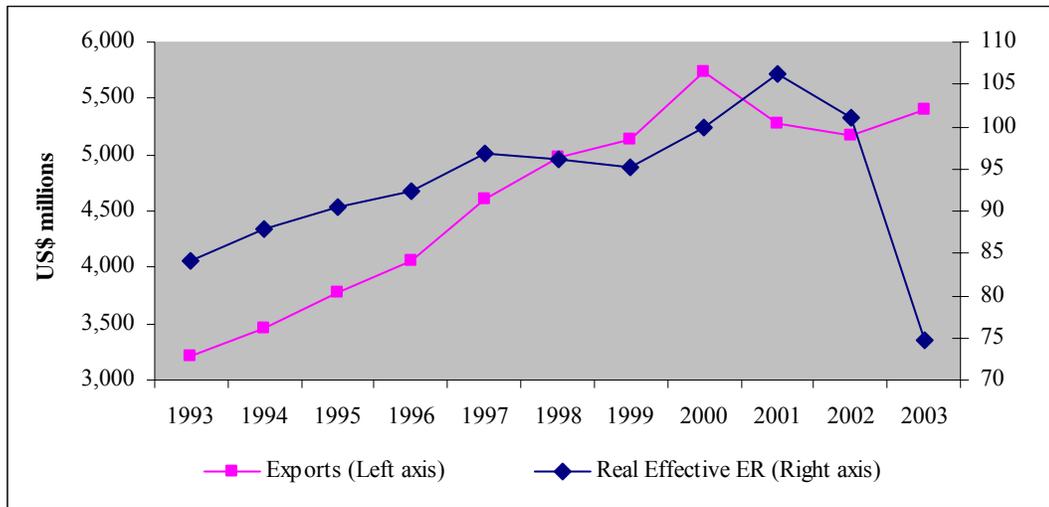
Source: Dominican Republic Central Bank

73. The loss of confidence and demand for foreign currency put tremendous pressure on the exchange rate, and the peso depreciated by 100 percent between February 2003 and February 2004 (see Figure 2.11). The Central Bank operated a dual exchange rate regime until March 2003.<sup>19</sup> But during the period of foreign exchange management in the 1990s, the peso's nominal stability led to a marked appreciation in real terms; the peso in fact became overvalued (see Figure 2.12). Exports nevertheless grew during this period of real appreciation, driven by the import-intensive FTZ sector and facilitated by regulatory changes supportive of FTZ expansion and FDI as well as the increased preferential access to the US under the CBI and CBTPA. The recent depreciation in 2003 did not benefit local production or consumption due to higher import prices, but it increased export competitiveness and thus export demand. Although today's foreign exchange market is driven by private sector transactions without government intervention, there is a tax on foreign exchange transactions equivalent to 13 percent. This foreign exchange commission was introduced in 1991 to help finance foreign debt, and is periodically adjusted in response to government needs.<sup>20</sup>

<sup>19</sup> The November 2002 Monetary and Financial Law eliminated the dual foreign exchange market, introduced rules governing the participation of the Central Bank, and ensured the free convertibility of the peso.

<sup>20</sup> The foreign exchange commission was implemented by the Monetary Board in July 1991 at a rate of 2.5 percent, lowered to 2 percent in December 1991, and to 1.5 percent in March 1994. Commission fees began

**Figure 2.12. Real Effective Exchange Rate and Exports**



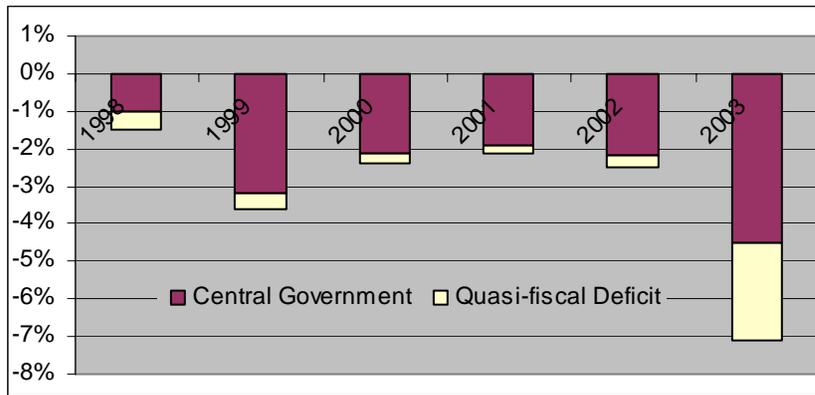
Source: Dominican Republic Central Bank

74. Fiscal and current accounts. As shown above, tariff and other trade taxes are an important source of budget revenues, averaging 6 percent of GDP in the late 1990s. Recent and forthcoming trade liberalization have caused and will cause a decline in tariff revenues, exacerbating the government's already weakened fiscal position following the banking crisis, slack economic growth, external shocks such as high world oil prices, mounting debt burden, all on top of widespread tax evasion. Ad-hoc tax measures to mitigate falling revenues included the introduction of a 2 percent surcharge on all imports and a 5 percent tax on exports (excluding FTZs); both measures severely hurt Dominican competitiveness, thus diminishing growth prospects. The modest fiscal deficits of the late 1990s through 2002 – which averaged around 2 percent of GDP – gave way to a doubling of the central government deficit in 2003. The new Central Bank debt raised the quasi-fiscal deficit, resulting in a total public sector deficit equivalent to 7.5 percent of GDP in 2003 (see Figure 2.13). A recently adopted tax reform bill, effective October 1, 2004, contains a package of measures to raise revenues by 1.7 percent of GDP, for example through an increase in the ITBIS from 12 to 16 percent, inter alia. These steps will be crucial – but insufficient – to reestablish fiscal health.<sup>21</sup>

to climb in July 1998, when it was raised to 1.75 percent, and to 5 percent in October 1999, but only on a temporary basis to compensate for rising oil prices. In October 2001, the fee was reduced to 4.75 percent (1.75 percentage points were earmarked for the Central Bank's external debt service, and the remainder was earmarked for non-financial public sector external debt service). Although the Monetary and Financial Law stipulated its elimination by November 2003, the Monetary Board announced it would reduce the commission by 0.25 percent every quarter beginning in October 2003. Instead, the fiscal pressures associated with the banking crisis led the authorities to increase the commission to 10 percent in October 2003, and to 13 percent in the beginning of 2005.

<sup>21</sup> A Stand-by Arrangement was agreed with the IMF in August 2003, but the second review of the program was suspended due to missed fiscal targets. The authorities re-launched discussions on new IMF financing in 2004, and a new Stand-by Arrangement was approved in January 2005.

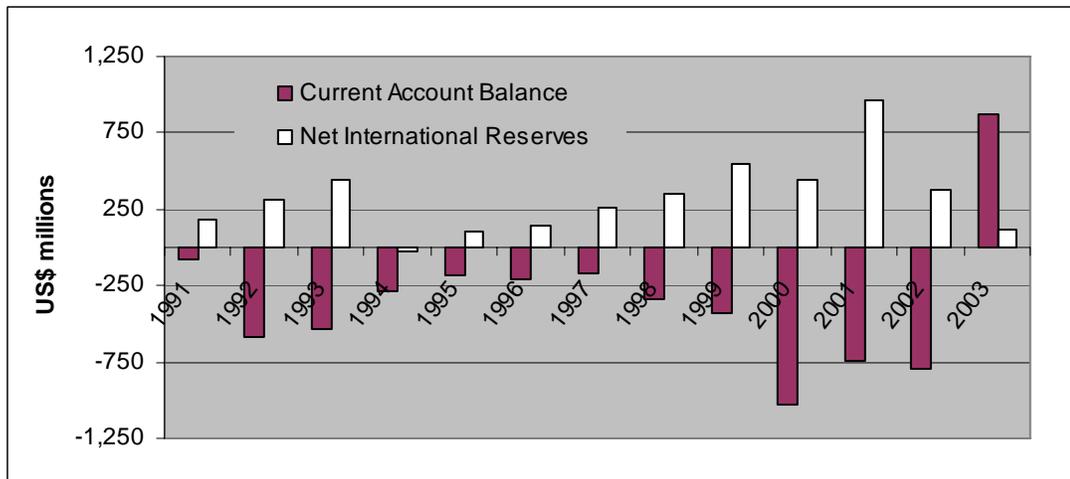
**Figure 2.13. Fiscal Deficit (% of GDP)**



Source: IMF

75. With respect to external balances, the Dominican Republic has run current account deficits for the last ten years, owing to large trade deficits. In fact, 2003 was the first year to post a positive current account balance, driven by the import compression associated with the economic recession and peso depreciation (see Figure 2.14). Capital flight further weakened the peso (as mentioned above) and helped deplete international reserves. The current account deficit was financed mainly by inflows of foreign investment, particularly to the telecommunications and tourism sectors (FDI is discussed further in Chapter 3). Prior to the current macroeconomic crisis, large investment inflows had led to an increase of international reserves, albeit from low levels, but these were lost in an effort to defend the exchange rate (see Figure 2.14). There has been modest restocking of international reserves in 2004.

**Figure 2.14. Current Account and International Reserves**



Source: Dominican Republic Central Bank, IMF

76. Public debt. The banking and electricity crises and the deterioration in market sentiment in 2003 and 2004 resulted in negative real economic growth and significant pressures on the fiscal and external accounts, as illustrated above. Total public debt as a percentage of GDP more than doubled from 27 percent at end-2002 to 54 percent at end-2003, reaching near-critical levels. As a result, government debt service requirements rose from modest levels of 12 percent of total expenditure in 2001 and 2002, to 19 percent in 2003, and 24 percent in 2004. The quasi-fiscal deficit of the Central Bank as a result of the liquidity assistance provided to failing commercial banks is estimated to have reached 2.6 percent of GDP in 2003 and a projected 4 percent in 2004. The government currently

faces severe liquidity constraints, despite some relief under a Paris Club rescheduling agreement reached in April 2004, and arrears to electricity sector and other suppliers continue to accumulate. The authorities have struggled to make timely debt payments to private creditors (plans for a market-friendly private creditor debt restructuring are underway), raising concerns about a possible default. These debt stock and debt service indicators paint a gloomy picture for the future, effectively discouraging investment in the near term, which in turn exacerbates declining economic growth and competitiveness.

77. This analysis illustrates how the relatively sound growth-supporting macroeconomic framework in place throughout much of the 1990s gave way to slower growth and the emergence of serious macroeconomic imbalances in 2003. The banking crisis magnified the already weakened fiscal position, causing sharply higher public spending, capital flight, high inflation, a significant depreciation of the peso, and a doubling of public debt – in short, creating a very difficult macroeconomic environment unlikely to foster investor confidence and growth in the short run.

### **E. Strategies for Addressing Competitiveness**

78. The preceding description of the various and sundry non-tariff factors affecting trade and growth suggests multiple and extensive impediments to investment: a weak institutional environment, over-regulation, elaborate export procedures, high tax rates (outside the FTZs), high cost of capital and electricity, and macroeconomic imbalance and uncertainty. For domestic investors, the government's ineffective role as regulator and protector of property rights may render the cost and risk associated with new entry too great. From the perspective of foreign investors, the Dominican Republic's business climate does not compare favorably to several of its Caribbean and Central American neighbors – particularly Costa Rica – although advantages relating to labor may outweigh other factors. It is therefore not surprising that foreign investors are attracted to the free zones, which benefit from more efficient regulation, stable policy (e.g., tax treatment), and a lower cost structure in terms of taxes and fees. Rational investors take into consideration all steps of the business cycle – start-up, operation, and exit – when selecting countries in which to invest. A survey of foreign investors in the Caribbean cited the Dominican Republic's volatile macroeconomic situation (especially regarding the exchange rate), frequently changing policy environment, weakened banking system and spotty electricity supply as impediments to investment (Foreign Investment Advisory Service 2004). On the positive side, in addition to ranking the Dominican Republic high with respect to labor availability and quality, surveyed investors praised the telecommunications network – ranked most advanced in Latin America – and the large number of ports.

79. The survey also found that foreign investors in the Dominican Republic did not rely on investment promotion activities or trade missions by the Dominican authorities, or promotional ads to shape their investment decisions (Foreign Investment Advisory Service 2004). The 2003 results of the World Economic Forum global competitiveness composite index suggest that the Dominican Republic is in a difficult competitive position, ranking 62<sup>nd</sup> out of 102 countries (down from 52<sup>nd</sup> of 80 countries in 2002), although it fairs slightly better within the LAC region, coming 10<sup>th</sup> out of 21 (behind Chile, Mexico, El Salvador, Trinidad and Tobago, Uruguay, Costa Rica, Brazil, Peru and Panama; World Economic Forum 2003).

80. Within this context of a difficult business environment and changing rules of the game vis-à-vis international trade and globalization, strengthening the Dominican Republic's competitive position will be crucial to sustaining the current level of integration and trade-driven growth. Recognizing these challenges, the Dominican private sector has been proactive in putting the item on the policy agenda for debate. Beginning in 1998, the national employers' association (*Consejo Nacional de la Empresa Privada*, or CONEP) with support from USAID mobilized its members to

develop a national competitiveness plan, which in 2000 was formalized into a National Competitiveness Strategy. The government responded by creating the National Competitiveness Council, a public-private agency whose mandate is to formulate, implement and develop competitiveness strategies for the key productive sectors, particularly the tradables sector (van der Horst 2002). The plan as formulated by CONEP et al. and adopted by the government is structured around the creation of sectoral clusters that bring together firms from along the production chain, government in its dual role as service provider and policy maker/regulator, and members of the community. Each cluster develops its own strategy by considering existing constraints, exploring potential market opportunities, and identifying how to meet these challenges through detailed action plans that might include specific investments or policy recommendations. This participatory approach ensures ownership and creates social capital through cooperation. Progress has been made in tourism and the manufacturing sector clusters, including FTZs, as well as in agro-industry, and future work will focus on tradable services such as communications.

81. The most recent competitiveness strategy, developed by CONEP in December 2003, is very much anchored in the ongoing economic crisis and responds to the macroeconomic instability in the aftermath of the banking crisis by calling for regulatory, supervisory and institutional strengthening in the public sector. The strategy's extensive recommendations focus on: macroeconomic stabilization policies including fiscal reform and sustainable debt management; restoring fiscal health without imposing new taxes that hurt private sector competitiveness; improving the tax regime applicable to national industries by moving toward equal treatment with FTZs; increasing private sector representation on the National Competitiveness Council (there are currently 3 private sector representatives compared to 6 from the public sector); promoting a national innovation system; rationalizing public expenditures; promoting investment; discontinuing the use of decrees rather than laws to set policy; supporting the SME sector; providing compensation funds to sectors harmed by free trade accords; and a host of other measures relating to education, social security, poverty, employers' social responsibility, institutional reform, modernization of the state, civil society participation, property rights, corruption, and judicial reform (Consejo Nacional de la Empresa Privada 2004).

82. Experience from competitiveness programs implemented throughout Latin America – many with the support of the donor community, particularly IDB and USAID – points to 3 important elements of an effective strategy: (i) a participatory approach to strategic planning including the smallest and largest actors; (ii) consensus between the private and public sectors, each playing a distinct role, with the private sector taking the lead while the public sector focuses on policy reforms; and (iii) programs that are demand-driven (Chrisney 2002). The city of Santiago developed its own strategic development plan, which provides an interesting example of civil society consultation and public-private-community partnership (see Box 2.4).

#### **Box 2.4: Santiago Competitiveness Plan**

Santiago is the second largest city of the Dominican Republic and located on the other end of the island from Santo Domingo. Prosperous and physically and culturally distinct from the capital, Santiago's rapid industrialization and population growth led a group of municipal officials, private firms, citizen groups, central government representatives and community organizations (including for example religious, cultural and educational institutions and NGOs) – over 40 institutions are represented on the Council for the Strategic Development of the City and Municipality of Santiago – to develop a strategy to achieve managed growth that ensures a high quality of life, adequate public services, vibrant economic development linked with global markets, and environmental protection.

This ambitious initiative resulted in several successes, not least of which was developing and implementing an effective participatory framework of consultation and coordination among a wide range of affected parties. The plan has been very process-oriented to-date, but has identified 29 programs and 158 projects which it is beginning to implement. The projects and action plans grow out of an assessment of opportunities, constraints and risks to the city as it looks forward. The strategy provides the basis for mobilizing resources from both public and private spheres, and guides the allocation of these project funds. Each year, the Council prioritizes 15 projects for preparation and implementation, and revisits this list annually to address implementation issues and avoid misallocating resources due to shifting priorities.

Thanks to support from a long list of international donors, the planning process functions smoothly under this framework. Adopting the cluster approach mentioned above, some of today's main priority projects center around creating business incubators, developing Santiago tourism and health tourism in particular, and strengthening the technical university programs and their links with the private sector and new market opportunities. Having focused within the city limits, the council is broadening its focus toward a holistic regional approach to integrate the rural sector, which should help to stem potential migration pressures. Much of Santiago's industry is concentrated in the textiles sector within FTZs, and the future phase-out of FTZ advantages may displace firms to FTZs within Haiti, which will continue in operation beyond the WTO's 2010 deadline because of its low income/capita. These and other potential effects of the changing trade regime will be incorporated into future planning. The strategic plan has been adopted by city leaders as the government's official strategy, ensuring compatibility with government spending and investment in priority programs and projects.

Source: Consejo para el Desarrollo Estratégico de la Ciudad y el Municipio de Santiago 2002

### **III. Trade Facilitation**

83. The preceding section identifies a plethora of factors – from institutions and regulations to taxes and the macroeconomic environment – that affect trade performance indirectly. Together with the tariff regime, these factors create an incentive framework that guides trade outcomes. But other factors are relevant to trade, affecting the cost of trade directly. These include transport and transaction costs, logistical requirements of loading and unloading ships, customs procedures, and the movement and distribution of goods between the domestic market and ports. Although apparently ancillary, transportation and logistics costs can be significant and distort trade to sub-optimal outcomes (see World Bank 2002b). For instance, Hummels (1999) estimates that a one-day reduction in customs clearance is equivalent to a 0.5 percentage point cut in tariff rate. Trade facilitation is therefore central to competitiveness, and in many ways can be addressed through straightforward cost-effective measures.

## **A. Audit Methodology**

84. An extensive audit of transport and trade facilitation in the Dominican Republic was carried out for this study, using a methodology developed by the World Bank.<sup>22</sup> The audit provides a diagnostic of transport efficiency and transactions costs by assessing the quality of logistical services and infrastructure (particularly ports), customs operations, and the institutional setting. The analysis was developed on the basis of interviews with freight forwarders, cargo agents, multi-modal transport operators, local logistics operators, exporters, importers, exporters' and importers' associations, shipping lines, shipping agents, the Port Authority, port operators, customs officials, chambers of commerce, and government authorities in the Ministry of Industry and Trade, the Competitiveness Council, and the Free Trade Zone Council (CNZFE). The findings described below, which were presented in a workshop in Santo Domingo in July 2004 attended by a wide range of stakeholders, help to place the Dominican performance within the regional context with a view to exploring market opportunities through increased competitiveness.

85. To understand the performance of trade transport for Dominican importers and exporters, it is useful to understand the existing trade infrastructure as well as that of potential competitors, since cost and quality differences affect transactions costs and ultimately the final goods price to the consumer. Moreover, with the growing market for regional distribution, the prospects for exporting transshipment services is under-exploited in the Dominican Republic, which is geographically well-placed to be a significant player.

## **B. Existing Trade Infrastructure**

86. Ports. By virtue of being an island nation, port infrastructure is integral to trade performance. Moreover, the expanded FTZ sector and increase in cruise ship visits also raised the stakes for efficient port access and operation. The port system in the Dominican Republic consists of 8 main ports (Santo Domingo, Barahona, Haina, Las Calderas, Boca Chica, Caucedo, San Pedro de Macoris and Puerto Plata) and 17 minor ports. Until 2004, nearly two-thirds of total trade tonnage and four-fifths of all containerized trade passed through Haina, located 20 km west of Santo Domingo, and about 11 percent of each was processed in Puerto Plata (on the north side of the island near Santiago). Between 1970 and 1999, trade volumes tripled: import volumes average 6.2 percent annual growth, while export volumes fell by an average 1.7 percent per year, driven primarily by the contraction in sugar and bauxite.

87. Until recently, the port system could be characterized by deficient infrastructure and equipment, poor operational management and important institutional weaknesses. The main weaknesses identified in the audit relate to:

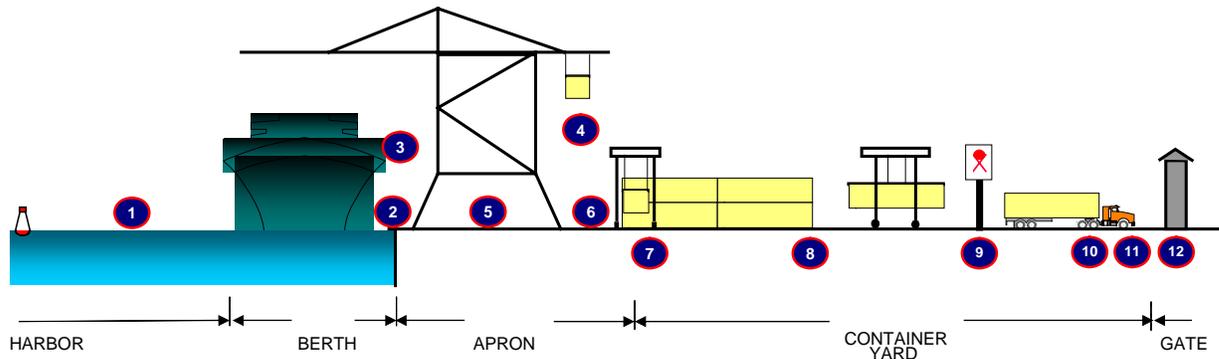
- security and the lack of controlled access,
- loading equipment,
- docks and harbor depth,
- management of the yard, with multiple operators and out-of-date equipment, and
- customs operation.

Although the water-side operations in Dominican ports is on par with regional service levels, they fall short of the world's leading ports. And with respect to the land side of operations, service standards in the Dominican Republic are much lower than regional competitors. The many aspects of port services are illustrated in Figure 2.15.

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<sup>22</sup> For a description of the methodology, see Raven (2001). For more detail on the Dominican Republic trade and transport audit, see the background paper by Martin Sgut (2004).

**Figure 2.15. Port Services**



- |   |                                     |    |                                  |
|---|-------------------------------------|----|----------------------------------|
| 1 | Arrival of the vessel               | 7  | Horizontal movement to yard      |
| 2 | Berthing                            | 8  | Positioning of container in yard |
| 3 | Unlashing                           | 9  | Customs control                  |
| 4 | Vertical movement with the crane    | 10 | Delivery                         |
| 5 | Horizontal movement of the crane    | 11 | Gate control                     |
| 6 | Positioning of container in chassis | 12 | Gate exit                        |

Source: Kent (2004)

88. In end-2002, the private La Romana port was inaugurated, receiving the majority of cruise ship dockings. More importantly, a new, privately financed state of the art deep water port at Caucedo, 30 km east of Santo Domingo, was inaugurated in January 2004.<sup>23</sup> This port is expected to attract about two-thirds of Haina’s existing business, and in fact in its first 6 months of operation pulled about 40 percent of business originally slated for Haina (see Sgut 2004 for a detailed description of Caucedo and a comparison with Haina). In addition to superior equipment and physical facilities capable of handling large volumes quickly, Caucedo has extensive storage capacity which eases the movement of goods through the port, and is developing facilities to provide logistics services for local and regional distribution. In fact, a new free trade zone – *La Zona de Actividades Logísticas* – is under construction in an area adjacent to Caucedo with direct access to the terminal to provide logistics services.<sup>24</sup> The prospects for improving logistics services and expanding the industry in the Dominican Republic are good, particularly in the FTZs, where there is geographical concentration but little subcontracting of logistics, as is the practice in Europe and the US. On the other hand, ground transportation is generally subcontracted, although FTZ firms are protected from the inflated prices imposed by the transportation guilds (discussed further below). Finally, Caucedo has a single operator, but this consortium has links to some shareholders of HIT, the operator with a concession to operate Haina, raising the prospect that the competition introduced by Caucedo will be eliminated by the fact that a single dominant operator will control 80 percent of Dominican port trade.

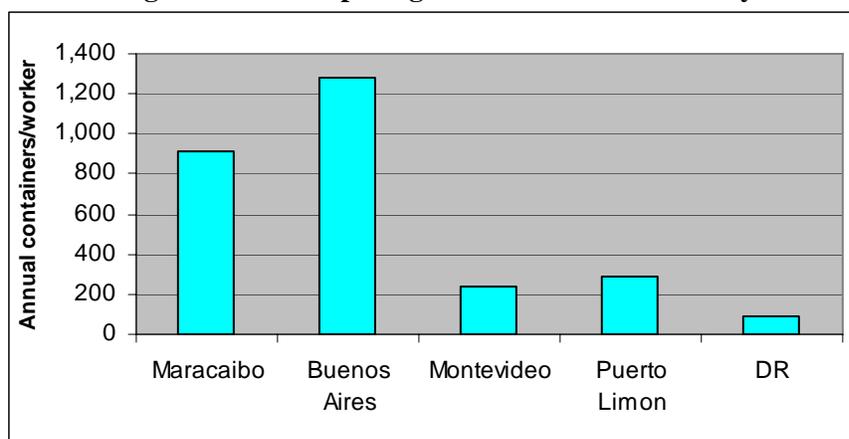
89. Part of the poor operation of existing ports – outside of Caucedo – is linked to the port sector’s obsolete legal framework and institutional difficulties of APORDOM, the Dominican Port Authority. According to Law 70-70 modified by Law 169-75, APORDOM is an independent port authorizer and administrator of public, concession and private ports, but also a port operator, combining functions that create a conflict of interest. The administrative council has 6 members: 3 private sector members, and 3 government representatives named by the President. The state’s

<sup>23</sup> This port represents a first-phase investment of US\$300 million, developed by CSX World Terminals, with a consortium of local firms and participation by IFC.

<sup>24</sup> The WTO restrictions on export subsidies or support programs does not apply to services.

influence is apparent in the transfer of APORDOM port fee income to the government budget during surplus years, i.e., through 1998, and even in 1999 when APORDOM ran a deficit. The structure of expenditure reveals inefficiencies that worsened in recent years. In 2002, 96 percent of expenditures were for current expenditures (76 percent for personnel costs), up from 68 percent in 1998, which reflects a near-quadrupling of personnel between 1996 and 2003. As Figure 2.16 illustrates, worker productivity is very low in the Dominican Republic compared to other ports in the region. This current-capital-maintenance breakdown is far out of line with international best practice in which current expenditures should absorb only 15 percent of the budget, leaving the bulk of resources for upgrading infrastructure, new investment and maintenance. For example, inadequate resources for dredging several ports resulted in subcontracting this service to users at double the cost. Evidence of inadequate investment include damaged pavement, lack of lighting, deficient port access, and deteriorating piers that risk major damage to ships. The inauguration of Caucedo will sharply reduce APORDOM's income.

**Figure 2.16. Comparing Port Worker Productivity**

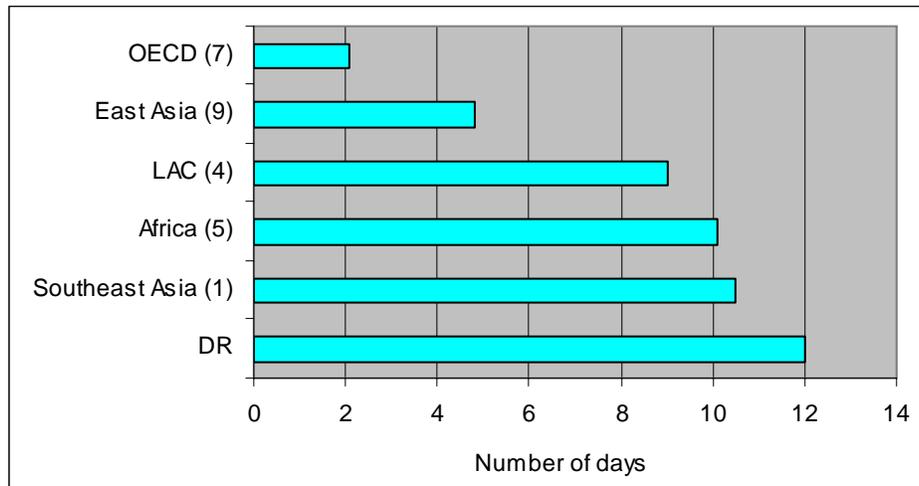


Source: Sgut (2004)

90. An indicator of port performance that can be compared internationally is the turnaround time for goods passing through ports. In the Dominican Republic, the turnaround time for imports (excluding Caucedo and FTZ-destined imports) averages 12 days, one third higher than the Latin America and Caribbean region as a whole, more than double the average for East Asia, and six times the average for developed countries (see Figure 2.17). The principal cause of these long delays is linked to inefficiencies in customs operations (elaborated below). These delays further add to the excessive freight charges through the granting of extra rent-free days for container use, estimated at about US\$10 million per year.<sup>25</sup> Additional charges in the form of late penalties are estimated to raise freight costs another US\$7.5 million annually. And inventory costs associated with delays – ultimately passed on to the consumer through higher prices – are estimated at US\$180 million per year.

<sup>25</sup> The rent free grace period for container use averages 10-12 days in the Dominican Republic, compared to 11 days in Nicaragua and El Salvador, 10 days in Venezuela and Colombia, 9 days in Cost Rica, Honduras and Guatemala, and 2-5 days in Argentina (Naviera B&R 2002, cited in World Bank 2002c).

**Figure 2.17. Average Customs Dispatch Time for Containers (sample size in parentheses)**



Source: International Exhibition Logistics Associates website, World Bank (2004e)

91. Ground transport. Internal transportation is exclusively truck transport, and container cargo is transported using trailers provided free of charge (for up to 5 days) by the shipping companies. This system requires that a stock of trailers be maintained on site; the existing stock is about 3,500 chassis, which is a key contributing factor to excessive freight costs in the Dominican Republic, adds an estimated US\$130 per 40-foot container, accounting for capital and maintenance costs. Moreover, these services are primarily provided by small firms of 1-5 trailers, implying few economies of scale. The majority of these micro firms belong to unions affiliated with the national federation FENATRADO. Although transport prices in principle are set by supply and demand, FENATRADO has broad control over port access and excluding non-members. The resulting lack of competition leads to high costs and de facto forced regulation. The country's road network – 5,000 km of highway and 14,000 km of rural roads – suffers from inadequate maintenance that is below the regional average. Recent efforts by the government target decentralizing maintenance management of half of rural roads and subcontracting maintenance on half of all highways.

92. The largest internal markets in the Dominican Republic are concentrated in Santo Domingo (50 percent of the population) and Santiago (25 percent of the population), and are served by Haina and Caucedo (near Santo Domingo) and Puerto Plata (40 km from Santiago). It is clear that internal transport costs depend on the point of origin and destination, although ground transportation costs are likely to be secondary to the availability of quality port services when trading firms and lines choose a port of charge or discharge. In light of these factors and the natural constraints related to distance, there is no single optimal location for logistical centers.

93. Port access. Unfettered growth and expansion of cities close to ports, together with inadequate physical planning, have progressively strangled access to ports, causing long delays and traffic jams for trucks outside the main port gates. Alternative entrances are being considered, but APORDOM needs to undertake a comprehensive review of the needs of all ports.

94. Security. Although most land transport shipments are not insured, due to the low perceived risk of losses on the road, some shipping companies provide their own security forces to ensure door-to-door protection. Other risks of losses and/or damage due to inadequate security surround the inspection process. With the exception of Caucedo, Dominican ports lack even the minimum security standards required by the International Maritime Organization and by the customs authorities of developed trade partners. International security standards are defined in three main agreements:

(i) the Container Security Initiative, (ii) the Customs-Trade Partnership Against Terrorism, and (iii) the International Code for the Protection of ships and port installations. To improve security, the government in 2002 authorized the functioning of a private firm to provide container inspections using x-ray scanners, subject to a maximum cost of US\$95 per full container and US\$26.25 for empty containers (in line with international markets, although with increased use, prices are expected to come down significantly). Additional progress is needed in the areas of automated information sharing between customs authorities. Not meeting these key new security certifications has high costs regarding lost competitiveness of the port, extra charges associated with inspection in a certified port, and more generally as an impediment to exports.

### **C. Customs**

95. Customs operations are very inefficient in the Dominican Republic, owing to obsolete legal and institutional frameworks that are harmful through inhibiting trade facilitation and transport, as well as through reducing revenue collections. The legislation in place dates to 1953, although a new initiative to modernize the laws has recently gotten underway. The main weakness of customs operation is a high degree of discretion by customs functionaries – particularly collectors – who change rules and procedures at whim, which creates uncertainty. Outdated reference lists that also do not reflect seasonality raise the risk of under-valuation, which arises in one-in-five cases; to address this risk, bank guarantees or insurance are required to cover the potential difference plus fines. But because the review of cases takes a year and sometimes 2 years, these securities requirements impose a significant burden on firms, both through the cost of financing guarantees and by constraining firms' total credit capacity. Customs documentation requirements such as the bill of sale, consular certificate (a vestige from an earlier age that exists in only a few countries in the world and in effect acts as a tax equivalent to US\$150), manifest, bill of loading and customs declaration are excessive and typically duplicate information. Another indication of the system's poor functioning is the frequent absence of the bill of loading which guarantees the integrity of the merchandise during transport, implying a laxity that is far from international standards. Despite plans to introduce automation, little is in place today, and is merely in the form of providing electronic files as backup to paper reporting.

96. At present, about 95 percent of imported and exported cargo is physically inspected, as is 100 percent of all documentation – levels far above international norms. Although somewhat better for FTZs, import inspections are carried out in the absence of adequate installations: the cargo is deposited on the ground, with inadequate lighting, no protection from the elements and in unsanitary conditions that could compromise the goods. Exacerbating the inefficiencies is the involvement of 15-20 individual agents – inspectors, dock workers and customs functionaries – causing extensive delays due to poor coordination. The large number of agents also increases opportunities for discretion and corruption. The observed lax security at Haina in terms of entry and exit of individuals, and the flow of individuals associated with the presence of restaurants and parking within the port, also potentially compromise merchandise quality. HIT, the operator of Haina, recently launched several improvements including the creation of a separate inspection area and additional lighting.

### **D. Competing Regionally in Trade Logistics**

97. The Dominican Republic is located in a region of high-density commercial cargo maritime traffic, and of course is physically very close the US market, implying that the Dominican Republic is well-placed to compete regionally. With the increase in ship capacities and thus prevalence of containerized cargo which requires special infrastructure, there has been a marked consolidation of east-west shipping corridors and increased reliance on intermediate ports where cargo is unloaded and reloaded for regional distribution or subsequent shipment north or south. The main corridors are:

(i) Asia-Panama Canal-East Coast of the US; (ii) East Coast of the US-Panama Canal-West Coast of the US; (iii) Europe-Panama Canal-West Coast of South America; (iv) East Coast of the US-East Coast of South America; (v) Gulf Coast-East Coast of South America; (vi) Gulf Coast-Europe; (vii) Asia-Panama Canal-East Coast of South America; (viii) West Coast of South America-East Coast of South America; (ix) Gulf Coast-Africa; (x) Gulf Coast-West Coast of South America. The Dominican Republic, which lies along these corridors, has excellent prospects for offering transshipment services to third countries, potentially extending its reach to the entire Latin America region.

98. Of the seven main regional ports around the Caribbean Basin, only Miami, Panama, Puerto Rico and Jamaica act as distribution ports or transshipment ports for cargo moving between Asia, Europe and the US. With Caucedo – a latest generation port – the Dominican Republic today has the potential to become an important provider of logistical services as a hub port. Puerto Rico and Jamaica will be key competitors in the region, possessing comparable infrastructure, although Jamaica's size implies that its internal market is too small for economies of scale. The Dominican Republic is particularly well positioned to provide distribution services for European exports to the US which heretofore used Miami as a base of distribution operations. This is especially the case in light of the increased entry requirements into Miami in the post-September 11<sup>th</sup> heightened security environment. The Dominican Republic is also well placed for handling cargo destined to the Caribbean. Furthermore, the Dominican Republic could potentially serve as an intermediate port for shipments traveling between Canada or the East Coast of the US or Europe and the East Coast of South America. The new port capacity at Caucedo, especially with respect to the number of containers moved/hour, is expected to exceed most regional competitors (see Sgut 2004). Prior to Caucedo, however, the Dominican port infrastructure was inadequate to attract major traffic, with only 6 lines to Europe (compared to 13, 11, 8 and 7 in Colombia, Panama, Costa Rica and Venezuela, respectively) and 18 lines to the US (compared to 27, 22, 20 and 20 in Panama, Honduras, Venezuela and Jamaica, respectively).

99. Today, the trade logistics industry is not very developed in the Dominican Republic, as alluded to above, due in large part to constraints vis-à-vis contracting land transport, and the complexity and unpredictable nature of customs transactions. Bonded warehouses provide services ranging from storing containers, unloading and loading them, and distributing merchandise. Freight forwarders provide total freight services for cargo from its initial point to final destination including customs and local transport, but account for only 10 percent of the market. Third party logistics refers to a more comprehensive service that includes those of bonded warehouses and freight forwarders but also adds value by, for example, unbundling and repackaging bulk goods and distributing them down the retail chain. It is in this area that the planned logistics center at Caucedo is seeking to establish a market. Panama and Miami already have developed this industry, but the Dominican Republic could be competitive – owing to its location and low labor and land costs – particularly in an expanding market, and could in turn attract more regional trade into Dominican ports and create even more jobs. But this will require key enabling elements: high quality infrastructure to move merchandise through ports quickly and securely (available at Caucedo but not elsewhere), efficient (i.e., cost effective and safe) transport of goods to and from to logistics and/or distribution centers, a local market with necessary production and human resource capacity, transparent legislation, and adequate implementation capacity.

## CHAPTER 3: TRADE CHARACTERISTICS AND TRENDS

100. The Dominican Republic faced important changes in the external and internal determinants of trade during the 1980s and 1990s (including the tariff and non-tariff policies described above) which led to structural changes in its trade and productive sectors. The analysis in this chapter indicates that the export sector moved away from “traditional” exports (sugar, tobacco, coffee, cocoa, and minerals) to manufactures and tourism. This transformation of the Dominican export sector follows a similar pattern to much of the developing world during these two decades, but important differences set the Dominican Republic apart. While the economy became more open in terms of FDI to free trade zones, and increased tourism receipts and remittances (helping to finance imports), trade openness as a share of GDP was actually stagnant, even during the 1990s, effectively inhibiting more efficient production and the positive interaction between exports and imports, and thus the positive feedback from trade openness to growth. The concentration of exports to and imports from the US intensified between 1990 and 2003, and is essentially driven by FTZs and preferential access. Although labor-intensive apparel exports account for half of FTZ production, there has been recent diversification toward more labor-efficient and typically higher value-added electronics, pharmaceutical products and tobacco.

101. The dominance of FTZ exports stems from the preferred treatment provided to FTZ exporters in terms of duty-free imported inputs, better infrastructure and streamlined export procedures, which are complemented by preferential access to the US under the CBI/CBTPA. This potential access to the US market incentivizes importing inputs in order to meet rules of origin criteria. As a result, the strong FTZ performance had minimal backward linkages to the domestic economy, implying a limited direct contribution to overall growth, except through job creation and FDI. Decomposing growth into its various components reveals that consumption and to a lesser extent investment were the strongest contributors, with external demand playing a very minor role. On the production side, construction, commerce, tourism and government consumption are the main drivers of overall economic growth.

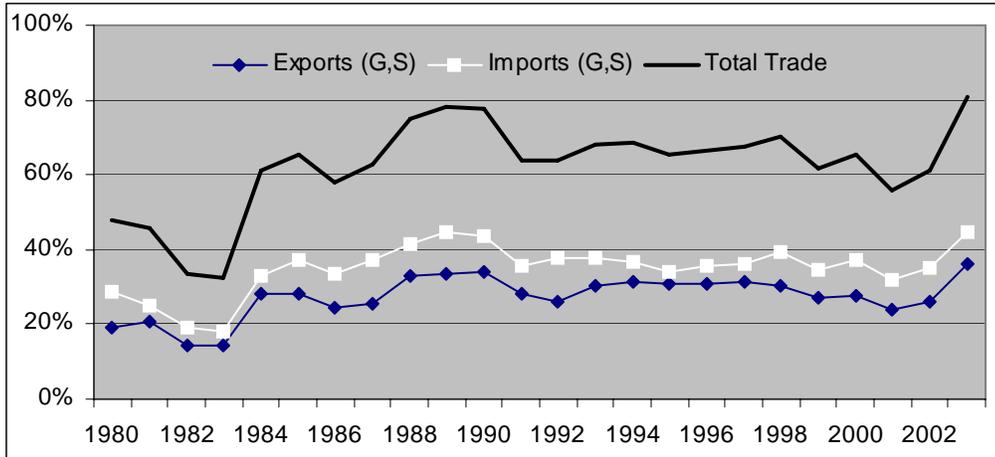
### I. Economy-Wide Trade Patterns

#### A. Trade Openness

102. In volume terms, trade increased markedly during the 1990s: exports of goods and services nearly doubled from US\$4.1 billion in 1993 to US\$8.9 billion, and imports rose from US\$5.5 billion to US\$9.1 billion in the same period. But trade openness (defined as the share of trade in GDP) remained relatively flat. Following a 200 percent devaluation of the Dominican peso in 1985, the Dominican economy reached its highest level of openness in 1989 when the sum of imports and exports (goods and services) reached 78 percent of GDP (see Figure 3.1). During the 1990s, trade openness declined to an average 67 percent of GDP, and exhibited a sharper downward trend after 2000, falling to 56 percent of GDP in 2001. The peso depreciation in 2003 caused an important – although likely temporary – rebound.

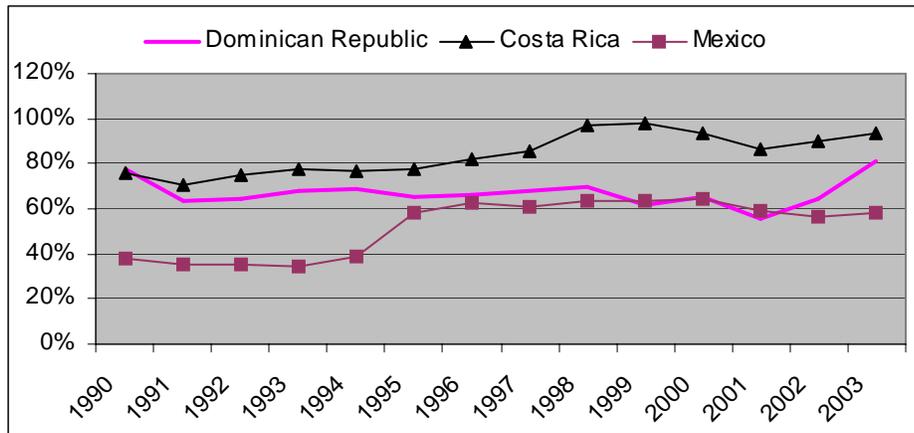
103. Comparing the trade openness of the Dominican Republic with two of the region’s top performers, Mexico and Costa Rica, shows that in the early 1990s the Dominican Republic and Costa Rica exhibited identical degrees of openness, but by the end of the decade Costa Rica’s trade to GDP ratio had soared to 97 percent while the Dominican Republic’s trade share declined (see Figure 3.2). By contrast, Mexico – a larger and more closed economy – caught up with the Dominican Republic by the end of the 1990s, with help from NAFTA beginning in 1995. At present, all Central American countries except Guatemala are more open to trade than the Dominican Republic.

**Figure 3.1. Trade Openness (% of GDP)**



Source: World Bank WDI

**Figure 3.2. Comparing Trade Openness Dominican Republic, Costa Rica and Mexico (% of GDP)**

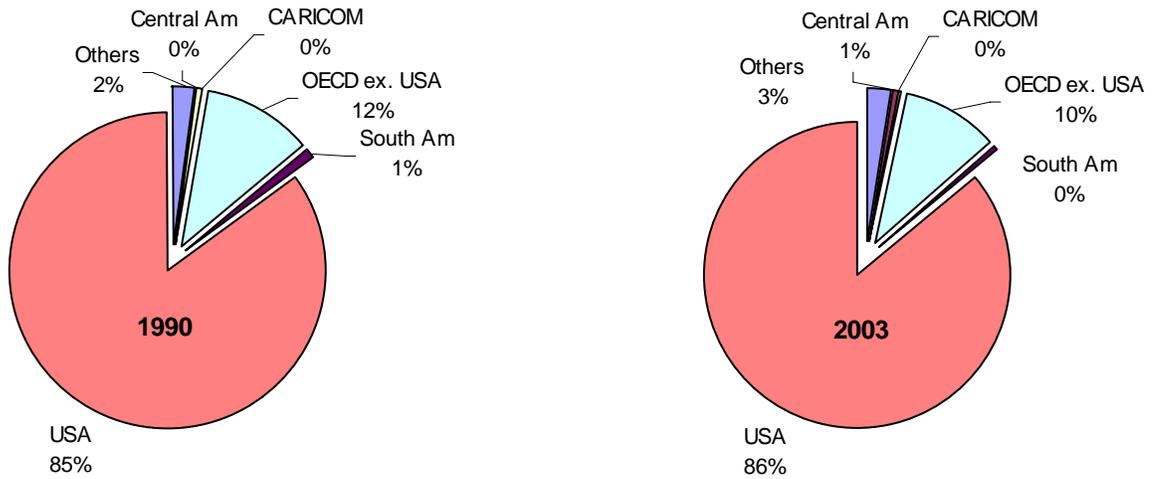


Source: World Bank WDI

**B. Direction of Trade**

104. Dominican trade is carried out primarily with a single partner, the US. Although the Dominican Republic is a signatory to a range of preferential trade agreements with the EU and with Caribbean and Central American neighbors, Dominican trade in 2003 was no more diversified than in 1990 (see Figure 3.3): nearly 90 percent of Dominican Republic exports are destined for the US. Regional trade partners remain insignificant for Dominican exports, suggesting more of a political rather than economic rationale for these regional agreements.

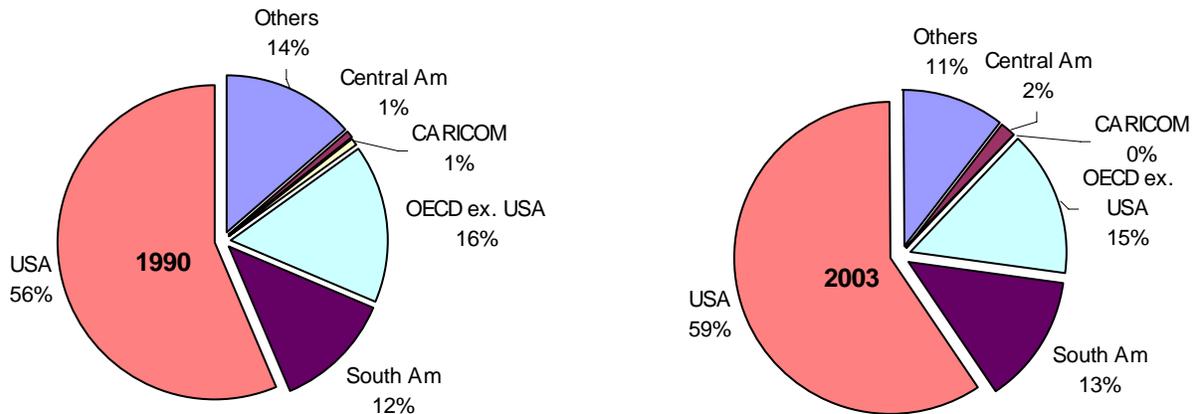
**Figure 3.3. Exports by Country of Destination**



Source: UNCOMTRADE-WITS

105. The breakdown of imports by source country is similarly concentrated, with the Dominican Republic predominantly importing from the US and to a lesser extent other OECD countries. A small shift nonetheless occurred in the 1990s when South and Central American countries increased their share in the Dominican import market by 1 percentage point each (see Figure 3.4). The new FTA with the US, however, may trigger some trade diversion away from South America and toward the US and Central America (discussed below in Chapter 4).

**Figure 3.4. Imports by Country of Origin**



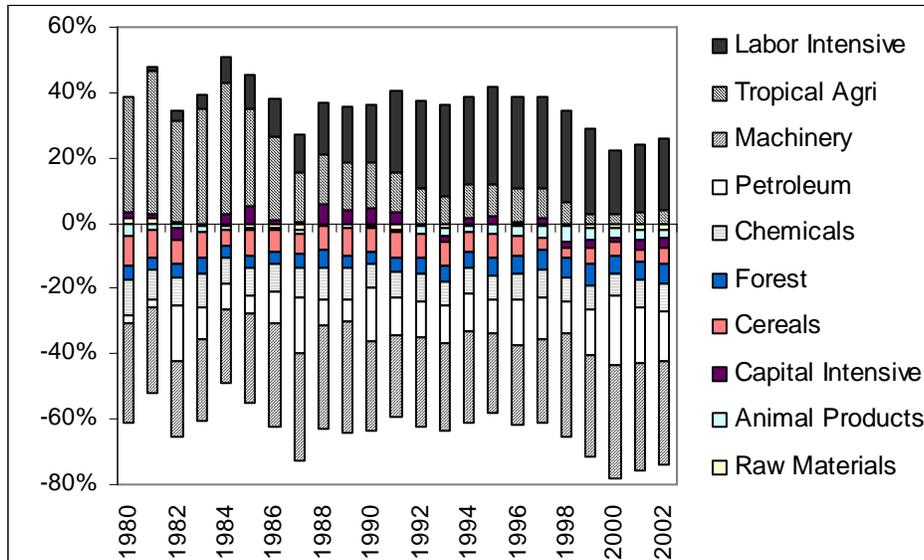
Source: UNCOMTRAD-WITS

**C. Comparative Advantage**

106. Perennial reliance on US-based trade belies important demand shifts during the last two decades – namely in the composition of goods. In order to understand the Dominican Republic’s trade performance, the analysis identifies the sectors and products in which Dominican producers

have a comparative advantage by producing at a lower relative cost, and whether these have changed during the last decade. Comparing net exports per worker in ten different product group categories provides an indication of Dominican comparative advantage.<sup>26</sup> Figure 3.5 illustrates that trade reforms in the late 1980s and 1990s profoundly changed the Dominican Republic's trade structure from a net exporter of tropical agriculture to a net exporter of labor-intensive products. This shift in the productive structure towards labor-intensive products was accompanied by large and increasing net imports of petroleum and machinery, reflecting the investment required for new industries created primarily within FTZs.

**Figure 3.5. Leamer Structure of Trade Net Exports per Worker (% of Total Net Exports)**

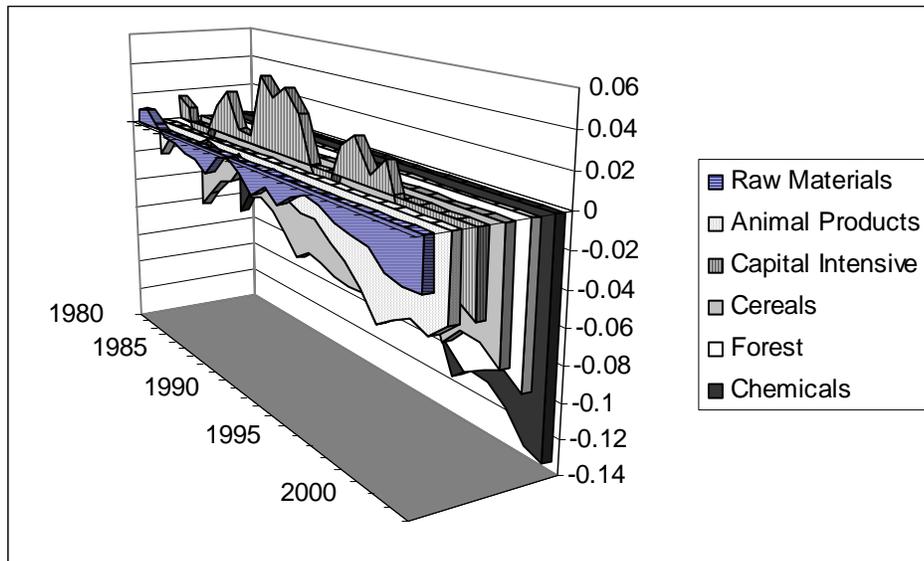


Source: UNCOMTRADE, World Bank WDI

107. Other than the increase in comparative advantage in labor-intensive products, Dominican producers of almost all other categories of products experienced a deterioration in comparative advantage, especially capital-intensive goods, chemicals, forest and animal products (see Figure 3.6). Disaggregating further indicates that weakening comparative advantage in capital-intensive goods was driven by a reversal in the small comparative advantage enjoyed by iron and steel products in the 1980s and early 1990s (see Figure 3.7). The reduction in industrial protectionism in the late-1990s is an explanatory factor of the sector's decline, which was concurrent with an increase in net imports of metal manufactures as FTZ investment boomed.

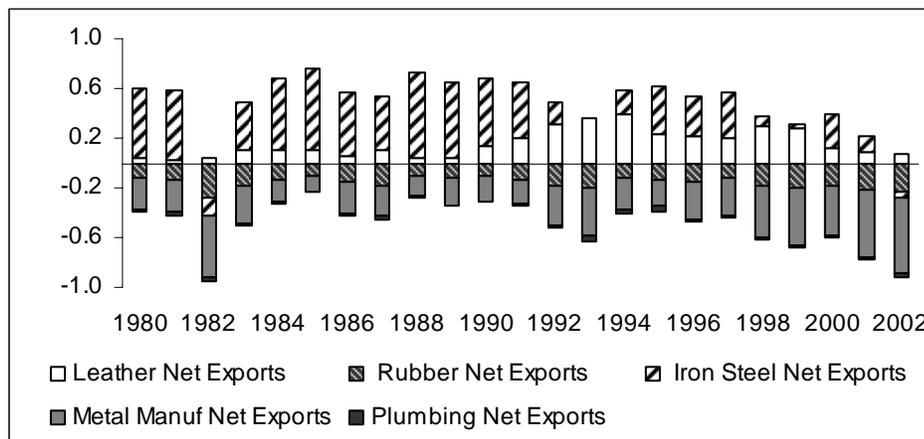
<sup>26</sup> Products in each category tend to be exported by countries with similar endowments in terms of labor, land, and natural resources, according to studies by Leamer (1984, 1995). See Annex II for the list of the products included in each category using the Standard International Trade Classification (SITC).

**Figure 3.6. Leamer Structure: Net Exports per Worker (US\$ thousands)**



Source: UNCOMTRADE, World Bank WDI

**Figure 3.7. Leamer Structure, Capital-Intensive Products Net Exports per Worker (US\$ thousands)**



Source: UNCOMTRADE, World Bank WDI

108. Although the Dominican Republic's terms of trade improved over the past two decades (see Table 3.1), "traditional" exports, which include tobacco, sugar, coffee, cocoa, fruits, and vegetables, declined in importance from 58 percent of total exports in the early 1980s to 21 percent a decade later, to barely 13 percent by 2002 (see Figure 3.8). Nevertheless, the Dominican Republic remains a net exporter of traditional exports. In fact, in the middle of the 1990s a surge in tobacco exports – much of which came from FTZ-based firms – led to an increase in the value of traditional exports (see Figure 3.9).<sup>27</sup>

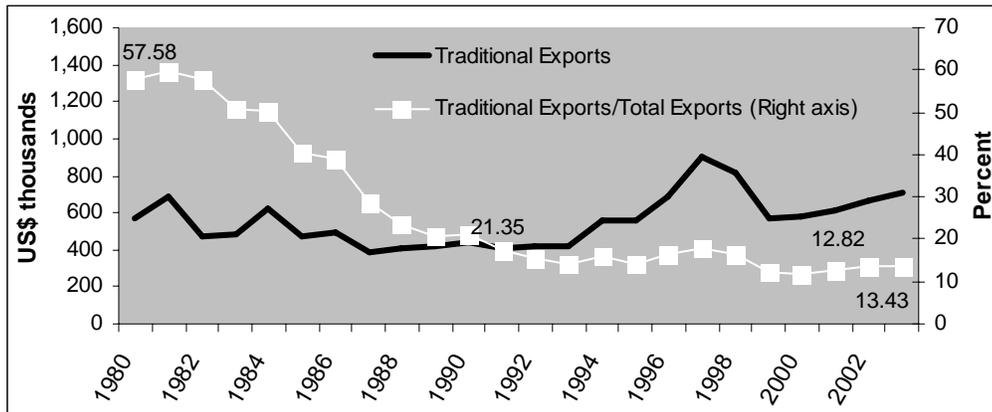
**Table 3.1: Terms of Trade**

(1970=100)	
<b>1950-1958</b>	84.59
<b>1959-1968</b>	95.66
<b>1969-1973</b>	91.81
<b>1974-1978</b>	84.32
<b>1979-1991</b>	87.45
<b>1992-2000</b>	107.68

Source: Lizardo and Guzman (2002)

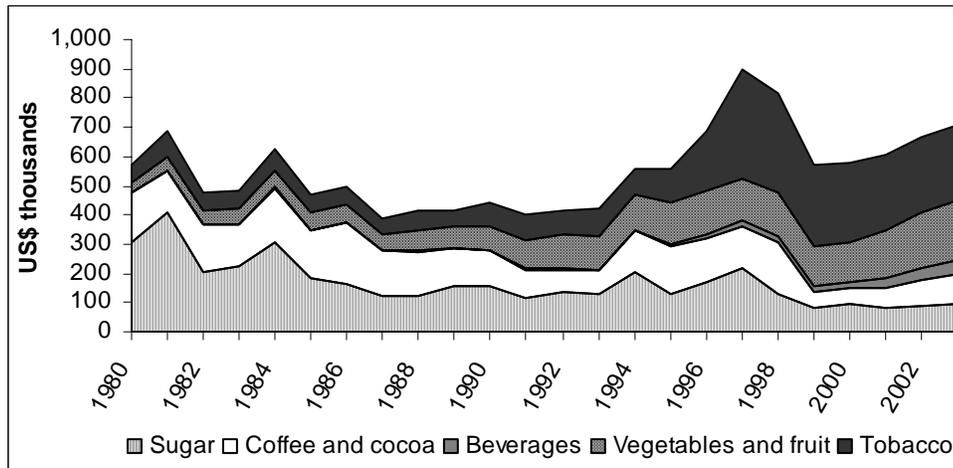
<sup>27</sup> "Traditional" exports do not include the same set of products as the Leamer category tropical agriculture.

**Figure 3.8. Total Traditional Exports**



Source: UNCOMTRADE

**Figure 3.9. Composition of Traditional Exports**

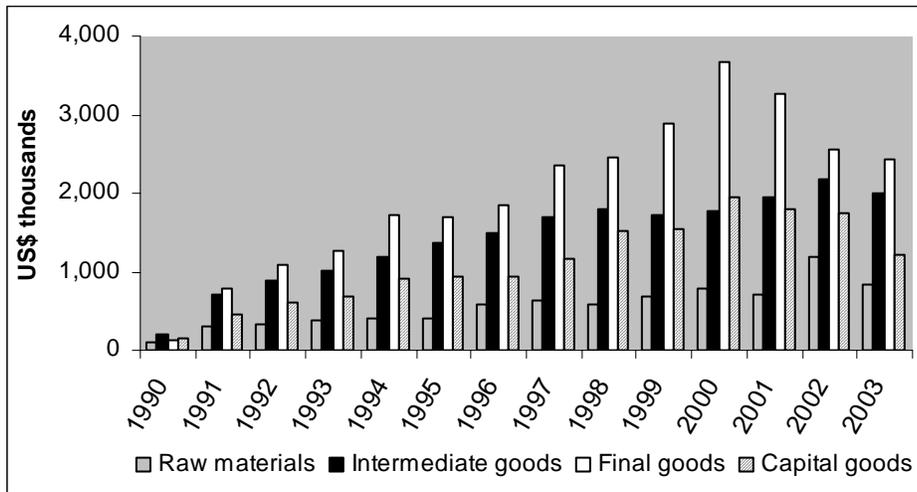


Source: UNCOMTRADE

#### D. Import Structure

109. The comparative advantage indicators analyzed above reflect changes in the structure of imports; the most dramatic change was increased imports of machinery, petroleum and chemicals, which suggests that most imports were directed to the productive sector of the economy. Classifying imports by type of consumption (final, capital, intermediate, and raw materials) reveals that during the 1990s there was indeed a substantial increase in imports of capital goods but there was a similar increase in imports of final goods as well, which averaged 20 percent growth per year. Imports of intermediate goods and raw materials also grew, but at a somewhat slower rate of 12 percent on average per year (see Figure 3.10). Note that by 2001, imports of final goods began to decline due to the economic slowdown despite considerable tariff reductions during that year.

**Figure 3.10. Imports by Type of Good**

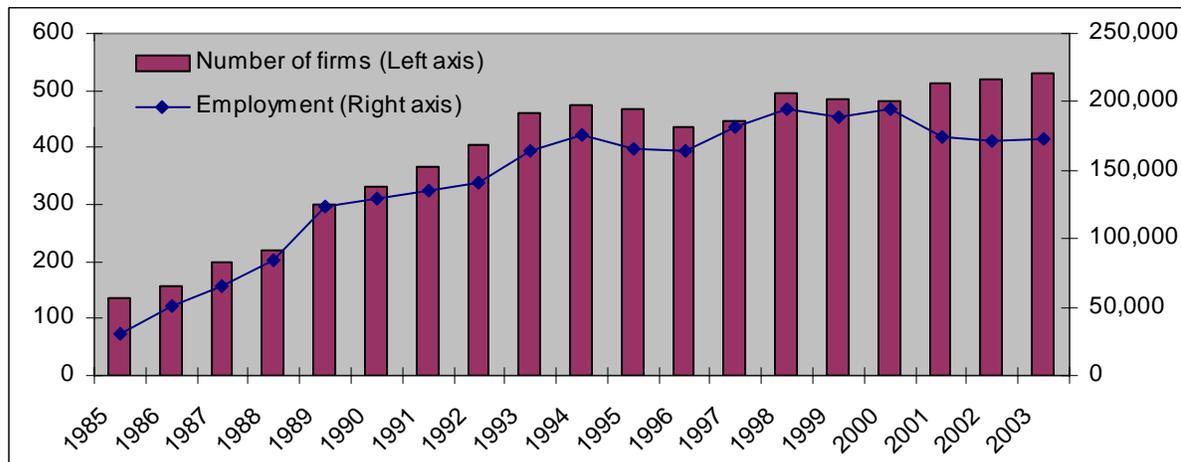


Source: UNCOMTRADE

## II. Free Trade Zones

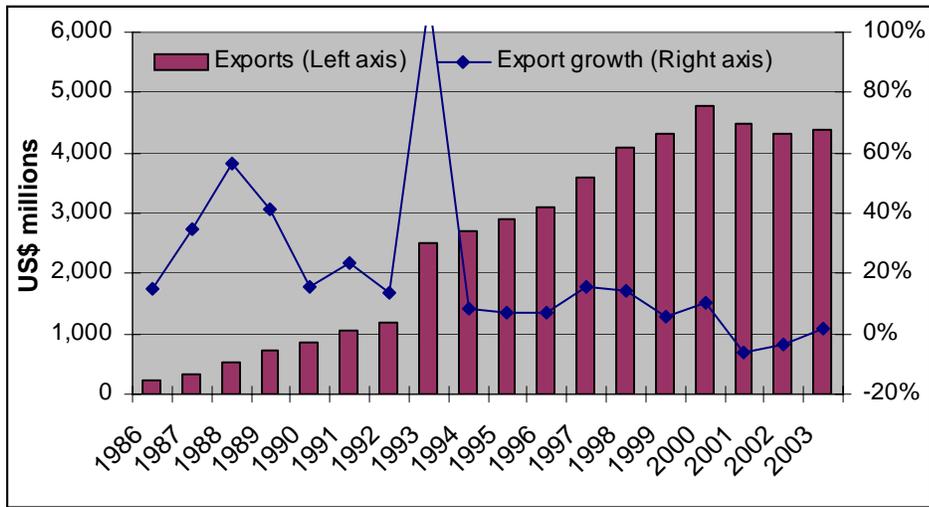
110. The Dominican Republic – together with Mexico – was one of the pioneers in creating FTZs (or *maquiladoras*), which today have been embraced worldwide as a way to raise international competitiveness through establishing specialization in key industries. Free trade zones promote trade by allowing producers to import inputs duty-free, and facilitate exports through access to better infrastructure and streamlined export and customs procedures, inter alia. As early as 1955, the Dominican Republic promoted the creation of FTZs (Law 4315), but it was not until the end of the 1980s and beginning of the 1990s that FTZs became the driving force behind the Dominican boom in apparel exports to the US. Several enabling factors laid the groundwork for the take-off of FTZs: a stable macroeconomic environment, simplified institutional framework and requirements for FTZs (established in Law 8-90), the depreciation of the Dominican peso, and the promotion of FDI (Foreign Investment Law 16-95 of 1995). As a result, between 1985 and 2003, the number of FTZ parks increased from 3 to 54, the number of firms jumped from 136 to 531, employment in FTZs grew more than five times from 31,000 to 173,000, and the value of exports increased twenty-fold from US\$215 million to US\$4.4 billion, accounting for 80 percent of all goods exports and over 50 percent of total goods and services exports (see Figures 3.11 and 3.12).

**Figure 3.11. FTZ Firms and Employment**



Source: CNZFE

**Figure 3.12. FTZ Exports and Export Growth**



Source: CNZFE

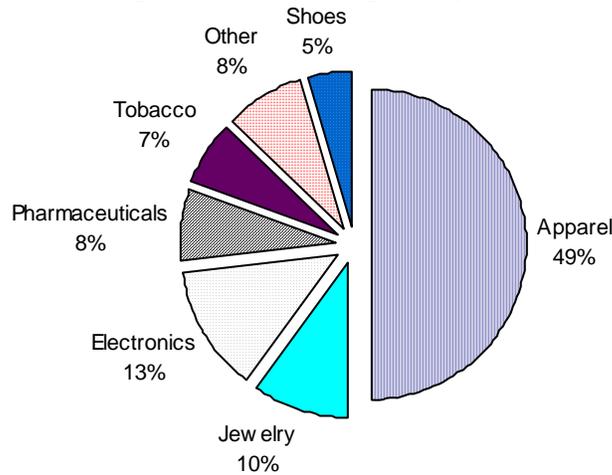
111. The strategic objective of FTZs – namely to promote and diversify exports, generate foreign exchange and attract FDI – proved highly effective in the Dominican Republic, particularly because it did not undermine the highly protected import substitution sector or traditional exports.<sup>28</sup> The conjunction of these policies resulted in a dual economy (as mentioned above) characterized by an inefficient industrial base oriented to the internal market and a declining export sector of traditional goods on the one hand, coupled with a booming export-oriented manufacturing sector in the FTZs.

112. Export creation was significant under the Dominican FTZ regime, as FTZ exports grew by an average 10 percent per year between 1993 and 2000 (measured in nominal US dollars). But in 2001 and 2002, the sector declined by 5 percent each year (see Figure 3.12), implying declining competitiveness in the US market (nearly four-fifths of FTZ exports are destined to the US and another 15 percent go to Puerto Rico). The depreciation in 2003 and 2004 restored external demand for FTZ output, evidenced through higher export volumes.

113. Free trade zones also had an impact on export diversification, triggering the fundamental shift in Dominican comparative advantage from tropical agriculture to labor-intensive products (recall Figure 3.5), which are highly concentrated in the apparel and textile sector located primarily in FTZs. A trend of increasing concentration in apparel manufacturing transpired over the last two decades: in 1981, FTZ apparel exports accounted for a third of total FTZ exports (Lizardo and Guzman 2001), compared to half of FTZ exports in 2003 (see Figure 3.13).

<sup>28</sup> Mauritius (Subramanian and Roy 2003) and Indonesia and the Philippines (Jayanthakumaran 2003) also successfully used FTZs to promote exports by creating areas free of the distortions affecting the rest of these economies.

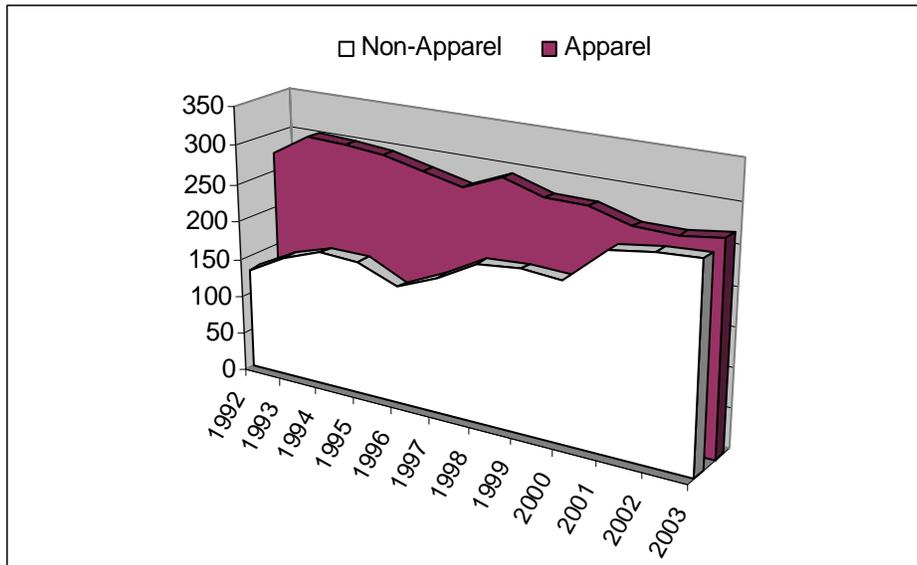
**Figure 3.13. FTZ Exports by Sector 2003**



Source: CNZFE

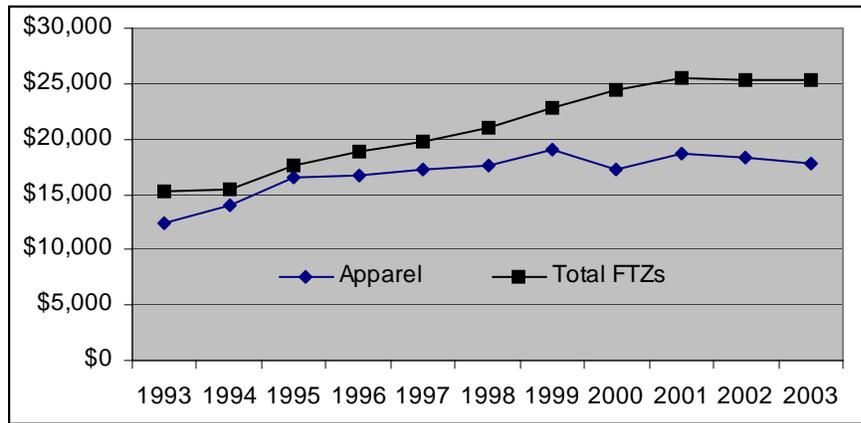
114. Concurrent with the increasing relative importance of apparel manufacturing, FTZ production of other goods increased in absolute terms, and in fact represents a dynamic development of new market niches. Several key non-apparel sectors in FTZs have attracted significant shares of investment, as reflected in the relative increase in the number of non-apparel FTZ firms since 1992 (see Figure 3.14). While a third of total investment to-date has gone into textile and apparel firms, tobacco has attracted 15 percent of total investment, compared to 12 percent each in electronics and pharmaceuticals, and 6 percent in footwear. This development of new market niches also resulted in a shift toward a higher average technological content. Measured by exports per worker, average FTZ labor productivity in non-apparel categories exceeds labor productivity in apparel, and this gap has widened over time (see Figure 3.15).

**Figure 3.14. Number of Apparel vs. Non-Apparel Firms in FTZs**



Source: CNZFE

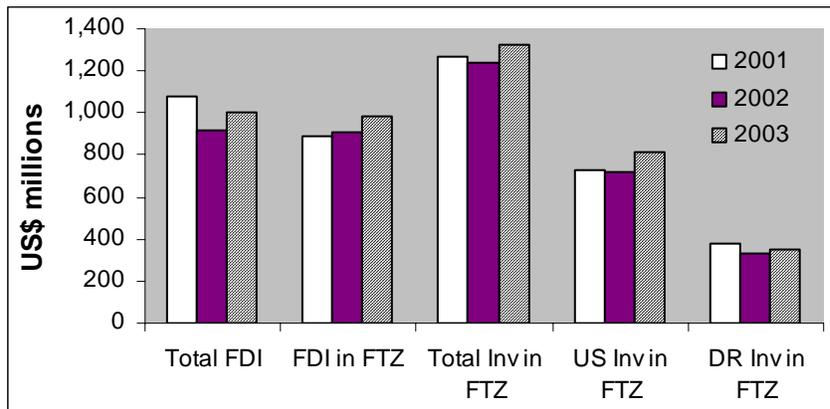
**Figure 3.15. FTZ Exports per Worker (US\$)**



Source: CNZFE

115. Although new market niche development both at the economy-wide level and across products within FTZs has been important, as documented above, there has been minimal diversification in destination market for FTZ exports, despite various trade agreements with Europe and Central American countries. In 2003, some 93 percent of FTZ exports were destined for the US or Puerto Rico. At the same time, about four-fifths of FDI to FTZ firms comes from the US, although Dominican-sourced capital investment in FTZs accounts for a quarter of all new investment (Figure 3.16). This predominance of the US as destination market and investor suggests that FDI in FTZs is aimed at exporting production back to the source country, namely the US. This implies that FDI is primarily vertical in nature, thus enabling firms to exploit cost advantages – chiefly the sharply lower cost of Dominican labor compared to the US, and to a lesser degree by exploiting the geographical proximity to the US and Puerto Rico.

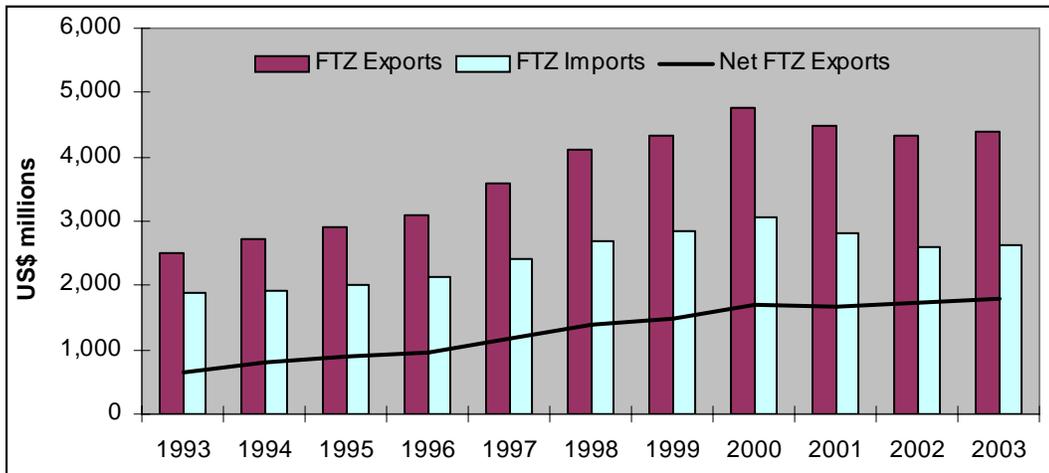
**Figure 3.16. FDI and Total Investment in FTZs**



Source: CNZFE, CEI-RD

116. The vertical nature of FDI – inherent to FTZs because of the duty-free treatment of imports of raw materials and other components – means that as exports increase, so do imports, as observed in the 1990s (depicted in Figure 3.17). The high import content of FTZ exports translates into modest net export growth, implying a very limited impact on the domestic economy with respect to value-added and foreign exchange.

**Figure 3.17. FTZ Net Exports**



Source: CNZFE

117. These minimal backward linkages translate into a relatively small FTZ contribution to growth despite a dominant contribution to export receipts: FTZ-sourced value-added comprises about 3 percent of GDP, and the contribution has in fact declined in the most recent period. Even the fiscal linkages are negligible, due to import duty and export fee exemptions and no corporate income tax or profit-sharing requirements (discussed in Chapter 2). A more extensive analysis of the growth implications of trade – and FTZs in particular – is carried out below.

118. Other explanations of the limited integration of FTZs in the Dominican economy arise from the fact that FTZ firms are located in geographically separate and enclosed industrial parks. Furthermore, FTZ demand for local inputs is limited by a lack of quality control, high prices relative to quality, and delivery delays by local firms (documented by Mortimore et al. 1995 quoted in Lizardo and Guzman 2001). This implies that there is substantial room for improving local managerial efficiency to reap greater benefits from backward linkages. The lack of complementary incentives through duty drawback policies for domestic firms puts them at a competitive disadvantage, and thus discourages backward linkages and reduces the potential domestic impact. To address these disincentives, Export Promotion Law 84-99 of 1999 established a duty drawback scheme for exporting firms outside FTZs, allowing non-FTZ firms to be reimbursed for tariffs and import-related taxes on inputs for the production of exported goods. The duty drawback system is not yet functioning effectively, however.

119. One policy measure that promotes backward linkages with the domestic industrial sector and domestic consumption is the rule allowing FTZ firms to sell up to 20 percent of total output on the domestic market, subject to import duties associated with non-exported production. This rule is not binding, however, given that only 2 percent of FTZ output is sold locally. The enclave nature of FTZs in the Dominican Republic limits the spillover effects to the Dominican economy, although there is of course a positive trickle down effect through utilities consumption, profits to domestic shareholders, job creation and wages (explored in Chapter 5), on-the-job training, and demonstration effects to domestic entrepreneurs, all of which contribute to overall economic growth.

120. In addition to foregone income from taxes and tariffs from FTZs, which constitutes a direct subsidy by the government, FTZ firms also benefit from extensive indirect subsidies in the form of public investment related to the industrial parks. Although the Dominican law provides FTZ incentives similar to those in other countries in Central America and the Caribbean (see Madani 1998

for a comparison), incentives place non-FTZ firms at a distinct disadvantage. However, the preceding analysis illustrates the numerous positive effects of the flourishing FTZ sector: dynamic export growth, FDI inflows for firm and job creation, increased competitiveness in niche markets, and higher public investment in infrastructure, resulting in increased provision of roads, ports (albeit of mediocre quality), and communications for the economy as a whole.

121. The challenges for the future will be to: (i) harness the positive spillover effects through more backward linkages, stimulating ties to the domestic economy, (ii) foster continued innovation to retain competitiveness and expand market niches, such as through promoting private research and development and increasing links between tertiary education institutions and the private sector (World Bank 2002d); and (iii) resolve the disparate treatment of FTZ and non-FTZ exporters in such a way as to meet future WTO obligations and facilitate trade.

122. The duty-free treatment of imports into FTZs is one method of rebating taxes on imported inputs for exported production. This de facto duty drawback could be applied to the economy as a whole; whereas this option would hurt fiscal revenues, the impact will be mitigated by DR-CAFTA which will de facto extend duty-free treatment to all imports from the US and Central America, not just those entering FTZs. As mentioned above, a duty drawback scheme was approved in 1999, but this system is not yet effective, in part because it is very difficult to administer, particularly given the institutional weaknesses that inhibit monitoring and efficient customs operations. Equalizing access to a functioning duty drawback scheme is not adequate to meet WTO obligations, however, nor would it be sufficient to achieve the overarching objective to provide a level playing field. As noted in Table 2.4, FTZ firms benefit from other tax advantages in addition to duty-free imports, namely exemption from: the corporate tax (equal to 1.5 percent of gross revenues); the 16 percent value-added tax ITBIS; the 13 percent foreign exchange commission; the 5 percent export tax (already eliminated); and the 2 percent import tax (eliminated in January 2005).

123. One option that would level the playing field would be to open FTZs to all producers regardless of whether they are exporters by eliminating the minimum export requirement. But the most effective method of eliminating forbidden export subsidies and creating stronger opportunities for backward linkages to the domestic economy is to ensure equal treatment of FTZ and non-FTZ sectors by eradicating disparities in the administrative procedures and infrastructure access between FTZ and non-FTZ firms, extending the ITBIS to FTZs, applying identical corporate tax rates across the economy, and eliminating the foreign exchange commission altogether. The resulting change in incentive structure will need to be phased in gradually to avoid driving producers out of FTZs. And given the importance of the sector and the desire to avoid unnecessary disruption, the authorities will need to consider any proposed tax changes within the broader context of comprehensive tax reform, which could include broadening the ITBIS tax base, for example.

124. The next section considers the textile and apparel sector as a particular illustration of heretofore Dominican success in competing internationally, and the future challenges arising from forthcoming changes in the external trade environment.

### **III. Textiles and Apparel: A Case Study**

125. The textile and apparel sector has been an outstanding export performer, both relative to FTZ exports and to economy-wide exports as a whole, and as such merits particular attention. The apparel sector's strong export performance is explained in large part by the nature of preferences vis-à-vis the US market.<sup>29</sup> In the period since 1996, apparel exports from the Dominican Republic accounted for

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<sup>29</sup> Ninety-nine percent of apparel exports are destined to the US market.

about 4 percent of total US apparel imports, and a fourth of all CBI apparel exports to the US (Table 3.2 reports US apparel imports by source). In the past decade, Dominican exporters have been effective in taking advantage of these preferences, reflected by high utilization rates defined as the share of total US imports entering under preferential agreements. Figure 3.18 illustrates that in relative terms the Dominican Republic relied more heavily than its CBI neighbors on US preferences, and particularly after the CBTPA became effective. Preference utilization reached close to 90 percent in 2002 and 2003, surpassing the average for all countries receiving preferential access.

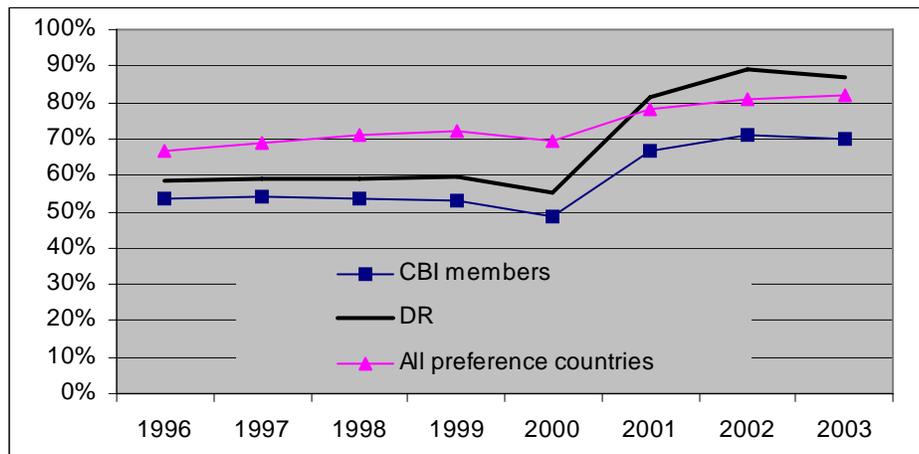
**Table 3.2: US Apparel Imports by Source (US\$ billion)**

	Total	From CBI	From Dominican Republic	From preference countries <sup>1</sup>
<b>1996</b>	37.50	5.93	1.72	11.70
<b>1997</b>	44.20	7.53	2.19	15.20
<b>1998</b>	49.30	8.22	2.31	17.80
<b>1999</b>	52.00	8.77	2.31	19.70
<b>2000</b>	58.60	9.57	2.38	22.00
<b>2001</b>	58.00	9.49	2.23	21.30
<b>2002</b>	58.20	9.47	2.13	21.30
<b>2003</b>	62.40	9.62	2.10	21.70

<sup>1</sup> Includes NAFTA members, CBI, Andean and AGOA beneficiaries

Source: US International Trade Commission

**Figure 3.18. Preference Utilization Rates for US Apparel Imports**



Source: US International Trade Commission

126. Another perspective on assessing the degree to which Dominican exporters take advantage of preferential access comes from comparing the average effective tariff paid with the statutory MFN tariff that applies to exporters not meeting the rules of origin criteria and thus not receiving preferences. As indicated in Table 3.3 below, tariffs on Dominican apparel exports hovered around 7 percent in the late 1990s, a full 10 percentage points less than the MFN tariff rate of 17 percent. This could imply that Dominican producers exhibit greater adeptness at adjusting to changes in US preference policies compared to competitors in the Caribbean and Central America. This is particularly reflected in the post-2000 period under the improved terms of the CBTPA: the weighted average tariff on Dominican apparel imports to the US fell to 2 percent in 2002 and 2003. Together this evidence indicates the sophistication of the sector in the Dominican Republic and its ability to conform to rules of origin relative to other exporters in the region.

**Table 3.3: Effective Tariffs on Apparel Imports to the US**

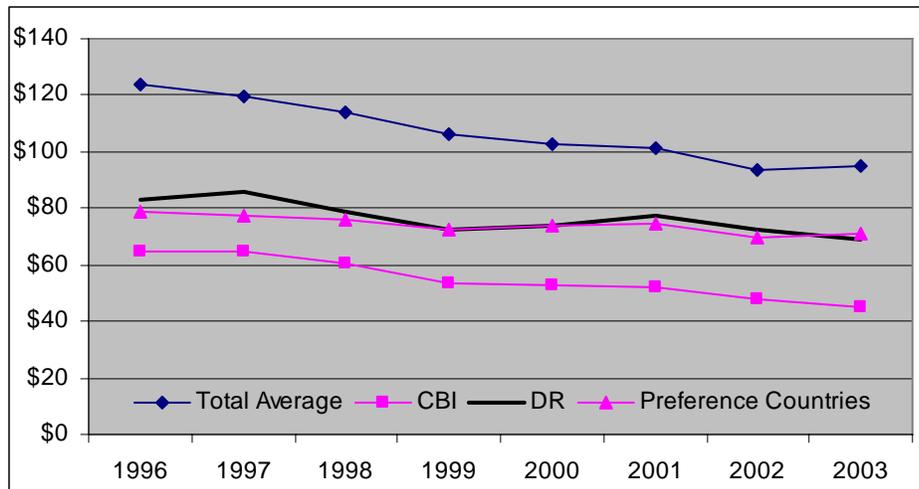
	US MFN tariff rate <sup>1</sup>	Actual mean tariff rate	Actual tariff CBI countries	Actual tariff DR	Actual tariff Preference Countries
1996	17.4%	13.5%	8.3%	7.5%	6.0%
1997	17.4%	13.0%	8.1%	7.4%	5.6%
1998	17.5%	12.7%	8.3%	7.4%	5.2%
1999	17.5%	12.4%	8.3%	7.2%	5.0%
2000	17.3%	12.5%	9.2%	8.1%	5.4%
2001	17.1%	11.8%	5.8%	3.2%	3.8%
2002	17.0%	11.6%	5.0%	1.9%	3.4%
2003	16.7%	11.5%	5.1%	2.4%	3.0%

<sup>1</sup> The averages are calculated by using the import value of each category as weights.

Source: US International Trade Commission

127. A cross-country comparison of unit prices by product category gives an indication of producers' competitiveness and relative placement on the quality spectrum.<sup>30</sup> Dominican apparel exports to the US are about 30 percent cheaper on average than the weighted average unit price for US apparel imports from all countries; this reflects in part the lower tariff, but also the quality of the product within its product category. The Dominican Republic thus produces lower than average quality apparel products, albeit higher quality compared to the rest of Central America and the Caribbean (see Figure 3.19). The steady decline in prices since 1996 is explained by increased competition through globalizing markets, and more significantly by the reduction in tariffs concomitant with the various preferential agreements between the US and its trading partners. However, the general downward trend in import prices may mask the relative increase in demand for preference-qualifying products that could have resulted in higher prices paid to exporters. In other words, although the price to the importer and US consumer declined, part of the new profit margin arising from the reduction in tariffs may have been captured by exporters.

**Figure 3.19. US Apparel Import Unit Price by Source (US\$)**



Source: US International Trade Commission

<sup>30</sup> Weighted average calculations use export values at the very disaggregated 8-digit category level, such that price differences reflect quality differences across similar products rather than product differences.

128. Most of the literature on trade liberalization – and preferential agreements in particular – examines the impact on trade volumes. But aggregate data on export values combines price and volume data, making it difficult to tease out the separate factors underlying these trends. Exchange rate effects are also hidden when the comparison is made in US dollar terms. In the analysis that follows, we will shift the focus to price effects in order to better understand the welfare impact of trade liberalization by identifying the relative winners at the country level. Using the methodology developed by Özden and Sharma (2004), we consider how exporter prices rise as a result of increased preferences to the Dominican Republic, and the proportion of the preference margin that this price increase represents, with the remaining gain captured by importers.

129. Özden and Sharma (2004) use a Fixed Effects Generalized Least Squares regression on the determinants of the relative differences in apparel export prices, controlling for market power effects through market share variables (i.e., total exports by country and total US imports by category) and using country, year and 4-digit category fixed effects. We repeat the regression analysis here, updating observations to span the period 1996 to 2003. The revised estimates (results reported in Table AIII.1) indicate that between 1996 and 2003, average export prices for Dominican producers rose 9 percent as a result of tariff preferences (controlling for other effects including supply shocks), while those for CBI countries rose 8 percent (based on the 2003 tariff preference margin). In both cases, exporters captured about two-thirds of the potential gain, or preference margin, measured by the difference between the MFN and actual tariffs.<sup>31</sup> Importers captured a third of the benefit through import prices averaging 5 percent lower for Dominican products and nearly 4 percent lower for CBI products.

130. The positive, statistically significant values on both market share variables suggests that market share affects the magnitude and distribution of preference-induced price changes. Özden and Sharma (2004) rank countries by size of export price increase, concluding that Honduras, the Dominican Republic and Costa Rica experienced the highest gains (around 9 percent for the 1992-2002 period) compared to under 5 percent for El Salvador and Guatemala.

131. In order to disentangle the CBI and CBTPA effects, we divide the sample into two subsamples: 1996-2000 and 2001-2003. The Dominican Republic's larger market share prior to 2000 led to high relative exporter prices through a higher capture rate of 85 percent, which declined to 64 percent in the CBTPA period, although the preference margin increased in the later period (see Table AIII.2); in net terms, Dominican exporters gained a higher price increase under the CBTPA (10 percent) compared to the CBI (7 percent) because of a larger margin, but US importers gained ground in relative terms, capturing a greater share of the potential gain.

132. This analysis estimates the extent to which tariff reductions were passed on to Dominican exporters through higher prices relative to apparel exporters in the rest of the world. But to understand the Dominican Republic's competitive advantage in apparel, it is essential to look at the broader context, namely that US trade policy with other apparel suppliers such as China relies heavily on quotas. Under the Multifibre Agreement (MFA), the US imposes quantitative restrictions on imports that threaten its domestic apparel industry. Almost two-thirds of US apparel imports do not enter under preferential terms, with the majority coming from countries outside the CBTPA and other preference regimes (NAFTA, Andean and AGOA beneficiaries). Chinese apparel exports alone accounted for 14 percent of total US apparel imports in 2003. The other top apparel exporters to the US are Turkey, India, Pakistan, Bangladesh, Sri Lanka, and the Southeast Asian economies. Following the MFA phase-out scheduled for January 2005, Dominican exporters are likely to face

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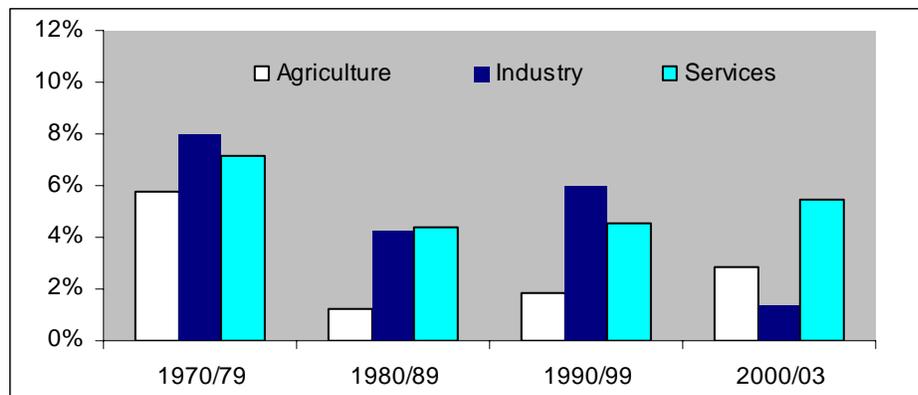
<sup>31</sup> The data set used by Özden and Sharma (2004) covers 8 CBI countries: Costa Rica, Dominican Republic, El Salvador, Guatemala, Haiti, Honduras, Jamaica, and Nicaragua.

major competition from outside the region. Producers will need to respond flexibly by re-orienting production to higher value-added products and taking advantage of their geographical proximity to the US by providing special order and niche products that can be supplied quickly. Chapter 4 explores in detail the potential impact of post-MFA competition.

#### IV. Trade Contribution to Growth

133. The robust export growth described above – particularly in the FTZ sector – has played a central role in transforming the Dominican economy. But the degree to which trade contributed directly to GDP growth is surprisingly modest. Recall that trade openness remained flat, even during the late 1990s, years of tremendous economic growth. A sectoral decomposition of the evolution of GDP using national accounts data since 1970 reveals that industry (including manufactured exports) has grown robustly, although the sector has lost ground since 2000 (see Figure 3.20). The agriculture sector contracted sharply over the last three decades, its share in GDP falling from 25 percent in 1970 to 13 percent in 2003.

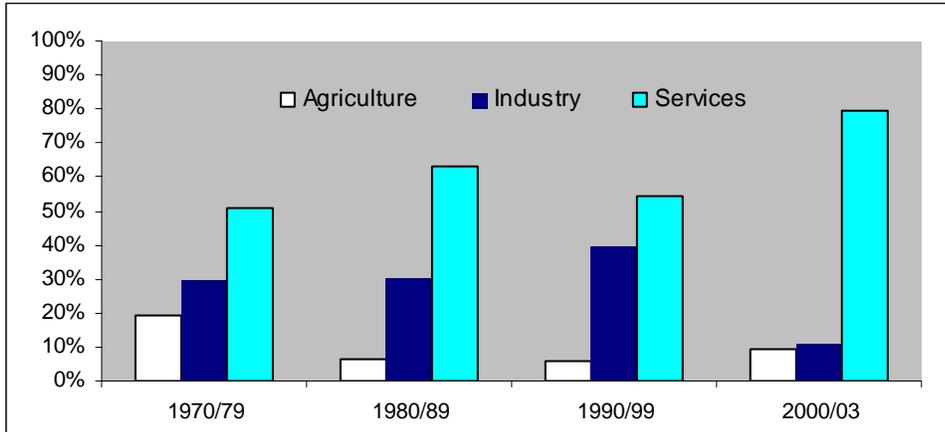
**Figure 3.20. Sectoral Growth 1970-2003**



Source: UNCTAD-TRAINS

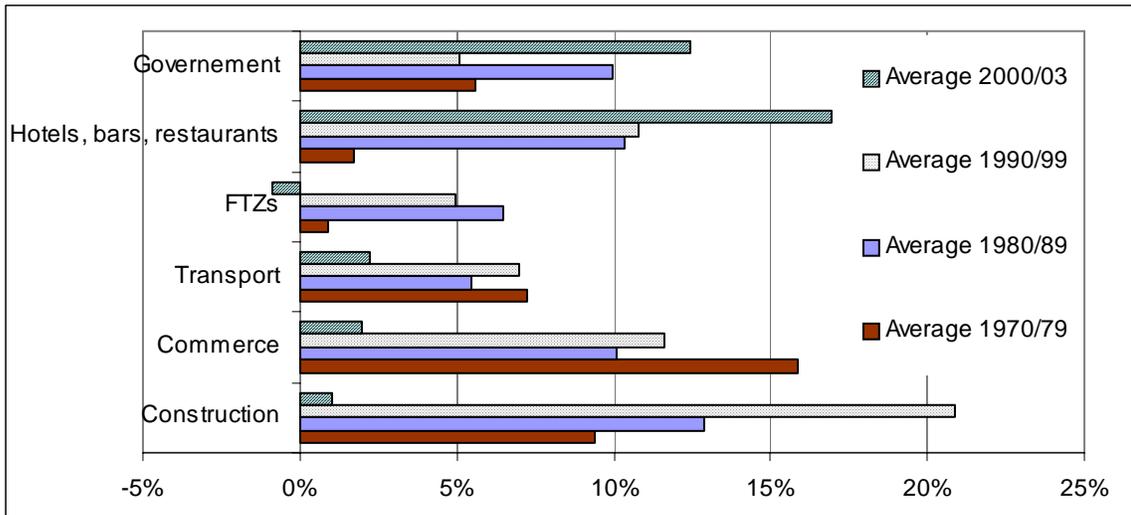
134. Services, by contrast, have maintained a robust annual growth rate of over 5 percent since 1970, and significantly outperformed the rest of the economy since 2000. Because services account for more than half of GDP, service sector growth has been the main driver of overall GDP growth, contributing 50-80 percent over the past thirty years (see Figure 3.21). A closer examination of sectoral growth patterns indicates that construction, tourism and commerce were the primary drivers of economic growth, while FTZs during their main period of expansion – namely the 1980s and 1990s – accounted for only 5-6 percent of GDP growth (see Figure 3.22). Lizardo and Guzman (2001) contend that the most important links between FTZ production and the domestic economy (other than labor) come from the intermediate consumption of energy, water, rent, transport and communication.

**Figure 3.21. Sector Contribution to GDP Growth**



Source: UNCTAD-TRAINS

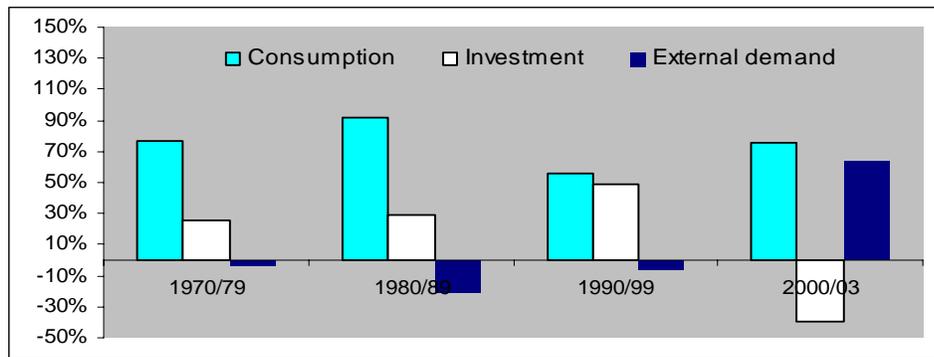
**Figure 3.22. Key Sector Contributions to GDP Growth**



Source: UNCTAD-TRAINS

135. Shifting the growth accounting exercise from the supply to the demand perspective, Figure 3.23 below illustrates that external demand has made a relatively modest contribution to growth, except in the most recent period, which was driven by the peso depreciation. Consumption, on the other hand, has been the primary source of GDP growth.

**Figure 3.23. Demand Composition of GDP Growth**



Source: UNCTAD-TRAINS

136. The preceding growth decomposition cannot fully measure the indirect role that FTZs have played in stimulating economic growth, however. Recent regression analysis by Lizardo and Guzman (2002) decomposes the factor components of output to measure the relative contributions of capital, labor, human capital and total factor productivity growth. The research concludes that capital formation explains 75 percent of GDP growth during the 1992-2000 period. This finding comprises an important FTZ contribution, given the large share of total capital investment directed to FTZs, but it also points to other significant capital accumulation in the rest of the economy, namely through infrastructure investment and the extensive development of the tourism sector. Using the methodology developed by Mankiw et al. (1992), Lizardo and Guzman (2002) find that labor and human capital growth each contributed only 4 percent of GDP growth during the 1990s, while increases in total factor productivity explained 17 percent of overall growth (the growth literature provides extensive evidence that TFP growth is highly correlated with trade). These results, which are similar to earlier findings that TFP grew by over 2 percent per year in the 1990s (World Bank 2000), are contradicted when the methodology developed by Hall and Jones (1998) is applied to the Dominican data; measuring human capital growth more carefully using Mincer regressions, the Hall and Jones growth regressions show that TFP growth was actually negative over the period, while labor and human capital each contributed 14 percent to overall growth.

137. Another extensive growth decomposition exercise by Loayza et al. (2004) attributes decadal growth differences in Latin America to five potential explanatory variables: transitional convergence (i.e., catch-up), cyclical reversion, structural policies, stabilization policies and external conditions. The authors conclude that in the Dominican Republic, one-third of the change in growth between the 1980s and 1990s was driven by structural changes – proxied by increases in secondary school enrollment, government consumption and infrastructure in the case of the Dominican Republic – and to a lesser extent cyclical reversion and stabilization policies. Unlike the rest of Latin America, the Dominican Republic experienced positive terms of trade shocks particularly in the beginning of the 1990s (recall Table 3.1) which also contributed positively to growth.

138. Taken together, these results imply that although FTZ production has been central to export growth, its direct contribution to overall economic growth has been modest. Figure 3.22 suggests that the development of the Dominican economy has been reasonably diffuse, with tourism and construction playing key roles, but with widespread links to commerce and transport, and a non-negligible government role in stimulating the economy through both spending and investment. The indirect contribution of FTZs – through investment, TFP growth and utilities and other intermediate goods consumption – is likely to have had an important impact on growth, however, and the employment creation associated with this growth – both trade-related and in the non-trade economy – will be examined below in Chapter 5. Whereas this analysis considers the contribution of trade to

growth, it is important to note that growth has positive feedback effects on trade, with higher incomes fueling increased demand for imports (recall from Figure 3.10 that imports of final goods dominate all other types of imports). As the external trade environment faced by the Dominican Republic undergoes fundamental changes in the coming years, it would be useful for policymakers to understand the potential implications for trade outcomes and Dominican economic growth more broadly.



## **CHAPTER 4: FUTURE TRADE POLICIES AND THEIR POTENTIAL IMPACT**

139. The preceding chapter analyzes the role that trade plays in the Dominican economy with respect to linkages with the domestic economy and the extent of its contribution to growth. Whereas export performance spearheaded by the FTZ sector and tourism was strong throughout the last decade, the overexposure to the US market – reflected in the slowdown observed after 2000 and subsequent recovery with exchange rate depreciation in 2003 – raises concerns over future growth prospects in light of trade policy changes and particularly with the required phase-out of special FTZ tax treatment. Export performance in the last decade has been driven by preferential access to the US market and a supportive policy environment for FTZ producers, while import-competing sectors remain protected, as described in Chapter 2. Whereas the numerous impediments to trade in terms of non-tariff trade-related factors comprise a challenging environment for expanding trade and increasing Dominican competitiveness in the future, there are many policy levers available in the framework of the complementary trade agenda that could facilitate trade and competitiveness, as discussed above.

140. But the trade policy framework guiding Dominican trade is in the throes of change arising from new international agreements and obligations. The new free trade agreement with the US and Central America, DR-CAFTA, is likely to increase Dominican exports to the US significantly, on the order of at least 10-20 percent based on model simulations (not accounting for the potential emergence of new product markets and technologies resulting from trade liberalization), with gains concentrated primarily in the FTZs. These anticipated gains will offset the expected decline in apparel exports following the phase-out of the Multifibre Agreement, which could reduce Dominican apparel exports to the US by some 30 percent. Whereas DR-CAFTA will reduce fiscal revenues from tariffs on imports (60 percent of which come from the US and Central America) and displace domestic production in favor of increased imports from the US, at the same time it will benefit Dominican consumers of intermediate and final goods through lower prices and/or higher quality, and create market opportunities in new product lines.

### **I. New Trade Policies**

#### **A. DR-CAFTA**

141. In light of the trade performance over the last decade and the US role as the country's prominent trade partner, the recently signed and yet to be implemented free trade agreement with the US and Central America will significantly affect trade outcomes by lowering the cost of US imports to Dominican consumers and at the same time raising export demand by US importers due to lower tariffs on Dominican exports. However, given that many Dominican exports already have duty-free access to the US market under the CBTPA, the magnitude of the overall effect is unclear (the analysis below estimates the potential effects).

142. The US entered its first regional FTA in 1994 with the signing of NAFTA with Mexico and Canada. Subsequent bilateral FTAs were signed between the US and Israel, Chile, Singapore, Jordan, Bahrain, and more recently Australia and Morocco. In 2003, the US initiated trade talks on a potential FTA with various Central American countries, following a blueprint similar to NAFTA but resulting in non-negligible differences. On the heels of these negotiations, the US and Dominican Republic began bilateral talks in January 2004, and subsequently decided to incorporate the Dominican Republic into CAFTA, thereby creating DR-CAFTA. The country grouping reflects certain similarities in export structure and markets, in that the US is a major trade partner with each, textile and apparel exports account for a large proportion of exports, and signatories already have preferential access to the US market under the CBTPA.

143. The general provisions of DR-CAFTA, signed in August 2004, are as follows (Table AI.2 contains a brief summary). Existing tariffs on US-Dominican trade will be cut according to a schedule of tariff reductions to be implemented over 10 years for non-agriculture, and 15-20 years for certain agriculture products. Upon ratification of the agreement, four-fifths of US consumer and industrial exports to the Dominican Republic and Central America will enter duty-free, with the proportion rising to 85 percent in 5 years, and 100 percent in 10 years other than the extended timeframe for agriculture.<sup>32</sup> For the most sensitive products, tariffs will be phased out gradually through quotas limiting the duty-free entry by volume, with volume limits increasing over time and ultimately eliminated. Dominican and Central American exports to the US will continue to have preferential access (i.e., duty- and quota-free) subject to the same rules of origin in effect under the CBTPA, but on a permanent basis. For most apparel categories, the rules of origin have been extended to include input fabrics from Mexico and Canada (up to certain quotas) in addition to the US and Central America. Accumulation rules are expected to apply to co-production by Dominican and Haitian firms (this will require a separate agreement). The “short supply” waiver has been extended to a longer list of apparel products, and a minimum value-added cap for third-country (i.e., non-CAFTA) content was agreed.<sup>33</sup> Under the new accord, the Dominican Republic will open its services market to almost all services (subject to a small negative list), including telecoms, financial services, insurance, financial information and data processing, distribution, computer-related services, energy, transport and construction, inter alia. Other provisions allow e-commerce and promote protection of digital products.

144. The trade opening defined in DR-CAFTA will potentially expand consumer choice and stimulate FDI, particularly in light of strengthened investor protections under the agreement, including an appropriate legal framework and transparent dispute settlement mechanisms that encourage trade-enhancing solutions on the basis of open, transparent and consultative processes.

145. The terms of DR-CAFTA are relatively lenient on Dominican agriculture producers, given that many of the current protective measures will remain in place for 15 years, with the most sensitive products retaining protection for 20 years.<sup>34</sup> Sugar will be the only Dominican export to the US that faces a tariff. The preferential quota on Dominican sugar exports to the US was raised by 10,000 tons, and will rise by 10 percent per year. Meanwhile, the Dominican Republic and Central American countries will eliminate their sugar tariffs within 15 years.<sup>35</sup>

146. Sanitary and phyto-sanitary standards (SPS) were not subject to negotiation, since the relevant rights and obligations are already defined in the WTO’s Application of SPS Accord. Nevertheless, the new FTA moved forward the inspection and certification processes that will effectively open the US market to Dominican mangoes for the first time. All parties agreed to the reinstated pre-inspection program for fruits and vegetables.

147. The accord has many important new provisions that go beyond those established in the Chile and Singapore FTAs, relating to trademark protection, intellectual property rights, government

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<sup>32</sup> Because tariffs on intermediate goods are scheduled to decline before those on final goods, the relative rate of protection of final goods will actually rise in the near term, albeit only temporarily.

<sup>33</sup> A short supply waiver allows non-member country imports of inputs to qualify as within-FTA content when the supply of the input – either domestically or in member countries – can be demonstrated to be inadequate.

<sup>34</sup> These include rice, chicken thighs, powdered milk, mozzarella cheese, and yogurt.

<sup>35</sup> In September 2004, the Dominican legislature imposed a 25 percent tariff on US corn syrup imports, in contradiction to DR-CAFTA. The legislature is expected to remove the tariff, however, once agreement can be reached on compensation mechanisms. For a comprehensive treatment of agriculture products, see World Bank (2004f).

procurement, workers' rights and environmental safeguards. All of these elements will be essential for passage by the US Congress. With respect to trademarks, for example, the accord retains the existing 20-year patent period, and strengthens intellectual property rights on digital and other products. The DR-CAFTA agreement includes language identifying the principles and procedures that support efficient and transparent government procurement. The Dominican Republic does not have contradictory legislation in place which would violate DR-CAFTA, but neither does it have a sound procurement regulatory framework or practices reflected by these principles and procedures, according to a recently concluded World Bank study (see World Bank 2004b). The FTA includes provisions for procurement of goods, services and public works over certain defined thresholds (US\$58,550 for goods and services, US\$6,725 for works), but during the first three years of the agreement, much higher thresholds prevail (US\$117,100 for goods and services, US\$8 million for works), enabling a transition period to full compliance and improved procurement capacity.<sup>36</sup> And for public works in particular, the accord calls for eliminating mandatory joint venture provisions within 15 years, and after 5 years, the maximum mandatory domestic content will be set at 10 percent. In fact, the requirement to comply with DR-CAFTA terms may help to catalyze efforts within the government to introduce effective procurement regulations and monitoring capacity. The indirect implications of transparent and sound procurement practices include better relations with trading partners, greater confidence in the government and the economy, and increased FDI.

148. With respect to labor protections, much of the US political debate over FTAs, and globalization more generally, stems from a concern that foreign labor, which is cheaper than US labor, is inadequately protected by labor laws, implying worker exploitation. But the language of the labor provisions in the trade agreement are general and consistent with the principle ILO conventions, all of which have been adopted in the Dominican Republic. The accord also commits its members to establish an intra-country cooperation program to strengthen and enforce labor laws.

149. The provisions relating to the environment – which go beyond FTAs with Chile and Singapore – recognize national environmental laws and the primacy of national authority within each country. The mutual objective is environmental protection, and the accord will contain specific dispute settlement mechanisms and an emphasis on public participation and transparency.

150. In order to implement DR-CAFTA effectively and derive the maximum gain from the accord, the authorities will need to draft and issue implementing regulations relating to key aspects of DR-CAFTA. Successful implementation of the trade agreement will also depend on government capacity, requiring upgrading of essential government functions such as customs procedures, rule of origin monitoring, standards upgrading and enforcement (including SPS), and procurement policies. In addition, strengthening government regulation of sectors not directly covered by DR-CAFTA but indirectly affected through trade incentives – for example, the financial services and insurance industries – would complement trade reform and foster growth through improving the business climate and increasing firms' operating efficiency.

## **B. Phase-Out of FTZ Protections**

151. By virtue of its membership in the WTO, the Dominican Republic will need to comply with the Agreement on Subsidies and Countervailing Measures which effectively rules out special treatment of exports as currently embodied in the fiscal and other advantages granted to FTZs in the Dominican Republic. And although FTZs are not defined or referred to explicitly in the WTO agreement, it is possible that even measures like publicly provided infrastructure could be contested under the new rules (English and de Wulf 2002). This equal treatment requirement will be fully

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<sup>36</sup> See World Bank (2004b) for a complete procurement analysis and policy recommendations.

binding in 2010 (although the phase-out schedule remains subject to re-negotiation under the WTO's Doha Development Agenda), providing a multi-year timeframe for adjustment to compliance.

152. This adjustment can take several forms. At the policy level, tax laws could be revised to extend existing FTZ duty-free treatment of imported inputs to all producers regardless of whether products are sold on the domestic market or exported. This would be identical to implementing an effective duty drawback scheme (recall that the system adopted in 1999 is not functional). Another policy option would be to introduce a low uniform tariff on the economy as a whole, not just FTZ producers, which would simplify customs and other trade procedures and reduce distortions on domestic consumption and production. Resistance to this policy option stems from the negative fiscal impact due to lower tariff revenues, which currently account for 13 percent of total government revenue, as well as pressure from protected sectors. But the policy may not be particularly costly with respect to tariff revenues once DR-CAFTA comes into effect, which itself is projected to reduce tariff revenue significantly, as shown in the simulation exercise below.<sup>37</sup> By leveling the playing field, a low uniform tariff would reduce rent seeking and lead to more sustainable employment-generating growth that is more diversified in product and market. In setting an appropriate uniform tariff level on third-party trade, the Dominican authorities would need to weigh the implied pattern of effective protection that would be created by the dual (i.e., within DR-CAFTA vs. third parties) tariff treatment. And in light of the fiscal constraints currently gripping the country, as discussed in Chapter 2, and the expected decline in tariff revenue associated with DR-CAFTA, the choice of tariff level will need to be consistent with revenue requirements under a sustainable fiscal program.

153. Introducing a low uniform tariff for third party trade is not adequate to meet WTO obligations, however, nor would it achieve the overarching objective to provide a level playing field for FTZ and non-FTZ firms and create stronger opportunities for backward linkages to the domestic economy, as discussed in Chapter 3. Because FTZ firms benefit from other tax advantages in addition to duty-free imports – namely exemption from the corporate tax, the value-added tax, foreign exchange commission, and the ad hoc export tax and import tax – WTO compliance will require ensuring equal treatment of FTZ and non-FTZ sectors by extending the ITBIS and corporate tax to FTZs, although any tax increases would need to be implemented gradually and should be part of a broader tax reform.

154. Until the WTO rules take effect, however, Dominican firms can continue to take advantage of existing US import markets over the next five years, a not inconsiderable period of time. Of course, the degree to which Dominican exporters can retain their competitive advantage without upgrading capital stock or training staff – investments that firms may be unwilling to make in light of investment return time horizons exceeding the interim period – is questionable. Moreover, an uncertain future policy environment is likely to discourage investment in new firm start-ups, thereby exacerbating the sector's ability to compete.

155. There is limited evidence of adjustment by FTZ firms to-date, despite the knowledge of these forthcoming changes (Box 4.1 below presents an exception). Not only would eliminating FTZ import tariff exemptions raise production costs sharply, but other factors will be relevant to future competitiveness. For example, Dominican FTZ producers will face potentially major competition from regional FTZ producers in Haiti, Honduras and Nicaragua which will be exempt from the new WTO restrictions on welfare grounds, because they fall below the threshold per capita income criteria. As a result, the Dominican Republic risks losing its significant share of the US import market to poorer competitors in the region and elsewhere. In fact, in Santiago – the country's second

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<sup>37</sup> Recall from Figure 3.4 that imports from the US and Central America account for 60 percent of total imports.

largest city – the strategic plans for future competitiveness under consideration among firms and planners have already identified plans to shift production to border zones to take advantage of Haiti FTZ competitive advantages (recall Box 2.4).

156. Even with the necessary changes in the FTZ regime – whatever they may be – it is important to note that the Dominican Republic’s FTZ sector has contributed more than just increased exports. Several enduring positive side-effects could outlive the WTO-imposed phase-out: better infrastructure, more efficient production (through imported technology), smoother trade transactions processing, and the capacity to expedite customs clearance.

### **C. MFA Phase-Out**

157. The final policy change in the terms of global trade considered here is the recent dismantling of the Multifibre Agreement on January 1, 2005. In place since 1974 under the auspices of GATT, the MFA allowed countries to impose quantitative restrictions on textile and apparel imports that threatened domestic industry. At the inception of the Uruguay round, a new Agreement on Textiles and Clothing (ACT) was ratified for the 1994-2004 period as a transitional measure toward eliminating quotas. Four WTO-members maintained quotas under the MFA: US, Canada, EC and Norway. The US – the world’s largest clothing importer – has relied heavily on this agreement to limit the inflow of goods from the world’s largest producers, most markedly China, and thereby maintain demand for developing country products including Dominican apparel exports, which in turn creates demand for US-produced production inputs such as textiles through trade diversion.<sup>38</sup> The phase-out of the MFA was set to occur in four stages, with each product assigned to a stage. The US has already eliminated quotas under the first 3 stages – in 1995, 1998, and 2002 – but the bulk of apparel imports to the US fall under stage 4.<sup>39</sup> This policy change vis-à-vis the elimination of textile and apparel quotas will likely hurt Dominican apparel exporters severely, as shown below.

### **D. Other Trade Negotiations**

158. As a result of the recently agreed DR-CAFTA, the Dominican authorities must renegotiate the bilateral FTAs already in place with each of their Central American counterparts in order to ensure consistency with DR-CAFTA.

## **II. Modeling the Impact of DR-CAFTA**

159. Given the trade performance over the last decade and the US role as the Dominican Republic’s most prominent trade partner, it is likely that the recently agreed DR-CAFTA will affect trade outcomes, but predicting the magnitude of this effect is methodologically challenging. Opening the Dominican economy to US imports free of duties should raise import demand, potentially altering the structure of production, particularly for firms previously producing for the domestic market. Looking to the outcomes following NAFTA for potential lessons for the Dominican Republic, a recent World Bank analysis (World Bank 2003b) finds that NAFTA increased economic growth through larger trade flows, FDI and productivity gains. The income gap between Mexico and the US and Canada narrowed but did not close, and demand for Mexican exports was an estimated 50 percent higher than pre-NAFTA demand, FDI experienced a 40 percent boost as a result the agreement, and the speed of technology adoption was reduced by half. But trade liberalization in itself is not

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<sup>38</sup> The rules of origin defined under the CBTPA and the new DR-CAFTA permit imports of inputs from member countries to count in the accumulation rules determining domestic content, thus making US textiles more attractive by facilitating duty-free access of the finished product to the US.

<sup>39</sup> Although the US may pursue safeguards such as anti-dumping and countervailing measures which could delay or reduce the impact of quota elimination, the time-consuming application process would preclude near-term safeguard protections.

sufficient to guarantee that more trade and increased FDI will lead to productivity growth and technology transfer. The recent World Bank flagship report on innovation asserts the centrality of education access and quality and innovation-supporting policies to enhance learning capacity in order to take full advantage of the potential gains to trade liberalization (World Bank 2002d).

160. In principle, an FTA between the Dominican Republic, the US and Central America would solidify access of Dominican exports to the US market on a permanent basis rather than the temporary provisions of the CBTPA, thus reducing investors' risk of adverse policy changes. Net job creation also resulted from NAFTA, ultimately leading to lower poverty in Mexico. But Mexico's preferential market access to the US hurt competing firms in the Caribbean and elsewhere: according to an ILO report, preferential treatment received by Mexico's textile sector together with the Mexican peso devaluation of 1994 contributed to the closure of 150 companies and 123,000 job losses in the Caribbean apparel industry (Madani 1998). DR-CAFTA should level the playing field for Mexican and Dominican producers, creating opportunities for Dominican entry or expansion in products in which Mexico has heretofore held a competitive advantage (consistent with the model's predictions below).

161. Several mitigating factors constrained Mexico's performance, including the limiting rules of origin relating to textiles and apparel (also relevant for DR-CAFTA), and institutional, infrastructure and macroeconomic policy weaknesses (World Bank 2003b). The crucial role of these factors is illustrated by the recent investment for a new INTEL production plant in San Jose, Costa Rica rather than Guadalajara, Mexico, reflecting the importance of human capital and infrastructure quality (Monge-Naranjo 2002).

#### **A. SMART Model Methodology**

162. This analysis estimates the potential impact of the new trade policies using a partial equilibrium model of world trade flows and tariff revenues (non-agriculture goods only) with annual data at the 6 digit level for 183 countries. The SMART model uses observed trade flows and tariff rates as its starting point, with 2001 as the reference year.<sup>40</sup> The model estimates the impact of tariff changes on trade volumes and tariff revenues, and calculates the extent of trade creation and trade diversion.<sup>41</sup> The model's underlying assumptions are the following: (i) goods are imperfect substitutes and therefore prices do not equalize; (ii) foreign and domestic supply curves are perfectly elastic, implying infinite supply; and (iii) all imports are final goods, such that tariff changes do not affect prices of products using imported inputs.

163. The partial equilibrium approach suffers from important shortcomings compared to general equilibrium models, such as the static long-run perspective that ignores adjustment periods and

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<sup>40</sup> The SMART model – Software for Market Analysis and Restrictions on Trade – was originally developed to assist developing countries in the Uruguay Round of trade negotiations. It has subsequently been fully integrated into a World Bank-UNCTAD project that uses UNCTAD's TRAINS data on imports, tariffs, para-tariffs and non-tariff measures.

<sup>41</sup> Trade creation is calculated for each tariff line as the product of the import level, the import price elasticity, and the percent change in the tariff (or price):  $\text{trade creation} = M * \epsilon_M * d(\tau) / (1 + \tau) * (1 - \epsilon_M / \epsilon_X)$ , where  $M$  is imports,  $\epsilon_M$  is the price elasticity of import demand,  $\epsilon_X$  is the supply elasticity of exports (assumed to be infinite), and  $\tau$  is the tariff. Trade diversion is calculated using ex ante import levels, the change in relative prices arising from tariff changes, and the import elasticity of substitution for each item:  $\text{trade diversion} = M * d(P_1/P_2) / (P_1/P_2) * \epsilon_S$ , where  $P_i$  is the import price including tariff  $\tau$ , and  $\epsilon_S$  is the elasticity of substitution between import 1 and import 2, assumed equal to 1.5.

second round effects (e.g., inter-industry effects and real exchange rate effects), and the model's sensitivity to assumptions on elasticities. Moreover, the model is limited by the fact that changes in only one country's tariffs can be simulated, albeit vis-à-vis specific countries; this means that the bilateral nature of a free trade accord between two countries cannot be modeled by simultaneous tariff reductions. We address this by separating the simulations into two stages, first considering the impact of reducing US tariffs on imports from the Dominican Republic and Central America, and subsequently considering the impact of reducing Dominican tariffs on imports from the US. The model also does not explicitly account for quotas, which is an issue given that the database on trade flows reflects the de facto presence of quotas. But we address this – particularly for the imminent Multifibre Agreement phase-out – by using tariff equivalents where possible. Another adjustment we make (representing a key improvement over past analysis) is to model the tariff reduction not from the MFN rate but rather from a weighted average tariff (per tariff line) that reflects the partial reliance on the CBTPA's duty-free access to the US.

164. Despite these shortcomings, the SMART model has two main advantages. It is very detailed, with results of policy changes calculated at the tariff line level, which can be particularly useful for industry-specific assessments. And despite this level of detail, the model has limited data needs: SMART's calculations require information on trade (imports and exports), tariffs, price demand elasticities and elasticities of substitution between products of different country origins. Because estimations rely on elasticities, the model will fail to predict new producers where markets do not already exist (i.e., imports have to be non-zero in order to display any change). For example, in the case in which tariffs are so high as to preclude trade of a particular product, a tariff reduction will not predict increased demand for that product. The scenario enumerated below considers the impact of tariff rate changes in the Dominican Republic and the US.

## **B. Simulations of DR-CAFTA Impact**

165. As mentioned above, because the SMART model cannot simultaneously calculate tariff reductions in the US and Dominican Republic, which would accurately reflect DR-CAFTA terms, the simulation is separated into two distinct stages. The first stage assumes that the US reduces its tariffs on imports from not only the Dominican Republic but also the other Central American countries in CAFTA (Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua). The resulting long-run trade creation from reducing US tariffs to zero, shown in Table 4.1 below, amounts to some US\$465 million in Dominican exports to the US, equivalent to a 20 percent increase over current export levels.<sup>42</sup> All the other DR-CAFTA member countries are projected to benefit even more than the Dominican Republic in relative terms. Note that the estimates from the zero-US tariff simulation represent an upper bound of potential gains, in light of the fact that even under the CBTPA, not all Dominican exports to the US meet the rules of origin criteria to qualify for preferential access, and as such are subject to MFN tariffs. It is therefore unlikely that under DR-CAFTA exporters will comply fully with rules of origin requirements. In order to address the likelihood of an interior solution, we conduct a second simulation in which we assume that effective tariffs – which already represent a trade-weighted average of the MFN and CBTPA tariffs – are cut in half. The projected results, interpreted as a lower bound of potential trade gains, are reported in the right side columns of Table 4.1. Taken together, therefore, Dominican exports are projected to grow by 10-20 percent as a result of lower US tariffs.<sup>43</sup>

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<sup>42</sup> Recall that this simulation does not account for the potential growth in new product lines.

<sup>43</sup> These estimates do not account for the costs associated with complying with and administering rules of origin.

**Table 4.1: Simulating US Tariff Reductions to Dominican Republic and Central America**

Exporter	Upper Bound				Lower Bound		
	Ex-ante Exports to US (\$'000)	Ex-post Exports to US (\$'000)	Change In Exports to US (\$'000)	Change In Exports to US (%)	Ex-post Exports to US (\$'000)	Change In Exports to US (\$'000)	Change In Exports to US (%)
Dominican Republic	2,350,537	2,815,664	465,127	19.8	2,582,814	232,277	9.9
Honduras	2,235,951	2,739,854	503,903	22.5	2,487,526	251,575	11.3
El Salvador	1,663,049	2,131,418	468,369	28.2	1,896,974	233,925	14.1
Guatemala	1,652,347	2,354,467	702,120	42.5	2,003,107	350,760	21.2
Costa Rica	731,454	915,247	183,793	25.1	823,234	91,780	12.5
Nicaragua	384,032	537,597	153,565	40.0	460,624	76,592	19.9
Total	9,017,370	11,494,247	2,476,877	27.5	10,254,279	1,236,909	13.7

Source: World Bank staff estimates

166. How does this compare to the global impact of DR-CAFTA? In other words, at which countries' expense does Dominican and Central American trade creation occur? Table 4.2 below summarizes the impact for the top 25 exporters to the US. Ranked in descending order by exports to the US (Dominican Republic ranks twelfth), the results indicate that the largest exporters lose trade share, although by negligible amounts. China, for example, is estimated to lose US\$25-50 million in exports, but this represents only 0.1 percent of the US\$19.8 billion total Chinese exports to the US in 2001. Mexico – the second largest exporter – could lose US\$50-100 million in exports, as the Dominican Republic and Central American countries regain market share lost to Mexico following NAFTA. Whereas the aggregate estimated trade creation in DR-CAFTA countries is large – ranging from US\$1.2-2.5 billion – the impact on non-member countries is very diffuse.

167. Disaggregating the trade impact by product indicates that much of the trade creation in the Dominican Republic is in the apparel sector. But it is important to recognize that this estimate does not account for the negative expected impact of the MFA phase-out in 2005, which precedes the ratification of DR-CAFTA. The discussion in section 4.III below assesses the impact of the quota phase-out on US demand for Dominican apparel manufactures.

**Table 4.2: Simulating the Global Impact of US Tariff Reduction under DR-CAFTA**

Country	Upper Bound				Lower Bound		
	Ex-ante Exports to US (\$'000)	Ex-post Exports to US (\$'000)	Change In Exports to US (\$'000)	Change In Exports to US (%)	Ex-post Exports to US (\$'000)	Change In Exports to US (\$'000)	Change In Exports to US (%)
China	19,768,154	19,716,100	-52,054	-0.3	19,742,268	-25,886	-0.1
Mexico	8,850,414	8,750,139	-100,275	-1.1	8,800,472	-49,810	-0.6
Canada	4,417,898	4,393,407	-24,491	-0.6	4,405,699	-12,199	-0.3
Hong Kong, China	3,874,880	3,838,684	-36,196	-0.9	3,856,852	-18,028	-0.5
Indonesia	3,377,578	3,352,996	-24,582	-0.7	3,365,269	-12,245	-0.4
Italy	3,114,977	3,100,377	-14,600	-0.5	3,107,694	-7,283	-0.2
India	2,865,260	2,844,039	-21,221	-0.7	2,854,698	-10,562	-0.4
Thailand	2,801,363	2,779,983	-21,380	-0.8	2,790,341	-10,646	-0.4
Korea, Rep.	2,726,780	2,706,027	-20,753	-0.8	2,716,453	-10,327	-0.4
Taiwan, China	2,394,242	2,374,748	-19,494	-0.8	2,384,537	-9,705	-0.4
Philippines	2,350,706	2,328,799	-21,907	-0.9	2,339,306	-10,911	-0.5
<b>Dominican Republic</b>	<b>2,350,537</b>	<b>2,815,664</b>	<b>465,127</b>	<b>19.8</b>	<b>2,582,814</b>	<b>232,277</b>	<b>9.9</b>
Honduras	2,235,951	2,739,854	503,903	22.5	2,487,526	251,575	11.3
Bangladesh	2,224,204	2,204,920	-19,284	-0.9	2,214,595	-9,609	-0.4
Pakistan	1,861,869	1,841,905	-19,964	-1.1	1,851,947	-9,922	-0.5
Sri Lanka	1,669,653	1,654,140	-15,513	-0.9	1,661,925	-7,728	-0.5
El Salvador	1,663,049	2,131,418	468,369	28.2	1,896,974	233,925	14.1
Brazil	1,654,488	1,648,038	-6,450	-0.4	1,651,282	-3,202	-0.2
Guatemala	1,652,347	2,354,467	702,120	42.5	2,003,107	350,760	21.2
Turkey	1,589,153	1,566,664	-22,489	-1.4	1,555,648	-11,120	-0.7
Australia	1,167,230	1,162,409	-4,821	-0.4	1,161,594	-2,401	-0.2
Macao	1,110,654	1,095,677	-14,977	-1.3	1,103,201	-7,453	-0.7
Cambodia	965,246	952,708	-12,538	-1.3	959,006	-6,240	-0.6
Malaysia	854,535	844,174	-10,361	-1.2	849,314	-5,161	-0.6
Costa Rica	731,454	915,247	183,793	25.1	823,234	91,780	12.5

Source: World Bank staff estimates

168. The second stage of this SMART model simulation is the elimination of Dominican tariffs on imports from the US. Recall that most products scheduled for continued protection through gradual and delayed tariff reductions are agricultural goods, which are not included in the SMART model database. The stage-two simulation estimates long-run trade creation (that is, the increase in US imports that displaces demand for Dominican products) amounting to US\$368 million (see Table 4.3). The majority of trade creation comes from vehicles (equivalent to an 11 percent increase in vehicle imports from the US), followed by chemicals (a 16 percent increase in US imports). Trade diversion (namely, the increase in imports from the US at the expense of lower imports from other countries) is projected at US\$101 million, a third of which is concentrated in vehicle imports. The total estimated reduction in tariff revenue is equal to US\$174 million, nearly two-fifths of current tariff revenues.

**Table 4.3: Simulating the Impact of Dominican Tariff Reduction on US Imports**

Product	Change in Revenue (\$'000)	Trade Diversion (\$'000)	Trade Creation (\$'000)	Trade Diversion (% total trade)	Trade Creation (% total trade)
Agriculture	-12,241	5,005	9,202	3%	6%
Processed food, vegetable oils	-7,098	3,777	7,344	2%	4%
Mineral fuels	-24,169	21,150	28,408	1%	2%
Chemicals	-21,681	7,966	72,405	2%	16%
Wood and paper	-11,028	6,976	27,029	2%	8%
Textiles	-1,526	400	1,743	3%	12%
Apparel	-5,716	5,180	20,322	3%	13%
Iron, steel, aluminum	-13,355	8,207	18,755	2%	5%
Vehicles	-70,202	37,056	154,613	3%	11%
Furniture	-6,715	4,884	28,514	3%	19%
Total	-173,731	100,601	368,335	2%	8%

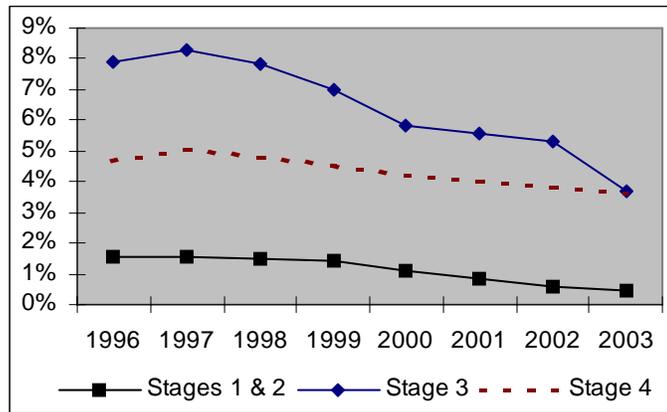
Source: World Bank staff estimates

169. Although the results of the two stages are not strictly additive, it is reasonable to assume that Dominican exports to the US are not substitutes for Dominican imports from the US, such that any netting out would be minor. The scenario estimates are therefore at least indicative of the magnitudes of the total potential trade effects following the implementation of DR-CAFTA. Summing the two results implies that the increase in Dominican net exports could range from US\$97 million (upper bound) to –US\$136 million (lower bound). It is important to note that these estimates are conservative in that they represent the ceteris paribus trade effects independent of potential expansion into new product markets, assume no complementary policy reforms to facilitate trade, and exclude the impact of lower input costs on the demand for Dominican exports since the model assumes all goods are final goods (although the analysis in Chapter 3 indicates that final goods imports account for less than half of all imports).

### III. MFA Quota Phase-Out and Impact on the Dominican Apparel Sector

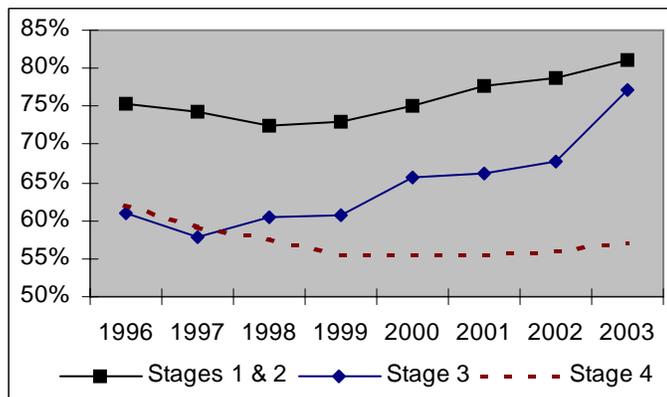
170. As illustrated above in Chapter 3, apparel preferences granted to CBI countries have been used extensively by Dominican exporters, particularly compared to other CBI countries. Whereas this suggests that Dominican firms have been flexible in responding to trade policy changes, it also indicates a heavy reliance on preferential access to the US market, which is predicated on the restricted competition from large producers like China under the MFA. Under the auspices of the Uruguay Round trade negotiations, the US agreed to eliminate textile and apparel quotas defined under the MFA over a period of 10 years. The first 3 stages of the gradual phase-out occurred on January 1<sup>st</sup> of 1995, 1998 and 2002. Dominican apparel exporters sustained significant losses in US market share between 1996 and 2003 concurrent with increased competition from other countries in products for which quotas were being phased out, and whose market share increased markedly (see Figures 4.1 and 4.2). Other CBI countries incurred similar although relatively smaller negative impacts. The main demand shock is yet to come, however, given that the product lines with the most binding quotas on US imports – accounting for 85 percent of total apparel imports – were left for the final round (i.e., stage 4) of eliminations on January 1, 2005. About 90 percent of Dominican apparel exports to the US fall into this category, with similar shares for CBI member countries (see Table 4.4).

**Figure 4.1. Dominican Share of US Apparel Market**



Source: US International Trade Commission

**Figure 4.2. US Apparel Market Share by Quota-Bound Countries**



Source: US International Trade Commission

**Table 4.4: Exports by Stage of MFA Phase-Out (US\$ billion)**

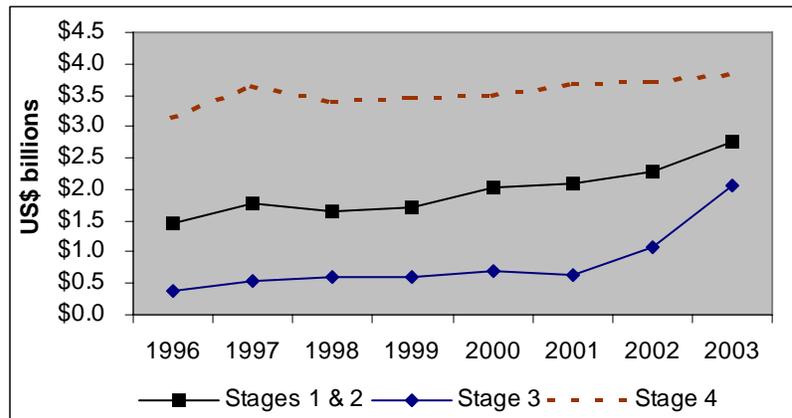
	Dominican Republic				CBI Countries			
	Stages 1 & 2	Stage 3	Stage 4	Total	Stages 1 & 2	Stage 3	Stage 4	Total
<b>1996</b>	0.05	0.18	1.49	1.72	0.31	0.46	5.17	5.93
<b>1997</b>	0.06	0.21	1.92	2.19	0.39	0.55	6.59	7.53
<b>1998</b>	0.06	0.23	2.02	2.31	0.45	0.59	7.18	8.22
<b>1999</b>	0.06	0.23	2.02	2.31	0.45	0.58	7.74	8.77
<b>2000</b>	0.05	0.21	2.12	2.39	0.46	0.56	8.55	9.57
<b>2001</b>	0.04	0.20	1.99	2.23	0.40	0.57	8.52	9.49
<b>2002</b>	0.03	0.20	1.91	2.13	0.35	0.64	8.49	9.48
<b>2003</b>	0.02	0.16	1.91	2.09	0.32	0.49	8.81	9.63

Source: US International Trade Commission

171. Given that Chinese apparel exports to the US are 4 times greater than Dominican Republic-sourced products, the potential for squeezing out Dominican and other CBI exports by undercutting prices is very real. Dominican exporters have two advantages over China: a response time averaging 4 weeks compared to 10 weeks in China, and a zero import duty into the US (subject to rules of origin criteria) compared to an average 19 percent for Chinese apparel (IDB 2004). Nevertheless, China

greatly expanded its exports to the US following the various quota phase-outs in stages 1, 2 and 3, the latter increasing by US\$1 billion between 2002 and 2003 (see Figure 4.3). And given that stage 4 product categories account for US\$3.8 billion of China's 2003 exports, the scale effect could render Dominican producers completely uncompetitive. Another relevant factor is that Dominican apparel exports to the US are below average on the quality spectrum (recall Figure 3.19), also the case for Chinese products.

**Figure 4.3. China Apparel Exports to the US**



Source: US International Trade Commission

172. In order to estimate the size of this potential quota effect (sometimes referred to as the “China effect”), we look to Özden and Sharma (2004), who consider the impact of quotas on the prices received by CBI countries with preferential access and conclude that for product lines in which quota-subject countries have an above average market share, the CBI exporters capture a relatively small share of the preference margin. But for product lines in which quota-subject countries have a below average market share (indicating either that quotas are binding or that exporters are not competitive in these products), CBI exporters capture nearly all of the gains, namely the entire preference margin. These findings suggest that to-date, the presence of quotas has benefited the CBI countries by increasing the gains to preferences for certain product lines, but for products in which the quota-constrained countries nevertheless have market power, the CBI countries have gained relatively less from preferences.

173. What is likely to be the impact of removing the final quotas and how will Dominican exporters be affected? Using the methodology developed by Özden and Sharma (2004), we run a Fixed Effects Generalized Least Squares regression on the determinants of the relative differences in Dominican apparel export prices during 1996-2003, controlling for market power effects through market share variables (i.e., total exports by country, and total US imports by category) and using year and 4-digit category fixed effects. We also include a dummy variable for those products on which quotas remained as of stage 3, which enables us to compare the magnitude of price differences between the quota-constrained products and the product lines already liberalized in stages 1 and 2.<sup>44</sup> The results – reported in Annex Table AIII.3 – indicate that Dominican exporters still capture two-thirds of the preference margin, but exporters of products still under quota controls gain even more, benefiting from prices that are 15 percent higher compared to already integrated product categories. The implication of removing the quotas, therefore, is a price drop large enough to overwhelm existing profit margins, possibly driving apparel manufacturers out of business. As will be seen in Chapter 5,

<sup>44</sup> Note that the regression also includes variables to control for market size. The quota-constrained dummy variable is calculated using the market shares of the top 16 apparel exporters to the US (for details, refer to Özden and Sharma 2004).

textile and apparel-related employment accounts for nearly 6 percent of the employed labor force, which means that up to 190,000 jobs are potentially at risk. According to recent estimates by USAID and Nathan Associates (2004), the MFA phase-out could lead to direct job losses in the apparel sector on the order of 37,000, although these would be partially offset by the projected 23,000 apparel jobs created under DR-CAFTA.

174. Many firms recognize the need to take steps to adjust to the new, post-MFA trade environment, although little evidence of adjustment is available. In fact, Dominican and other CBI exporters have been shifting production *toward* the affected product categories over the past several years. Box 4.1 provides a case study of new investment into the apparel sector as a means to counteract the potential quota effect.

#### **Box 4.1: Apparel Manufacturer Grupo M**

The Dominican pants manufacturer Grupo M is taking aggressive steps in face of imminent competition from China. At present, China's pants exports to the US are limited to 28 million pairs, less than 2 percent of the market. But retailers anticipate that within 5 years, China could provide up to half of all pants to the US market.

The company's future competitive niche will be in delivering the latest fashions to US consumers faster than other producers. To cut costs, Grupo M has invested in a new free trade zone that straddles the Dominican Republic-Haiti border, the Codevi Industrial Park. At present, two factories are in operation there, one of which employs 800 Haitian workers to sew basic Levi's-brand jeans – the labor-intensive part of production – which are subsequently sent to Santiago to be “finished” (i.e., washed and packaged). The other factory, which produces Hanes T-shirts, illustrates Grupo M's product shift from pants to knit shirt assembly.

Source: “Lapsing Apparel Quotas to Give China A Leg Up”, *Wall Street Journal*, June 17, 2004.

#### **IV. Implications for Growth**

175. The forthcoming trade policy changes associated with the MFA phase-out and DR-CAFTA and its impact on trade volumes has both direct and indirect implications for overall economic growth. At the conservative upper bound (that is, assuming no expansion into new product lines), Dominican net export creation under DR-CAFTA will approach US\$100 million, due to the offsetting increase in imports, but the gains will be partly offset by the quota phase-out. And if Dominican exporters do not adjust to meet the preferential access criteria and therefore continue to pay the MFN rate, exports will fall further. The employment reallocation aspects of trade creation and diversion will translate into: (i) lower labor demand for domestically produced goods that will be replaced by cheaper US imports following DR-CAFTA; (ii) FTZ job losses in the apparel sector beginning next year with the MFA phase-out; and (iii) partly offsetting job creation as a result of increased export demand by US importers, particularly in FTZ apparel firms. But this pessimistic view understates the potential gains to trade liberalization as seen in Mexico, for example, where FDI and technology inflows led to strong productivity growth. Moreover, there is a large agenda of trade-related policy options – discussed in detail in Chapter 2 – that the government could undertake to raise competitiveness and improve trade performance, with or without DR-CAFTA.

176. The net impact of the new trade environment on domestic producers and consumers is potentially large and will certainly be mixed, generating both winners (through lower prices) and losers (through lost business and jobs). Having completed negotiations for DR-CAFTA, the authorities recognize that the changing global external environment will challenge the country's competitive position and existing development strategy that has been anchored in the external sector. The very tangible risk of losing market share in manufacturing exports in the coming years highlights the need to initiate measures to mitigate the losses and at the same time facilitate adjustment in the

domestic market to respond to the opportunities and challenges created by the new external environment.

177. A range of trade policy measures to stimulate growth merits consideration by policymakers. But it is important to distinguish between aggregate level effects and distributional effects of GDP growth. Although trade and economic growth and welfare are positively correlated, as extensively documented in the trade literature, trade growth does not necessarily lead to poverty reduction within countries. So it will be important to consider the distributional effects of Dominican trade, addressed in Chapter 5 through the angle of employment and earnings, with a view to understanding the potential impact of new trade policies on vulnerable populations and informing social policy formulation to mitigate any negative effects.

## CHAPTER 5: LABOR DEMAND, MISMATCH AND IMPLICATIONS FOR TRADE PROSPECTS

178. The analysis in Chapter 3 conveys an idea of the size and shape of trade patterns, and which sectors are the primary drivers of exports and imports. Although the dualistic trade policy environment is found to have limited the backward linkages of FTZ output, there are nevertheless important trade-to-growth feedback effects from job creation – both inside and outside of FTZs – and increased aggregate demand through wage earnings. This chapter explores the transmission of trade incentives to employment creation, and labor demand more broadly, by examining the patterns and characteristics of employment and their interplay with trade outcomes.

179. The key questions this analysis seeks to answer are:

- What education and skills profiles are in demand by employers and are they available in the Dominican labor market today?
- Is the labor market sufficiently flexible to facilitate skills provision and matching between employers and job seekers?
- Are Dominican labor costs internationally competitive?

180. It is through the lens of job creation and labor market efficiency that we hope to gain a better understanding of the role of trade policy – past and future – in promoting development and welfare improvements in the Dominican Republic. Employment outcomes reflect effective labor demand, that is, the actual employer demand for workers from among a given pool of supplied labor. The analysis below identifies a long-term employment shift from agriculture and industry to services (primarily commerce, government and tourism), which was accompanied by rapid growth of informal employment, where own account workers have below average education and perform lower level occupations. Despite increasing labor demand since 1996, real wages remained level and in fact declined after 2001. Although educational attainment is increasing, labor demand continues to be concentrated in relatively low skills. Positive returns to education imply effective wage signaling in the labor market despite minimum wage and other regulations. The competitive FTZ and tourism sectors tend to pay less than most other sectors, explained in part by the large proportion of women employed therein and the 20 percent negative wage premium for women. Dominican labor as a whole is competitive relative to the Caribbean and Central American countries, both in terms of price and in terms of investors' perceptions of availability, productivity and a flexible regulatory environment.

181. But labor competitiveness also relates to the quality and magnitude of labor supply. The analysis below finds that job growth kept pace with labor force growth, such that the unemployment rate remained fairly steady. The rising educational attainment of women led to an increase in female participation and a rise in female returns to education. Nevertheless, the data provide evidence of some degree of education-occupation mismatch, for both men and women. Additional skills mismatch is evidenced by the large number of discouraged workers, and the long time it takes new entrants to find employment. This can be explained in part by unrealistic expectations on the part of job seekers, voluntary unemployment while workers queue for better work opportunities, poor education quality despite official credentials, and insufficient employer demand for higher skilled labor. Inequitable access to schooling affects the long-term prospects for increasing labor quality and productivity across the labor market, confining Dominican labor to basic skills that do not meet the demands of skill-intensive new technologies, with the result of limiting future competitiveness (particularly in higher value-added activities) and economic growth.

182. The analysis in this chapter relies on the Central Bank's labor force surveys (*Encuesta de Panel de Fuerzo de Trabajo*), conducted twice a year using a census-based sample of over 5,000 households.<sup>45</sup>

### I. Employment Outcomes since the Mid-1990s

183. The shifts in economic production since the reforms of the early 1990s – including trade reforms – are reflected in the changing employment patterns observed over the past decade. The total employed workforce in the Dominican Republic today exceeds 3.2 million workers. Declining shares of agriculture and industrial manufacturing employment throughout the 1990s were accommodated by a shift toward services. Figure 5.1 illustrates that the commerce sector is by far the largest employer (accounting for one-fifth of total employment), but agriculture and manufacturing remain important employers despite their declining shares. Disaggregating services further, the largest employment gains since 1996 occurred in commerce, general government and other services, and to a lesser degree in tourism (i.e., hotels, bars and restaurants), transportation and construction.<sup>46</sup> The construction sector grew more or less in line with overall employment growth, maintaining a flat share in total employment. Construction, commerce, tourism and transportation are integrally linked to international trade, for example through tourism-related sales and services. But the employment data do not permit a quantification of the direct and indirect links to trade.

184. The decline in agricultural employment reflects the shift away from traditional crop production, driven in part by changing international food prices and preferential market access. The stagnation in industrial manufacturing employment is more surprising, however, given the important expansion of FTZ exports during this period (over a third of industrial manufacturing jobs are in FTZs). But these FTZ gains reflect productivity increases in addition to job creation, as exports *per worker* increased by 35 percent over 7 years (averaging 4.4 percent growth per year between 1996 and 2003, measured in US\$ terms). It is notable that the contraction in FTZ exports in 2001 and 2002 was accompanied by job shedding (about 24,000 jobs lost) while worker productivity remained steady, suggesting that FTZ employers can adjust employment levels in response to changing demand.<sup>47</sup> In the economy as a whole, labor productivity (measured by real GDP/worker) increased by a more modest but still robust 17 percent between 1996 and 2003 (averaging 2.3 percent per year), suggesting that FTZs are more dynamic and increasing in labor efficiency compared to the rest of the economy. But the FTZ contribution to total labor demand has been moderate: FTZs created 40,000-60,000 jobs since 1991, while aggregate employment grew by 840,000 during the same period (this is consistent with the conclusion in Chapter 3 that TFP growth contributed only modestly to overall economic growth). Aggregate employment grew by a robust 4.6 percent per year between 1996 and 2002, marginally outpacing the expansion of the labor market.

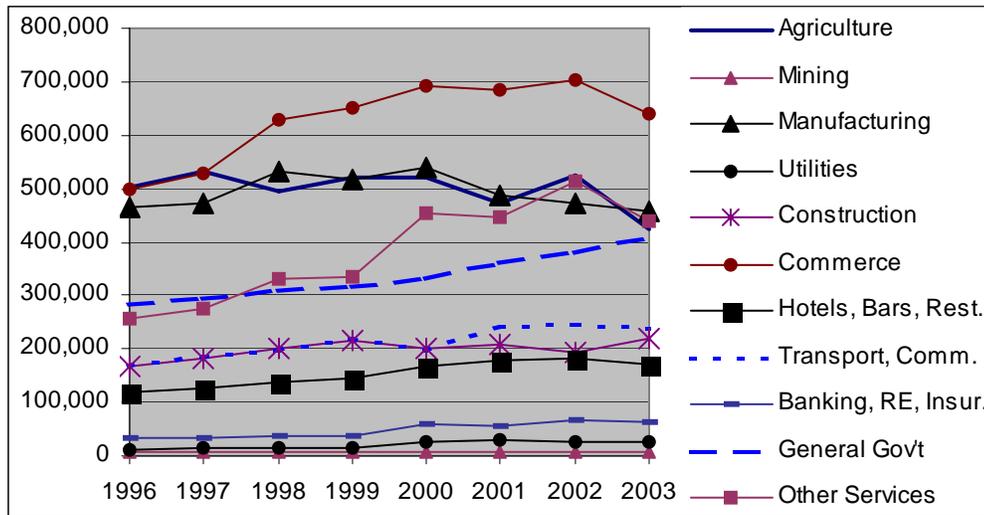
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<sup>45</sup> Unless otherwise noted, statistics refer to the April 2003 labor force survey. There was a change in the survey methodology in 1996, such that earlier survey results are not strictly comparable with those of 1996 and onward. Changes to the questionnaire occur regularly in response to emerging trends in the labor market, but comparability is maintained for the post-1996 period. Finally, the sample was adjusted in October 2003 to reflect the 2002 census results, leading to a much larger sample of 9,500 households that is regionally representative. The analysis relies on the April 2003 survey data rather than more recent surveys in order to isolate longer-term trade-related labor effects prior to employment shocks stemming from the macroeconomic crisis that emerged in mid-2003.

<sup>46</sup> Other services includes non-government health care providers and teachers, and providers of household and other personal services.

<sup>47</sup> The FTZ sector added jobs in 2003 and 2004.

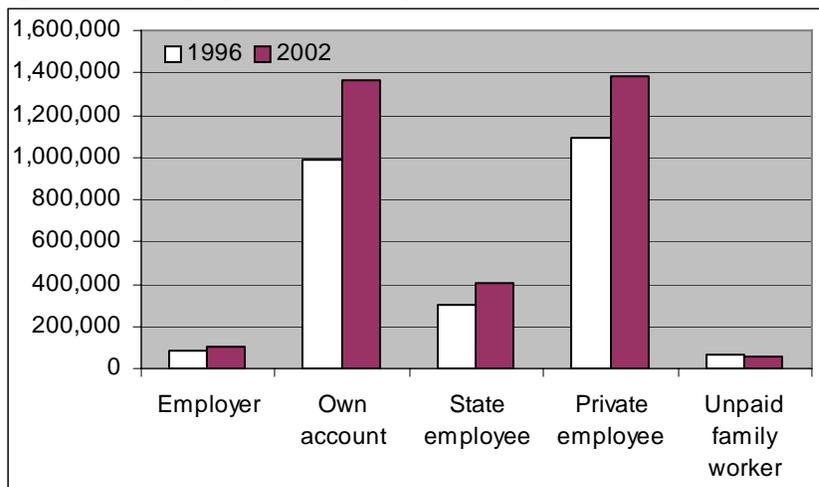
**Figure 5.1. Employment Level by Sector 1996-2003**



Source: Encuesta Panel de Fuerzo de Trabajo

185. This shift towards service jobs is mirrored in the concurrent increase in informal sector employment: those reporting to be “own account” workers represent two-fifths of total employment. Between 1996 and 2002 – a period of strong GDP growth – private sector firms added 290,000 jobs, but the informal sector experienced an even greater boom, generating 380,000 jobs, equivalent to 5.6 percent annual average informal job growth (see Figure 5.2). Although some 26,000 own-account workers are professionals employed primarily in the financial and personal services industries (April 2003 data), 90 percent of non-professional own account workers (excluding the agriculture sector) are employed in the services sector (37 percent in wholesale and retail trade, 17 percent in transportation and communications, and 16 percent in construction inter alia). Private sector employment also grew significantly, and faster than average, during the period 1996-2002. The sectoral distribution of private employees is much more concentrated in manufacturing, which accounted for nearly a third of total private employees in 2003. However, wholesale and retail trade are also significant employers within this category.

**Figure 5.2. Employment Gains by Work Status (number of workers)**

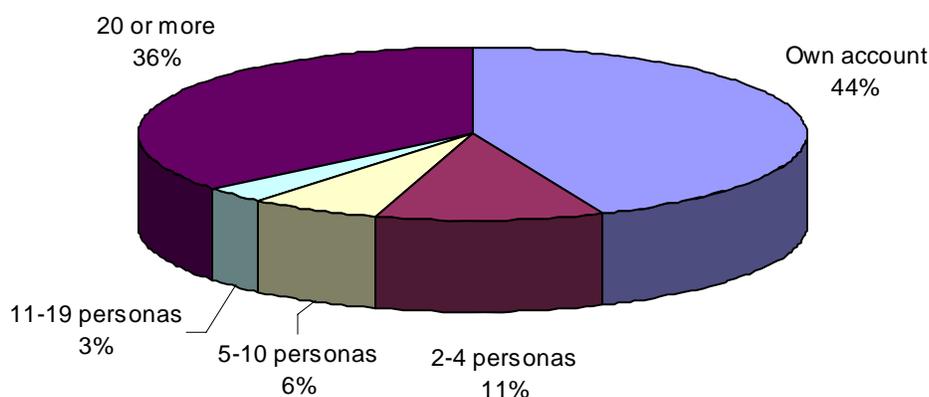


Source: Encuesta Panel de Fuerzo de Trabajo

186. By 2003, the smallest firms (1-4 workers) accounted for more than half of total employment (see Figure 5.3). Moreover, the share of employment in own account firms rose from 40 percent in April 2000 to 44 percent in April 2003 (not including domestic household workers). Several studies by FONDOMICRO, a Dominican micro enterprise financing fund, indicate the large and growing importance of small and micro enterprises in the Dominican Republic. One recent study carried out by FONDOMICRO (Trejos and Mora 2003) attributes the sector's expansion to households' efforts to escape poverty through informal activities, the links between the exploding tourism sector and local small-scale service providers, and the availability of remittances to finance start-up costs for new ventures.<sup>48</sup>

187. During the more recent 2000-2003 period, which encompassed periods of minimal economic growth, own account workers increased their ranks by nearly 175,000, primarily at the cost of private sector jobs, which experienced a negative outflow of 109,000 posts.<sup>49</sup> The informalization of the labor market is also reflected in the prevalence and type of contracts. Only 43 percent of employed respondents reported having signed a contract (April 2003).<sup>50</sup> And nearly two-fifths reported working in unlicensed firms in 2003, up from 37 percent in 2000.

**Figure 5.3. Employment by Firm Size, 2003**



Source: Encuesta Panel de Fuerzo de Trabajo

188. In order to understand the links between economic growth and trade and employment creation, it is important to consider not only which sectors have created jobs but also the nature and skill levels associated with these new jobs. With respect to occupation, own account workers tend to be employed in the lower skills occupations of sales and production activities (respectively accounting for 46 and 37 percent of non-agriculture self-employment in April 2003), implying that the recent increase in informal employment reflects an overall downward shift in worker productivity. Private employees, in comparison, display relatively higher concentrations of professional and

<sup>48</sup> Remittances increased from US\$1.1 billion in 1997 to US\$2.1 billion in 2003.

<sup>49</sup> Using the ILO definition of employed as age 15 and over.

<sup>50</sup> The Central Bank has begun to collect data on the type of contracts (i.e., indefinite, term, or by-the-task) workers sign, but this data are not currently available.

managerial level workers as well as clerks, although production and service activities remain important. This contrasts sharply with the occupational distribution in the public sector: some 55 percent of government workers hold professional, technical or managerial positions, compared to 34 percent in the public enterprise sector, and a mere 5 percent among own account workers.

189. The educational attainment patterns of different categories of workers also provide insight into the structure of the Dominican labor market. With respect to aggregate labor demand, nearly one-tenth of employed workers have no education, half have a primary education, and another quarter have a secondary education. The data in table 5.1, which compares education profiles across work status categories, indicates that the government and public enterprises have much higher demand for university graduates. Private employees have a higher concentration of secondary school graduates, while own account workers fall at the bottom of the education spectrum, with three-fourths having a primary education or less. These results suggest that workers with secondary and post-secondary education prefer jobs in the public sector, while those with a secondary or advanced primary (i.e., grades 5-8) education find more demand for their skills and therefore job opportunities in the private sector. But non-professional own account workers are the least well equipped in view of employers, pushing them toward self-employment in the informal sector.

**Table 5.1: Educational Attainment by Work Status**

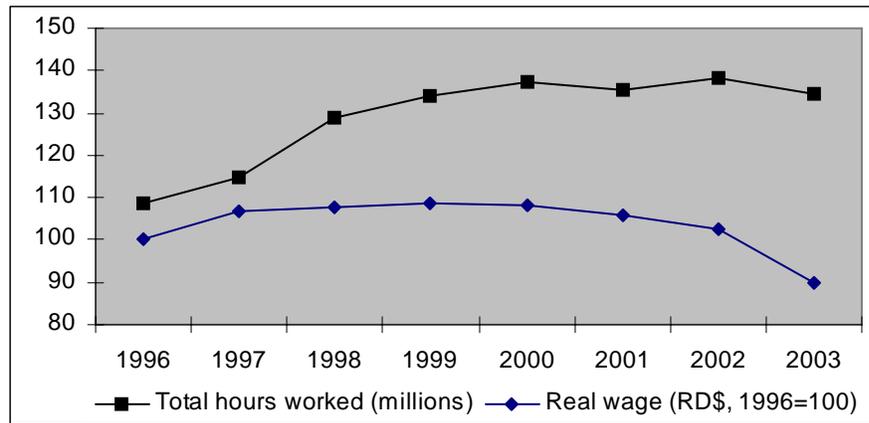
	<b>Total</b>	<b>Government</b>	<b>Public Enterprise</b>	<b>Private</b>	<b>Own account</b>
<b>None</b>	9%	3%	3%	3%	15%
<b>Pre-primary</b>	0%	0%	0%	0%	0%
<b>Primary 1-4</b>	19%	9%	8%	11%	29%
<b>Primary 5-8</b>	28%	18%	21%	28%	31%
<b>Secondary</b>	25%	26%	19%	33%	19%
<b>Vocational</b>	1%	1%	2%	1%	0%
<b>University</b>	18%	41%	46%	24%	6%
<b>Post-University</b>	1%	2%	1%	1%	0%
<b>Total</b>	100%	100%	100%	100%	100%

Employed, age 15 and over

Source: April 2003 Encuesta Panel de Fuerzo de Trabajo

190. If we consider actual hours worked as a measure of aggregate labor demand rather than number of jobs created, we observe an overall increase in labor demand between 1996 and 2000, but a decline thereafter, observed across all sectors and worker-type. Taking economy-wide averages, the number of hours worked per week was 43 in 1996, 45 in 1999, and less than 42 in 2002 and 2003. Real wages mirrored this rising and falling trend, as the average real hourly wage rose 9 percent between 1996 and 1999, subsequently fell by 6 percent in the period to 2002, and by a further 12 percent in 2003. Figure 5.4 illustrates that the economy's total hours worked more or less stagnated during 2000-2003 and the average real wage declined during this period, following 5 years of appreciation during the boom years of the late 1990s (the real wage decline in 2003 was particularly sharp, driven by the high inflation resulting from the peso depreciation). Both measures point to a serious weakening in labor demand since 2000.

**Figure 5.4. Labor Demand and Real Wages**



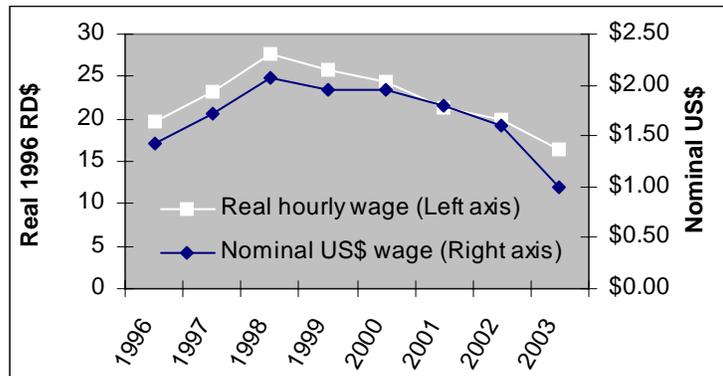
Source: Encuesta Panel de Fuerzo de Trabajo

191. It is methodologically difficult (and impossible without the necessary data) to establish the direct linkages between trade growth and employment fluctuations and their subsequent feedback to overall economic growth. But proxy indicators provide at least some insight into these connections. Although we cannot classify the standard sector breakdown by trade-intensity, we can examine two sectors that are particularly trade-related: tourism and textiles. The tourism sector – defined to include hotels, bars and restaurants, and excluding the many tourism-related activities such as transportation, crafts, and other tourism-linked services – provides about 6 percent of total employment (and a similar share of GDP). Tourism experienced strong employment growth that averaged 7 percent annually between 1996 and 2002.<sup>51</sup> The crisis of 2003 caused a 7 percent decline in tourism jobs. Real wages in the tourism sector rose 40 percent in 1997 and 1998, and declined thereafter, falling below 1996 levels by 2003 (as shown in Figure 5.5).<sup>52</sup> This decline in sector labor costs is mirrored in the overall decline in the international price of tourism services (denominated in US\$), indicating increased competitiveness. Real manufacturing wages, including textiles, remained higher in the period of slowdown (2000-2002) compared to the mid-1990s, implying a deterioration in competitiveness during this critical period (see Figure 5.6). Textile employment in FTZs, which accounts for more than two-thirds of total FTZ employment, grew by a modest 1.6 percent per year between 1996 and 2002, in net terms adding only 11,000 of the 790,000 jobs added to the economy during that period.

<sup>51</sup> The other sectors experiencing strong job creation were public sector-linked jobs (both public administration and defense, as well as utilities), banking and financial services, and other services.

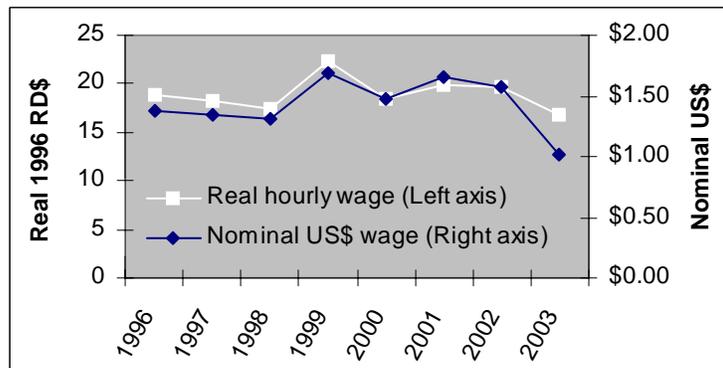
<sup>52</sup> Wage data for 2003 is calculated as the average of the April and October 2003 survey results.

**Figure 5.5. Tourism Wages**



Source: Encuesta Panel de Fuerzo de Trabajo

**Figure 5.6. Manufacturing Wages**



Source: Encuesta Panel de Fuerzo de Trabajo

192. The education profiles of textile workers reflect lower than average education levels, namely a high concentration of upper primary (grades 5-8) levels. Tourism, too, has a preponderance of low-skill jobs, reflected in educational profiles that tend to cluster around the primary level. These factors imply that although textiles – and FTZ manufacturing more broadly – and tourism have led to rising export receipts in the past decade, they have had a mixed impact on employment. Manufacturing employment fluctuations were much larger than those in the tourism sector, but the net impact on job creation was smaller in manufacturing, with a net addition of only 5,400 jobs between 1996 and 2002 (implying job losses in non-FTZ manufacturing), compared to tourism, which created over 58,000 new jobs in the same period. Workers in either sector are not generating particularly high value-added – as reflected in the lower than average manufacturing wage, for example – and as such have a modest direct impact on growth. But the extensive indirect linkages – such as tourism-related demand for transportation and communications services (accounting for 30 percent of total sector demand, according to Lizardo and Guzman 2001) or retail trade – generate a large number of jobs (albeit primarily in the informal sector at lower skill levels), providing an important contribution to growth.

## II. Determinants of Employment and Wages

193. The preceding section examines the recent evolution of the characteristics of employment in the Dominican Republic, contributing to our understanding of which sectors exhibit economic dynamism, and how the sector and work status profiles of workers have changed over time in

response to both domestic market demands and external competition. The analysis in this section shifts the focus from time trends to a specific snapshot in time of the micro-determinants of employment and wages.

194. Regression analysis using the April 2003 labor force survey data allows us to estimate the various characteristics of labor demand and the magnitude of their contributions, controlling for other factors. If we believe that wages are market-determined despite the existence of minimum wages and other legislated labor costs, as suggested by downward real wage flexibility and not fully binding minimum wages, then actual wages provide a signal of labor productivity and quality. By estimating the determinants of wages using Mincer-type earnings regressions (using the log hourly wage as the dependent variable), we can identify which worker characteristics are *de facto* in demand and the magnitude of their relative influence on wages. The regressions include individual, household and regional characteristics, because the labor supply decision of individuals depends not only on their training and areas of interest, but also on the availability and proximity of certain types of jobs, as well as the needs of the household. Using a Heckman correction to control for potential selection bias did not significantly alter the results (except where noted below).

195. As shown in Table AIV.1, the returns to education are positive and increasing, and larger for women in the private sector compared to the public sector, which is consistent with the expected wage compression typical of government pay policies. The large increments between the returns to each educational category suggest that wages are an efficient signal of quality. Even vocational training has a positive and relatively larger pay-off than general secondary education, suggesting that the vocational training programs in place in fact respond better to market needs compared to the traditional secondary education curriculum.<sup>53</sup> Earnings increase with age and potential experience, and part-time workers earn more than their full-time counterparts (*i.e.*, assuming otherwise identical characteristics), in both the public and private sectors. Some sectors exhibit different pay patterns: mining and construction pay higher wages, while manufacturing, tourism and wholesale and retail trade pay relatively lower salaries, although all pay better than agriculture sector jobs (the reference sector in the regression). Sector of activity is only a significant factor among private firms, not in the government.

196. Micro-econometric analysis provides additional insight into the functioning of the labor market, both in terms of efficient wage signaling, as well as by identifying deviations in experience among different sub-groups. The wage regression results in Table AIV.1 point to several areas in which earnings gaps emerge, indicating potential segmentation in the Dominican labor market.<sup>54</sup> These include pay differences between public and private sector workers (as suggested in the preceding section), between urban and rural areas, between own account workers and other categories of employees, between FTZ and non-FTZ firms, and between men and women (the latter is examined in detail in the next section).

197. By disaggregating the regressions between the public and private sectors, we can decompose the relative impacts of worker and household characteristics in the separate sectors. Regression 5 indicates a negative public sector wage premium equivalent to 11 percent (see regression 5), and in the Heckman corrected regression (not shown), male public enterprise workers earn 30 percent more than civil servants with the same characteristics. Rural workers in each sub-category earn about 20

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<sup>53</sup> Between 2000 and 2003, the magnitude of the positive returns to experience and education actually declined slightly, which could be the result of increased supply of workers in the labor market, especially at the higher skill levels.

<sup>54</sup> Earnings gaps are not sufficient evidence of labor market segmentation through rigidities precluding wage equalization; other factors affect labor supply decisions that ultimately impact on wages.

percent less than their urban counterparts (the gap is larger with the Heckman correction). We find a Santo Domingo-specific effect (i.e., higher wages in the capital city) equal to a 7 percent wage premium in the pooled regression.

198. Recall the preceding discussion of the emergence of the informal sector and own account workers. Regression analysis helps us understand the degree to which this represents a story of dynamic job creation of well-paying jobs, or rather an impoverishment and marginalization of a growing share of the labor market. The results in Table AIV.1 indicate that wages of non-professional own account female workers are about 20 percent higher than similar workers in the formal private sector (the wage gap is insignificant for men). The regression results do not indicate a significant wage difference between employees of licensed and non-licensed firms. Finally, firm size is determinant, as smaller firms (here defined as those with less than 11 employees) pay relatively lower salaries. Considered together, these results – especially the lack of a negative informal sector wage effect – do not imply this is the sector of last resort for marginal workers who cannot find employment elsewhere, although this is certainly the case for some workers. Even for these workers, however, the prospect of informal employment is likely to represent a net welfare gain by providing remunerative opportunities to workers who would otherwise exit the labor force. In terms of recent trends, we know that the economy and job creation slowed in 2001, 2002 and 2003, and the data show a larger deterioration in own account wages compared to the rest of the economy between April 2000 and April 2003, reflecting the informal sector’s reactive and flexible role in the face of stagnant or declining labor demand. There was also a relative deterioration in wages in small firms during this period.

199. In Chapter 2, the discussion on regulatory regimes identified sharp contrasts in the fiscal treatment of and regulatory burden on FTZ firms compared to producers and exporters outside FTZs. According to the regression results with Heckman correction (not shown), FTZ workers earn markedly less than their non-FTZ counterparts (16 percent less for men, 21 percent less for women), which supports the data on the average wage gap among manufacturing workers: RD\$21/hour in FTZs (22 percent above the minimum wage) compared to RD\$34/hour outside FTZs. With respect to hours worked, however, FTZ workers average 5 percent more hours per week. Taken together, these results suggest that FTZ firms have managed to remain competitive through controlling labor costs and expanding output through longer work hours.

200. What are the poverty implications of the pattern of recent job growth and the findings on wages? First we consider whether employment creation between 2000 and 2003 occurred in areas where the poor are most concentrated. Employment in rural areas grew more slowly than in urban areas during the period. We know that rural workers earn considerably less than their urban counterparts.<sup>55</sup> Although rural jobs account for a third of total employment, they account for 60 percent of the jobs held by the lowest income quintile of the population. And agriculture sector jobs represent by far the largest share (44 percent) of jobs held by the lowest quintile of the population. From 2000 to 2003, rural jobs at the lower end of the skills spectrum – namely production and agriculture occupation categories – declined by nearly 5 percent (compared to a 2 percent increase in rural jobs overall), and was accompanied by a 16 percent decline in the real average wage in these sectors, which represents a severe decline in purchasing power among those with already low earnings. These results – together with the fact that educational attainment is lower in rural areas (78 percent of rural workers have a primary education or less, compared to 46 percent of urban workers) – indicate a division between the urban and rural labor markets, with rural areas suffering the brunt of declining labor demand for low skills.

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<sup>55</sup> Using a consumption-based definition of poverty, World Bank (2001) estimates rural poverty at 42 percent and urban poverty at 21 percent in 1998.

### III. Gender Segmentation and Discrimination

201. The preceding evidence of divergent labor demand patterns and remuneration among different categories of workers raises the question of segmentation and discrimination. We examine the latter with respect to gender by exploring whether there is a gender-based distinction in labor market outcomes. The data indicate large discrepancies in the sector and education distributions of men and women. A higher proportion of women work in government, tourism and the domestic service fields compared to men, while agriculture jobs are dominated by men, as are the construction and transportation sectors. With respect to education, working men on average have less education than working women (driven in part by lower labor force participation by women with little or no education). But there is a higher share of university-educated women (28 percent of all employed women) than men (14 percent of men), and in fact a higher *number* of educated women working compared to men (see Table 5.2). In addition, employed women have a lower illiteracy rate than men (7 percent compared to 12 percent respectively). Women make up nearly half of all government employees, and just over half of those work in professional and technical occupations. Women also dominate traditionally female occupations like clerks and service providers.

**Table 5.2: Education Breakdown of Employment**

	Male	Female	% Male	% Female
<b>None</b>	219,773	64,648	10%	6%
<b>Pre-primary</b>	2,341	1,466	0%	0%
<b>Primary 1-4</b>	458,585	163,225	21%	15%
<b>Primary 5-8</b>	648,396	273,918	30%	24%
<b>Secondary</b>	513,113	290,368	24%	26%
<b>Vocational</b>	13,137	11,983	1%	1%
<b>University</b>	278,664	300,150	13%	27%
<b>Post-university</b>	13,444	14,563	1%	1%
<b>Total Employment</b>	2,147,453	1,120,321	100%	100%

Source: April 2003 Encuesta Panel de Fuerzo de Trabajo

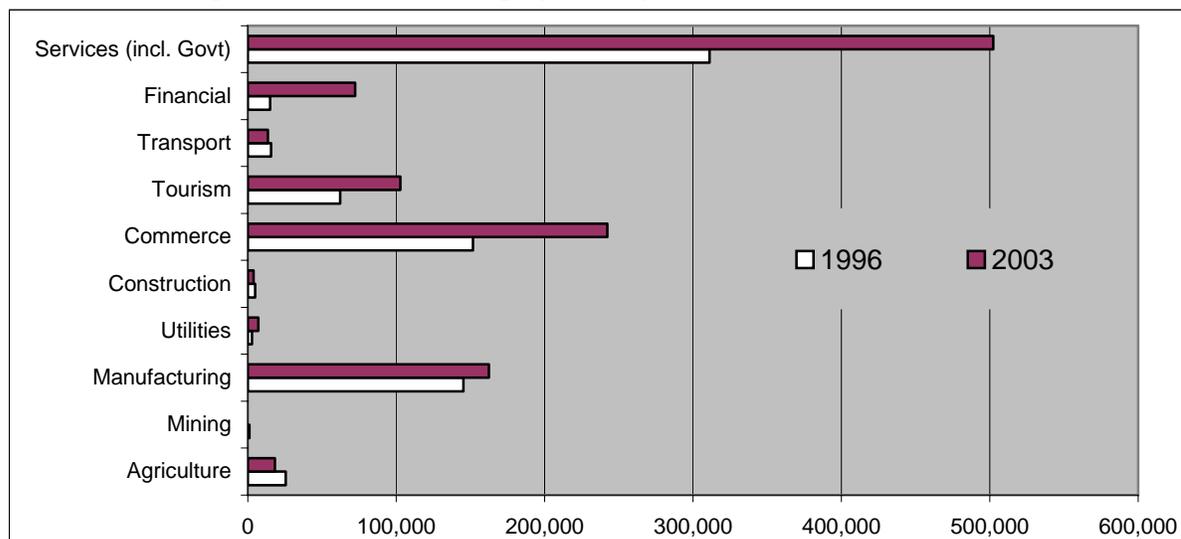
202. Comparing average wages for men and women reveals only a 5 percent gender wage gap, but this masks the extensive segregation of men and women in the labor market in terms of job type, sector of work and work status, as described above. Using regression analysis to control for these differences, the negative wage premium for women is equal to 18 percent (see regression 5 in Table AIV.1; results are similar in the Heckman corrected regression). This “unexplained” wage gap – namely that it cannot be explained by the independent variables considered in the regression – is considered a measure of gender discrimination by employers. In comparative terms, however, this 18 percent effective wage gap is an improvement over the 22 percent gap prevailing in 2000, and is in fact smaller than that in the US and most developed and developing economies.<sup>56</sup> The regression analysis also indicates that rural women fare worse than rural men compared to their urban counterparts, and women in tourism-sector jobs also fare worse (men in tourism jobs actually fare better than many other sectors, suggesting that men and women perform different types of jobs). But the positive informal:formal wage gap for women is large. In FTZs, women account for almost three-fifths of employment, which helps explain why FTZ wages are so much lower than in manufacturing firms outside the FTZs (through both the negative female wage premium and the negative FTZ wage effect). Whereas earnings increase with age for both sexes, age (captured by the potential experience variable) has a smaller positive effect for women’s wages, which could be the result of discrimination or a reflection of women’s time out of the work force for child-raising.

<sup>56</sup> If we exclude the FTZ dummy variable in the regression, the negative wage premium for women becomes larger.

203. Even though women represent only a third of total employment, the 1996-2003 period witnessed a large influx of women, with female employment rising by over 50 percent, compared to only 22 percent for men. Most of these new jobs were in the service sector (including the civil service) as well as commerce (i.e., wholesale and retail trade), financial services and tourism (see Figure 5.7).<sup>57</sup> Although the number of women managers more than doubled, the overall occupational distribution for women remains highly concentrated in services, sales and clerk positions. Is this consistent with women's increasing educational attainment? Female returns to education are markedly lower than men's in the public sector, which is surprising given that we expect greater equality and less discretion in the government's pay policies (see Table AIV.1). In the private sector, by contrast, the returns to education are very similar for men and women, although higher for women with a post-university education level, and represents a narrowing of the differences compared to 2000. This result implies that women have indeed made progress with respect to increased labor market opportunities, although the high rate of skilled female unemployment suggests still inadequate opportunities to absorb the influx of skills. Despite persistent wage discrimination, the increase in employed women has poverty-reducing effects by increasing household income in both two-earner and female-headed households (which experience higher rates of poverty).

204. The analysis provides additional evidence that gender discrimination within the household could attenuate gender segmentation and discrimination in the labor market for years to come through schooling decisions. For example, the probability of a child being enrolled in school is affected by the parents' education level. Namely, the mother's education level has a positive impact on school enrollment of girls, while the father's level of education is determinant (positively) for boys only (see Table AIV.2). Enrollment for girls is also higher in higher income households, while the effect is insignificant for boys, suggesting that boys' school fees take precedence over girls' when resources are tight.

**Figure 5.7. Women's Employment by Sector (number of workers)**



Source: Encuesta Panel de Fuerzo de Trabajo

<sup>57</sup> Note that 2003 data are from April 2003 survey.

#### IV. Is Dominican Labor Competitive?

205. The Dominican Republic's strong trade performance and sustained economic growth during the mid- to late-1990s provides evidence that the economy was competitive as a result of trade preferences by producing goods and services at a price and quality level in demand by the US. The weakening trade performance since 2000 raises questions about continued competitiveness in a dynamic global trade environment driven by rapidly shifting demand, and in the future by new trade agreements at the bilateral, regional, hemispherical and global levels. The preceding analysis of labor demand helps to unravel the role of labor in the production structure of the Dominican economy. The influx of women into the labor market may have put some downward pressure on wages; this effect was reinforced by the significant wage discrimination against women, making them relatively cheaper than men despite higher average education levels. On the other hand, recall from Figure 5.4 that real wages have declined only since 1999, and most sharply in response to the recent peso depreciation, implying that economy-wide pressures such as declining domestic and export demand rather than added labor supply pushed real wages down.

206. A foreign investors' perception survey carried out in mid-2004 concluded that compared to other potential investment destinations in the Caribbean, Dominican labor was a primary attraction due to relatively low wages, high productivity, general availability of both unskilled and skilled labor, and a flexible regulatory environment (Foreign Investment Advisory Service 2004). In terms of average wages, labor in the Dominican Republic is cheaper than in the rest of the Caribbean region, substantially cheaper than Barbados, Grenada, Jamaica and Trinidad and Tobago (see Table 5.3). Comparative wage data from the ILO (summarized in Table 5.4) indicates that the average manufacturing wage in the Dominican Republic, at US\$1.58 per hour, exceeds wages in Central America except for Costa Rica, but is competitive with respect to Mexico as well as more developed countries with higher per capita incomes.

**Table 5.3: Comparing Average Hourly Labor Costs in the Caribbean (US\$), 2004**

	<b>Barbados</b>	<b>Dominican Republic</b>	<b>Grenada</b>	<b>Jamaica</b>	<b>Trinidad &amp; Tobago</b>
<b>Professional</b>	\$30.00	\$14.30	\$63.70	\$23.10	\$32.40
<b>Skilled</b>	\$12.00	\$4.47	\$10.30	\$8.96	\$13.50
<b>Unskilled</b>	\$4.66	\$1.47	\$4.65	\$4.53	\$2.88

Source: Foreign Investment Advisory Service (2004)

207. Despite this positive external perception, Dominican labor is subject to legislation that reduces competitiveness through higher labor costs. Recall from Chapter 2 the ancillary charges that formal sector employers must pay in terms of the *cesantía*, *salario doble*, and payroll taxes to INFOTEP, in addition to the set of sector-specific minimum wages. In the absence of concrete evidence, the impact of these regulations can be inferred by the size and recent growth of informal sector employment, as high formal sector labor costs reduce labor demand and drive more and more workers into informal self-employment. The effect is likely to be exacerbated by forthcoming increases in payroll tax rates to finance the new social security system. The degree to which labor regulation imposes a burden on employers depends on the extent of regulation enforcement, however; recall that less than 20 percent of workers entitled to a *cesantía* upon termination actually received payment, suggesting that labor market protection fails most workers and as such is not a binding constraint on employers.

**Table 5.4: Hourly Manufacturing Wages (US\$), 2002**

	Wage/hour	GNI/capita		Wage/hour	GNI/capita
<b>Argentina</b>	\$1.29	\$4,220	<b>Mauritius</b>	\$1.10	\$3,860
<b>Bolivia</b>	\$0.79	\$900	<b>Mexico</b>	\$1.88	\$5,920
<b>Brazil</b>	\$1.33	\$2,830	<b>Nicaragua<sup>1</sup></b>	\$1.27	\$710
<b>Canada</b>	\$12.09	\$22,390	<b>Pakistan</b>	\$0.27	\$420
<b>Chile</b>	\$1.60	\$4,250	<b>Panama</b>	\$1.80	\$4,020
<b>Colombia</b>	\$0.64	\$1,820	<b>Paraguay</b>	\$0.54	\$1,170
<b>Costa Rica</b>	\$1.76	\$4,070	<b>Peru</b>	\$1.00	\$2,020
<b>Dominican Republic</b>	<b>\$1.58</b>	<b>\$2,380</b>	<b>Philippines</b>	\$0.76	\$1,030
<b>Ecuador</b>	\$1.27	\$1,490	<b>Poland</b>	\$2.67	\$4,570
<b>El Salvador</b>	\$1.06	\$2,110	<b>Singapore</b>	\$9.46	\$20,690
<b>Guatemala</b>	\$1.19	\$1,760	<b>Sri Lanka</b>	\$0.33	\$850
<b>India</b>	\$0.14	\$470	<b>Thailand</b>	\$0.73	\$2,000
<b>Ireland</b>	\$12.88	\$23,030	<b>Trinidad &amp; Tobago</b>	\$4.19	\$6,750
<b>Jordan</b>	\$1.36	\$1,760	<b>Turkey</b>	\$2.03	\$2,490
<b>Korea</b>	\$8.15	\$9,930	<b>United Kingdom</b>	\$17.77	\$25,510
<b>Malaysia</b>	\$2.10	\$3,540	<b>United States</b>	\$15.30	\$35,400

<sup>1</sup> Wage data is from 2001.

Note: Wage data reported prior to 2002 is adjusted for inflation.

Source: US Department of Commerce Import Administration, ILO, WDI, Dominican Republic Encuesta Panel de Fuerzo de Trabajo

208. Labor costs declined as a result of the currency depreciation in 2003, significantly lowering the US\$-price of labor. But the depreciation was also transmitted into high inflation, which on the one hand lowers real wages, but on the other hand increases the demand for wage increases. The relative lack of union representation and collective bargaining has meant that employers have adjusted nominal wages slowly, in the absence of effective pressure for cost of living increases. In October 2004, Congress approved a 30 percent increase in most minimum wages, and is pushing for further wage adjustments. And the government's proposed 2005 budget provides a 30 percent increase in government wages. In order to increase the competitiveness of Dominican labor, employers need greater flexibility in their employment decisions. It will be essential to proceed carefully with the introduction of the new social security system (which includes a universal pension and health insurance), since the projected jump in payroll taxes may drive more workers into the informal sector and lower the real wages of formal employees (since employers generally pass on labor taxes through lower wages).<sup>58</sup> This may counteract the policy objective of raising labor demand in the formal sector and the resultant higher wages passed on to workers to create a net welfare gain.

209. Two additional factors affect the competitiveness of Dominican labor: Haitian immigration and Dominican emigration. With respect to Haitian immigration, the relatively porous border between the two countries provides an alternative to those seeking escape from the dire economic circumstances and high unemployment in Haiti. Unofficial estimates place the Haitian population in the Dominican Republic between 500,000 and one million. But according to the 2003 labor force survey data, employed Haitians number only 58,000 (less than 2 percent of total employment), suggesting significant underreporting. Assuming that the data on the characteristics of Haitian workers is valid despite gross underreporting, about two-thirds of surveyed Haitians work in the

<sup>58</sup> Significant evasion of payroll taxes in the early phases of social security implementation, namely the pension contribution, is already emerging as a problem.

agriculture sector, with the rest employed in commerce and construction, and to a lesser extent as domestic servants and in tourism and transportation jobs. Although the availability of unskilled and relatively cheap Haitian labor may put downward pressure on wages in the rest of the economy, the scope of their impact – particularly in light of their concentration in agriculture – is unlikely to have had a major effect, on the basis of the labor force survey data (although this most likely understates the impact). If, however, Haitian workers account for 10-15 percent of the labor force, consistent with unofficial estimates, then the wage effect may be palpable. The wage gap between Haitian migrants and non-Haitians is very large: Haitians in the agriculture sector on average earn 23 percent (hourly wage) to 29 percent (monthly wage) less than non-Haitians. These wage gaps are even larger in the commerce and construction sectors (up to 50 percent in the latter). Regression analysis indicates that the unexplained wage gap between Haitian and non-Haitians, controlling for education and sector, *inter alia*, amounts to 33 percent for men (the effect is not significant for women).

210. Whereas in-migration potentially improves the competitiveness of Dominican output, out-migration could have the opposite effect if very large in magnitude and accompanied by significant remittances. In theory, a large outflow of highly skilled workers could lead to brain drain, lowering overall labor productivity. And a large inflow of remittances could increase the reservation wage, as well as help to fuel consumption spending. Most out-migration has been to the US (New York has a large Dominican community), with annual registered flows fluctuating between 18,000 and 27,000 in recent years, which in effect reduces working age population growth in the Dominican Republic by an average 9-13 percent annually.<sup>59</sup> The decision to migrate depends on individual circumstances and relative opportunities. Many go for tertiary education with the intention of returning to the Dominican Republic upon graduation, while others seek work opportunities: 30 percent of Dominican immigrants to the US have a primary education or less, and 43 percent have a secondary education (Thomas-Hope 2004). In light of these factors, it seems likely that in net terms, out-migration contributes positively to Dominican labor market functioning.

211. The preceding analysis of effective labor demand provides only part of the picture in understanding the trade-labor linkages in the Dominican Republic. It is essential to complement this knowledge with an assessment of the potential pool of workers on which employers can draw – namely the labor force and the entire working-age population more generally. The competitiveness of Dominican labor relates not only to cost but also to quality.

## **V. Supply of Labor**

212. The Dominican labor force grew by 4.5 percent annually between 1996 and 2002, driven by the entrance of women into the economically active population. The female labor force grew by 7 percent per year during this period, compared to only 3 percent for men. Despite this disproportionate growth, men still account for two-thirds of the labor force. The aggregate labor force participation rate also rose during this period, again driven by the influx of women, whose participation reached 42 percent in 2003 compared to 77 percent for men (using the ILO-consistent definition).<sup>60</sup>

213. The education breakdown of the labor force shows that in 2003, a quarter of the labor force had less than a 5<sup>th</sup> grade education, and 20 percent had a university education or higher. And the age

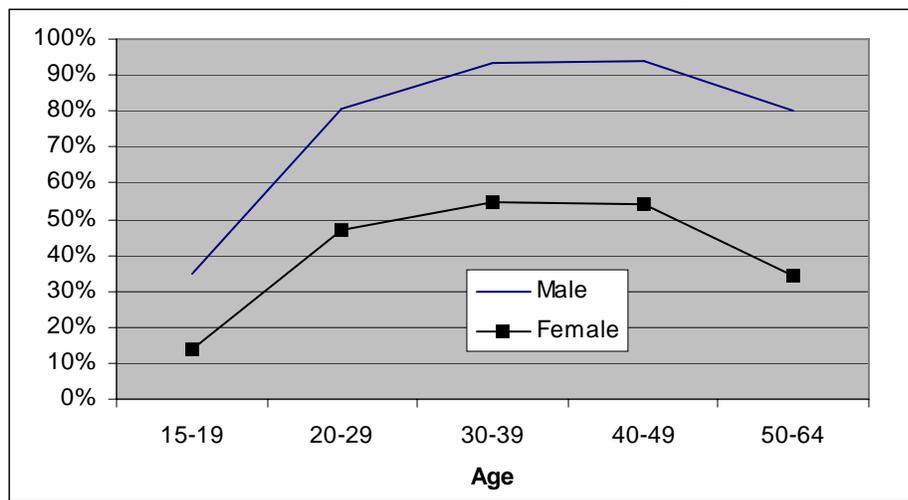
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<sup>59</sup> The data, based on US immigration data, excludes undocumented workers but includes previously undocumented workers who become legal (see Thomas-Hope 2004).

<sup>60</sup> Using the Central Bank definition of labor force participation, which includes all those over age 9 who are employed or unemployed (no job search required), the female participation rate was 41.1 percent and male participation was 66.8 percent in April 2003.

distribution of the labor force shows that the prime age of participation for both men and women is between 30 and 49 (see Figure 5.8).

**Figure 5.8. Labor Force Participation by Age Group**



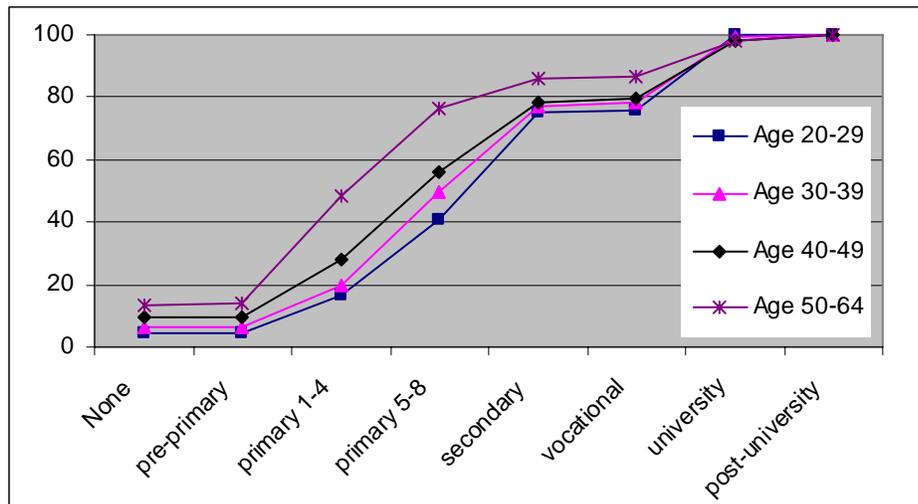
Source: Encuesta Panel de Fuerzo de Trabajo

214. Regression analysis on the determinants of labor force participation – using a Probit regression to estimate the contribution of various factors to the probability of being in the labor force – shows that less educated men are more likely to enter the labor force (except for those with a vocational education), while women’s probability of being economically active increases with education (see Table AIV.3). The likelihood of labor force participation increases with age in a quadratic relationship, ultimately declining on average after about age 50 (see Figure 5.8). Married men are more likely to be active than those who are single, divorced, or separated. For women, by contrast, married women are less likely to enter the work force compared to their unmarried counterparts. Household size and dependency ratio do not seem to affect the likelihood of entering the labor force, although the presence of children under age 6 increases men’s participation (the effect for women is negative but insignificant). Rural women are 12-14 percent less likely to work, while the likelihood of participation is not much affected by the share of public sector jobs in a given province. Spousal education level does not affect the probability of entering the work force, except for the positive impact on women’s labor force participation among women whose husbands have post-university education (see regression 4 in Table AIV.3). And women whose husbands are unemployed are more likely to enter the labor force, while wives of the self-employed (non-professional) are less likely to participate. Finally, the regression results indicate that members of households that receive remittances from abroad are less likely to enter the labor force. This is true for both men and women, and in fact the effect is larger for men.

215. The preceding analysis provides a static picture of the determinant factors behind the labor force participation decision. How does this characterization fit with the dynamic story described above, namely that female participation rates have risen sharply, prime-age men maintained a high participation rate, and education patterns among active men and women differ? The data indicate a trend of increasing educational attainment among both men and women, as younger age groups exhibit higher education levels (see Figure 5.9). Although the micro-level data analysis cannot shed light on the role played by broader macroeconomic developments in labor supply decisions, it provides evidence to support the observed influx of women concurrent with a rise in female returns to education at almost all education levels between 2000 and 2003. There is some evidence that women

are concentrated in lower-skill occupations despite higher education compared to men; 21 percent of employed women with at least a university education work as clerks compared to only 10 percent of men. On the other hand, 65 percent of women with a tertiary education were employed as professionals, technicians or managers, compared to 60 percent of men. For those with a secondary education, 26 percent of women work in service occupations compared to only 12 percent of men, while men with a secondary degree are three times more likely than women to work in production occupations, pointing to skill mismatch among semi-skilled males.

**Figure 5.9. Education by Age Cohort (Cumulative Distribution)**



Source: Encuesta Panel de Fuerzo de Trabajo

216. The occupation-education mismatch observed among the employed is also relevant for the mismatch between demand for labor and total supply, with the difference falling into unemployment (discussed below).

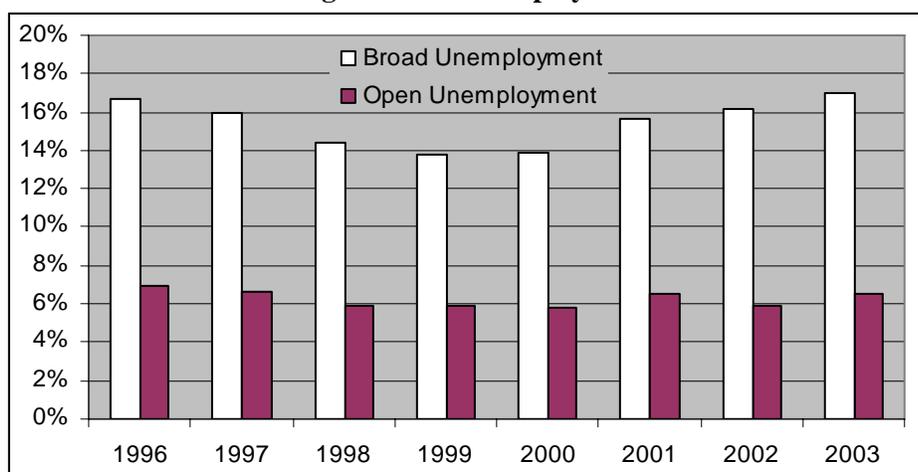
217. Children ages 10 and over are permitted to work under the Labor Code and all the labor aggregates reported by the Central Bank reflect this definition, implying that child labor is sanctioned by the state. This contradicts the ILO convention on minimum age (defined as age 14), which was ratified by the Dominican Republic in 1999. Nearly 39,000 children age 10-14 were employed in April 2003 (accounting for 1 percent of total employment), 60 percent of whom worked for remuneration (i.e., were not in unpaid family work). One-fourth of these child laborers are employed in agriculture and a third in wholesale and retail trade. Wages for this group averaged a low RD\$12/hour, although higher than the minimum wage for agriculture workers, and children worked an average 26 hours per week. Regression analysis indicates that boys age 10-14 in households with children under age 6 are more likely to be employed in paid work compared to households without younger dependents, and rural boys are somewhat more likely to be wage earners compared to their urban counterparts; there are no comparable effects for girls (see Table AIV.3, regressions 5 and 6).

218. Child labor is detrimental to the long-term competitiveness of the Dominican labor force, since working children miss out on schooling opportunities, reducing their human capital accumulation (and that of their children) and hurting labor productivity in turn. The authorities need to send a clear message of no tolerance, not only to protect the rights of minors, but also to increase the quality of the labor force in the long run. The government's ongoing White Book exercise to review labor regulation and foster improved compliance could be an effective tool toward this end.

## VI. Skills Matching and Unemployment

219. The term “matching” refers to the process of bringing together job seekers and employers – in other words matching supply and demand. A shortfall in demand results in unemployment. The Dominican authorities use two definitions of unemployment: open unemployment (*abierta*) and broad unemployment (*ampliada*). The former, consistent with the ILO definition, requires job search while the latter does not: these workers can therefore be classified as discouraged workers who have effectively exited the labor force. The aggregate unemployment data reflect the broader definition (and thus include both *abierta* and *ampliada*), but the gap between the two is on the order of 10 percentage points (see Figure 5.10). By end-2003, the open unemployment rate reached 6.5 percent, compared to a broad unemployment rate of 17 percent.

Figure 5.10. Unemployment

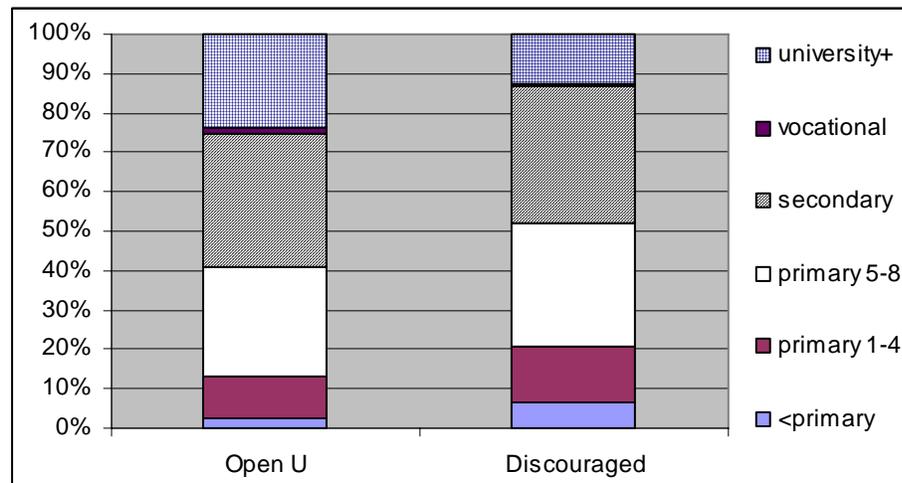


Source: Encuesta Panel de Fuerzo de Trabajo

220. The education distribution of the unemployed reflects lower educational attainment among discouraged workers compared to the openly unemployed (see Figure 5.11). The average age of openly unemployed workers is 29.9 years, compared to 29.5 for discouraged workers and 37.7 for the employed. This reflects a high rate of youth unemployment, double the national rates (i.e., 12 percent open unemployment for ages 15-24, and 31 percent broad unemployment). New entrants account for 27 percent of the open unemployed and 44 percent of discouraged workers, suggesting that labor demand has not kept pace with labor force growth. Regression analysis of the probabilistic contributions of various worker characteristics to unemployment status indicates that first-time job seekers are about 60 percent more likely to be discouraged rather than openly unemployed (see regressions 3 and 4 in Table AIV.4).<sup>61</sup> The fact that discouraged workers tend to be young and less educated points to two non-exclusive possibilities: (i) mismatch between expectations of school leavers and the realities of the job market; (ii) mismatch between skills of school leavers and those sought by employers (addressed below).

<sup>61</sup> Note that regressions were also run for unemployed youth ages 20-24, but the results for this subgroup did not differ substantially from the larger 15-64 population.

**Figure 5.11. Education Profile of the Unemployed**



Source: Encuesta Panel de Fuerzo de Trabajo

221. Based on April 2003 data, approximately one-fourth of the openly unemployed have been looking for a job for over a year, and another 15 percent have been unemployed for 6-12 months. But those openly unemployed who were previously employed encounter relatively longer job search delays (39 percent have been jobless for over a year, and 23 percent have been without work for 6-12 months), suggesting that new entrants may actually be better prepared to find employment (this result is confirmed by regression analysis). In terms of methods of job search, the majority visited firms or offices to solicit positions (59 percent), and most of the rest requested help from third parties. Among the 380,000 unemployed with previous work experience, some 71,000 (nearly 19 percent) reported receiving a *cesantía* payment, 27 percent of whom were in firms that shutdown, and the remaining 73 percent were laid off. The amount of the *cesantía* averaged just over 2 months' wages.

222. The open unemployment pool is evenly divided between men and women, although the female unemployment rate was 9 percent in April 2003 compared to only 4 percent for men. Disaggregating the unemployed by gender and education level reveals that for men, unemployment rates are highest for those with a vocational degree (18 percent) and those with a post-university education (10 percent). These results are similar to the regression findings that vocational graduates are the most likely education group to be unemployed, followed by university graduates (results are reported in Table AIV.4, regression 1). This pattern differs somewhat for women, although there is conflicting evidence on the degree to which education affects the likelihood of being unemployed. On the one hand, the highest unemployment rates for women are among those with a secondary education (12 percent) followed by university graduates (9 percent) and then primary school grades 5-8 (8 percent). On the other hand, the regression analysis indicates that education level is not a statistically significant determinant of women's unemployment status, although there is some significance for discouraged workers at the university level (regression 4 in Table AIV.4).

223. Other variables correlated with unemployment include: single marital status for men (more likely to be unemployed), men and women residing in rural areas (less likely), and men receiving remittances from abroad (more likely). This latter result could be interpreted to support the existence of voluntary unemployment, namely workers queuing for more desirable jobs or migration opportunities while being supported by others, for example through remittances. But it is equally possible that workers who are unemployed are more likely to solicit and receive income support from family members abroad because of need. Because this type of regression analysis cannot determine

direction of causality, it is necessary to look at other factors. In this vein, the analysis also considers the relationship to household head, and finds that being a dependent of the household head – either a child or other non-spouse family member – increases men’s probability of being unemployed by 3-4 percent (regressions 1 and 3 in Table AIV.4). This result, which holds for both definitions of unemployment, suggests a degree of voluntary unemployment among men, but not women.

224. The persistence and increase in unemployment in the Dominican Republic following the extended period of robust economic growth – in part explained by rapid labor force growth – implies insufficient employer demand for the skills on offer. The evidence indicates that this is the case for university graduates as well as those at the low end of the skill spectrum, many of whom are pushed into informal self-employment. A national survey of 740 employers sheds light on the extent of skills mismatch: the 2003 *Encuesta Nacional de Demanda de Capacitación* found that firms primarily sought workers with relatively low qualifications. This was particularly true for FTZ firms (78 percent of expected new hires would be sewing machine operators), but also true in the tourism and financial sectors.<sup>62</sup> Sectors that found it most difficult to find qualified workers included construction, manufacturing, financial services and insurance. More than half of employers reported difficulty in finding employees with the desired skills, especially in the fields of management and administration. Employers identified particular shortcomings in languages, experience and basic education.

225. When asked to forecast future labor demand over the next five years, employers anticipated that 53 percent of new hires would have university degrees and 29 percent would have advanced technical degrees. Areas of specialization in greatest demand would include: business administration (accounting, marketing, economics), information and communication technologies, electronics, secretarial skills, industrial and mechanical engineering, and tourism-related skills. Surveyed firms value behavioral skills as much as technical skills, and indicated demand for workers with “good habits, principles, and the ability to learn and adapt to new labor conditions.” This contradicts to some extent the training objectives on the part of workers to acquire short-term technical skill fixes to compensate for a lack of education and to make themselves more competitive for the immediate future job market (Guzman et al. 2003).

226. In certain areas, such as information and communication technology (ICT), widely available training has led to a high satisfaction of demand; in urban areas at least, Dominican businesses report little trouble finding ICT technicians and workers with basic computer skills. But as technology in all sectors continues to develop rapidly, the demand for technically skilled professionals will increase. The Dominican labor market’s capacity to meet this demand is explored below.

## **VII. Explaining Low Labor Quality**

227. The employer survey results reported above point to a disproportionate demand for low skills in the near term. Although this partly reflects the production structure of the Dominican economy and the trade incentives for FTZs in particular, it is also likely to be driven by the unavailability of high quality labor. The mismatch between education and occupation apparent from the large proportion of secondary and university graduates holding low-level jobs may be explained by the low level and quality of education in the Dominican Republic. Although access to primary education and primary completion rates increased markedly over the last decade (primary net enrollment rose from 74 to 94 percent between 1994 and 2002, and completion rates for eight years of basic education rose

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<sup>62</sup> Among hotels and restaurants, employers reported that 61 percent of new hires would be bartenders, waiters or cooks. Among financial sector firms, 71 percent of new hires would be tellers.

from 35 percent in 1998 to 53 percent in 2002), there are major weaknesses at the secondary and tertiary levels.

228. The gross enrollment rate for general secondary education is less than 55 percent, well below the Latin America average of 65 percent, and the net enrollment rate is only 28 percent, down from 34 percent in 1994, owing in part to demographic pressures (Secretaría de Estado de Educación 2003). Government expenditure on secondary education is very low and being squeezed further by increasing outlays for tertiary education, resulting in relatively low quality of instruction and few secondary education opportunities for students from lower socio-economic backgrounds, which in turn has a lasting negative impact on equity and social mobility and further undermines the country's competitiveness.<sup>63</sup> Past initiatives to increase competitiveness through bridging the digital divide included the installation of 300 computer laboratories in secondary schools. Although many are in a state of disrepair as a result of maintenance and electricity issues, thousands of students have nevertheless been introduced to basic levels of computer technology. Formal secondary technical or vocational education is also quite constrained, covering only 8 percent of all students enrolled in public secondary education. Within this group, 20,000 are enrolled in technical secondary education, another 150,000 in low-quality private vocational training, and 30,000 in training for self-employment (e.g., clothing, beauty salons, cooking, pottery, etc.).

229. At the tertiary education level, net enrollment is less than 15 percent, despite rapid growth of private institutions over the last 10 years. The dominant institution remains the publicly funded Autonomous University of Santo Domingo (UASD), with over 40 percent of all tertiary enrollment. UASD receives about 90 percent of all public higher education funding, and student fees are nominal at only US\$1.25 per credit. The academic credentials of students entering tertiary education is quite low, thus affecting the quality of higher education (Secretaría de Estado de Educación Superior, Ciencia y Tecnología et al. 2003). Tertiary institution administrators also point to inadequate professor training and substandard infrastructure. Finally, the lack of communication between educators and employers exacerbates skills mismatch in the labor market. The public higher education system appears to prepare students for the small traditional "white collar" industries of business, finance and law, in addition to education, while little effort is devoted to developing human resources for information and communication technology (ICT), higher value-added manufacturing, or tourism.<sup>64</sup> But where the public education system has failed, the private market has stepped in: there are hundreds of small IT institutes and language schools scattered across the country, so that even small towns of only 8,000 inhabitants have at least one, if not both.

230. The observed low levels of educational attainment at the secondary and tertiary levels in the Dominican Republic and the weakness with respect to education quality greatly restrict the prospects that graduates can be productive participants in the global knowledge-based economy in the near term, confining most workers to relatively low-skilled jobs in agriculture, construction, assembly-type manufacturing, and services related to the tourism industry.

### **VIII. In-Service Training by INFOTEP**

231. External market pressures on the demand for new skills and the observed mismatch described above have led employers to rely increasingly on in-service training to meet the specific training needs of their own personnel, among whom an estimated three-fourths require additional training. INFOTEP – the *Instituto Nacional de Formación Técnica* – was created by the government in 1980

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<sup>63</sup> Students from higher socio-economic backgrounds typically attend private schools: 22 percent of all secondary education enrollment is private, where per student spending is 17 percent higher than in public schools.

<sup>64</sup> More technical training is delegated to the Instituto Nacional de Formación Técnica (discussed below).

as an autonomous agency to provide private sector workers with the skills upgrading necessary to make them and their employers competitive in a changing global market. Courses are financed by mandatory payroll contributions shared by employers (1 percent) and employees (0.5 percent) in formal private sector firms, although the institute occasionally receives limited financial support from the government. INFOTEP offers traditional vocational training in industrial mechanics, electronics, auto mechanics, industrial design, metal construction, woodworking, and electrical system installation and maintenance. In addition, it has greatly expanded its offerings in computer skills, audio-visual arts and graphic design. Most courses are short (50 hours) and are offered mornings, afternoons or evenings, although some courses are part of a two-year technical degree.

232. INFOTEP's network of over 175 training centers is spread throughout the country, and the majority are private training centers that have been certified by INFOTEP to offer specific training courses (only seven centers belong to INFOTEP directly). INFOTEP also offers – on a pilot basis – mobile training workshops to reach workers who cannot access training facilities. Employer demand for courses is very high, as more than half of formal employers in the industry, commerce, service and agriculture sectors solicited INFOTEP courses in 2000. INFOTEP reached approximately 200,000 trainees in 2003. With respect to course offerings and design, INFOTEP is responsive to private sector needs and solicits direct input from employers. Slightly more than half of training was aimed at increasing competitiveness (using an enterprise-based “dual” training system of classroom instruction together with on-the-job training offered by the employer). Course content has increasingly shifted to custom-designed training in computer sciences, tourism, and skills related to FTZ competitiveness. But close to half of all training provided had a “social” content focused on upgrading general education skills (below university-level) rather than firm-specific skills. Although INFOTEP consults employers on course content, there is a bias toward formal businesses (only 16 percent of informal sector firms were consulted, compared to 61 percent of formal sector firms). Almost all of INFOTEP's courses require an 8<sup>th</sup> grade education as a pre-requisite, which in effect excludes a significant portion of the economically active population.

233. Unsatisfied demand for INFOTEP training is very large, particularly among youth who have left the formal education system but are not part of the formal labor market (i.e., pre-service training). Using existing training centers including the poly-technical institutes of the Ministry of Higher Education, Science and Technology and private Salesian training centers, INFOTEP estimates that it could double its output from 200,000 to 400,000 trainees per year, across a wide range of skills. INFOTEP's flexible network of public and private training centers together with its private sector orientation are well-suited to accommodate any major national skills-upgrading initiative, although a major infusion of external financing and increased focus on pre-service training and programs targeted to less educated workers would be necessary.

## **IX. Labor Market Implications of the New Trade Environment**

234. In light of existing education and skill deficiencies among the Dominican labor force, the challenge of competing successfully in the new trade environment is significant. Education is critical for technological advances and competitiveness, and research shows that higher stocks of human capital enhance the knowledge transfer benefits of foreign direct investment and trade liberalization. The government can foster innovation to retain competitiveness and expand market niches through promoting privately financed research and development, re-orienting curricula towards productive and competitive sectors, and increasing university-firm linkages (World Bank 2002d).

235. Although foreign investors cite Dominican labor as competitive in terms of cost, Dominican workers possess essentially basic skills, posing little quality advantage over most competitors. Moreover, the average skills profile falls short of the demands of higher value-added service and

manufacturing industries that pay higher wages. Greater availability of skilled workers would create incentives for firms to invest in new technologies that are skill-intensive, but filling this supply gap would necessitate better skills and extensive educational improvements, including achieving full access to education at the secondary level. Even the adoption and diffusion of existing technologies typically requires at least some secondary education (independent of the educational requirements to adapt and create new technologies). Existing gaps in secondary education have exacerbated inefficiency and inequity, as increasing numbers of talented, poor students are unable to access public higher education while tertiary students are drawn from a narrower and more affluent talent pool. Like many other Latin American countries with low education levels, the Dominican Republic is trapped in technological stagnation, weak growth (outside of tourism), and low demand for education, despite positive and increasing returns to education. At current levels of skill and education, the Dominican labor force is ill-prepared to benefit from foreign direct investment and technological transfer that would increase the country's international competitiveness.

236. Increased labor demand arising from new market opportunities and foreign investment inflows could stimulate individual, employer and government efforts to increase skills and improve matching. The shift toward higher value-added activities would propel growth through income and aggregate demand effects, and reduce unemployment directly through job creation and indirectly by better aligning expectations of job seekers and employers. A dynamic labor market would also increase domestic work opportunities relative to jobs available abroad, causing more potential migrants to remain in the Dominican Republic.

237. In order to meet the human capital requirements for supporting new export growth areas and developing new market niches, the current base of knowledge and training will need to be ameliorated. Reforms within the formal education system – primarily at the secondary and tertiary levels – could focus on improving general problem-solving skills, collaboration and teamwork skills, and cross-cultural understanding. With respect to technical skills, the following areas of expertise are likely to be in greater demand: electronics, bio-technology, supply chain management, chemistry relating to fertilizers and pesticides, information technology, and software development.

238. To understand fully the welfare implications of the projected job creation – with respect to both poverty and inequality – additional analysis is needed. The World Bank's forthcoming poverty assessment will tackle these questions in depth.

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## Annex I: Trade Agreements

**Table AI.1: Preferential Agreements**

<b>Agreement</b>	<b>Granting Countries</b>	<b>Objective</b>	<b>Terms</b>	<b>Expiration</b>	<b>Member Countries</b>
<b>Cotonou Accord</b>	European Economic Community and its overseas territories/countries	Promote economic, social and cultural development; contribute to peace and security; and reduce poverty through integration into global economy	Successor of the Lome IV Convention, provides preferential access to EU; No Quantitative restrictions; Rules of origin: complete or sufficient transformation, accumulation allowed with other parties to the accord plus South Africa ; No transshipment	December 31, 2007 for preferential tariff regime; 2020 for the broader accord	44 African countries (excluding South Africa), 15 Caribbean counties (Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago) and 8 Pacific island countries
<b>Caribbean Basin Trade Partnership Act (CBTPA)</b>	United States and Puerto Rico	Promote economic development of the Caribbean region	Extends NAFTA terms (tariff reduction or exemption) to products previously excluded in the CBI; preferential terms (both tariff and quotas) for certain textiles subject to rules of origin criteria (some products are excluded altogether); additional benefits for shoes, tuna, petroleum products, and watches identical to the rules of origin under NAFTA; accumulation allowed among CBI countries; no transshipment	September 30, 2008	Antigua and Barbuda, Aruba, Bahamas, Belize, Costa Rica, Dominica, El Salvador, Grenada, Guatemala, Guyana, British Virgin Islands, Haiti, Honduras, Dominican Republic, Jamaica, Montserrat, Netherlands Antilles, Nicaragua, Panama, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines, Trinidad and Tobago
<b>Generalized System of Preferences (GSP)</b>	Australia, Bulgaria, Canada, European Union, Japan, New Zealand, Norway, Russia, Switzerland, United States	Raise export revenues, encourage industrialization and accelerate growth in developing countries.	Each granting country defines the eligible products and rules of origin criteria for preferential access. In general, they apply to product lines 25-99 of the Harmonized System of Codification, include only some agriculture goods, and exclude textiles, leather and petroleum derivatives. No transshipment.		Developing countries elected by each granting country, and include the Dominican Republic

Source: “Instructivo sobre Acuerdos Comerciales y Programas Preferenciales que Benefician a la Republica Dominicana”, CEI-RD

**Table AI.2: Free Trade Agreements**

Agreement	Countries	Terms	Effectiveness Date
<p>CARICOM FTA (Goods, Services, Investment and Cooperation)</p>	<p>Less developed (LDCs): Antigua and Barbuda, Belize, Dominica, Grenada, Monserrat, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines More developed (MDCs): Barbados, Guyana, Jamaica, Surinam, Trinidad and Tobago</p>	<p>DR products have duty-free access to MDCs in the agreement, and will have duty-free access to LDC's beginning in 2005, except for goods on the negative list which are subject to MFN tariff rates. Certain products taxed at MFN, which is scheduled for gradual reduction to zero in 2004. Special measures for certain agriculture products. Exports from FTZs face MFN tariffs. Rules of origin: complete production or sufficient transformation within CARICOM; direct transport; accumulation rules apply for countries in CARICOM.</p>	<p>August 1998 with LDCs  December 2001 with Barbados, Jamaica and Trinidad and Tobago  Guyana and Surinam are pending</p>
<p>Bilateral FTAs with Central American Countries</p>	<p>Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua</p>	<p>Duty-free access of goods, with exceptions subject to MFN Gradual reduction of MFN to zero in 2004 for some products. Products on negative list subject to MFN FTZ exports from DR treated at least as well as exports from member FTZs. Rules of origin: complete production or sufficient transformation (defined by a change in tariff classification) within Central America FTA member countries; direct transport; accumulation rules apply for Central America FTA members.</p>	<p>October 2001 with El Salvador and Guatemala  December 2001 with Honduras  March 2002 with Costa Rica  Nicaragua is pending</p>
<p>DR-CAFTA</p>	<p>US, Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua</p>	<p>Duty-free access of goods and services (except for a small negative list) to be phased in over 10 years (15-20 years for sensitive agriculture products) through lower tariffs and rising quotas; 80 percent of US consumer and industrial exports to enter duty-free upon FTA ratification, 85 percent in 5 years, 100 in ten years, other than excluded agriculture goods. Expanded rules of origin for apparel, now allows imports from Canada and Mexico; longer list of short supply waivers; accumulation rules apply for DR-CAFTA members. Includes provisions for trademark protection, government procurement, workers' rights and environmental safeguards.</p>	<p>Signed August 5, 2004, but not yet ratified or implemented</p>

Source: "Instructivo sobre Acuerdos Comerciales y Programas Preferenciales que Benefician a la Republica Dominicana", CEI-RD

## Annex II: Components of Ten Commodity Aggregates

Aggregates	Product Name	SITC
Petroleum	Petroleum and derivatives	33
Raw Materials	Crude fertilizers and minerals	27
	Metalliferous ores	28
	Coal, coke	32
	Gas	34
	Electrical current	35
	Nonferrous metal	68
Forest Products	Lumber, wood and cork	24
	Pulp and waste paper	24
	Cork and wood manufacture	63
	Paper	64
Tropical Agriculture	Vegetables	5
	Sugar	6
	Coffee	7
	Beverages	11
	Crude rubber	23
Animal Products	Live animals	0
	Meat	1
	Dairy products	2
	Fish	3
	Hides, skins	21
	Crude animals and vegetables	43
	Processed animal and vegetables oils	94
	Animal products n.e.s.	
Cereals, etc.	Cereals	4
	Feeds	8
	Miscellaneous	9
	Tobacco	12
	Oil seeds	22
	Textile fibers	26
	Animal oil fat	41
	Fixed vegetables oils	42
Labor Intensive	Nonmetal minerals	66
	Furniture	82
	Travel goods	83
	Art Apparel	84
	Footwear	85
	Misc. manufactured articles	89
	Postal packing no classified	91
	Special transactions not classified	93
	Coins	96
Capital Intensive	Leather	61
	Rubber	62
	Textile yarn, fabric	65
	Iron and Steel	67
	Manufactured metal n.e.s.	69
	Sanitary fixtures and fittings	81

<b>Aggregates</b>	<b>Product Name</b>	<b>SITC</b>
Machinery	Power generating	71
	Specialized	72
	Metal working	73
	General industrial	74
	Office and data processing	75
	Telecommunications and sound	76
	Electrical	77
	Road vehicles	78
	Other transportation vehicles	79
	Prof. And scientific instruments	87
	Photographic apparatus	88
	Firearms and ammunition	95
	Chemicals	Organic
Inorganic		52
Dyeing and tanning		53
Medical, pharmaceutical products		54
Essences and perfumes		55
Fertilizers		56
Explosives and Pyrotechnics		57
Artificial resins and plastics		58
Chemical materials n.e.s.		59

### Annex III: Apparel Case Study Regression Results

**Table AIII.1: Effect of Preference Margin**

Regression: Feasible Generalized Least Squares with product group and year fixed effects.			
Dependent variable: Log of relative export prices from Dominican Republic, HS categories 61 and 62.			
Data: Dominican apparel export prices 1996-2003 at the HS 8-digit level; 4-digit product categories for the fixed effects.			
	<b>Coef.</b>	<b>Std. Err.</b>	<b>t</b>
Preference margin	0.660	0.118	5.620
Log of export value	0.081	0.010	7.760
Log of total US imports	(0.033)	0.011	(3.030)
Constant	(0.062)	0.166	(0.374)
Observations	1112		

Source: World Bank staff calculations

**Table AIII.2: Effect of Preference Margin under CBI, CBTPA**

Regression: Feasible Generalized Least Squares with product group and year fixed effects.						
Dependent variable: Log of relative export prices from Dominican Republic, HS categories 61 and 62.						
Data: Dominican apparel export prices 1996-2003 at the HS 8-digit level; 4-digit product categories for the fixed effects.						
	<b>1996-2000</b>			<b>2001-2003</b>		
	<b>Coef.</b>	<b>Std. Err.</b>	<b>t</b>	<b>Coef.</b>	<b>Std. Err.</b>	<b>t</b>
Preference margin	0.851	0.163	5.230	0.635	0.174	3.650
Log of export value	0.073	0.014	5.360	0.101	0.018	5.750
Log of total US imports	(0.016)	0.014	(1.150)	(0.062)	0.019	(3.340)
Constant	(0.073)	0.205	(0.350)	(0.056)	0.298	(0.188)
Observations	718			394		

Source: World Bank staff calculations

**Table AIII.3: Effect of Removing Apparel Quotas**

Regression: Feasible Generalized Least Squares with product group and year fixed effects.			
Dependent variable: Log of relative export prices from Dominican Republic, HS categories 61 and 62.			
Data: Dominican apparel export prices 1996-2003 at the HS 8-digit level; 4-digit product categories for the fixed effects.			
	<b>Coef.</b>	<b>Std. Err.</b>	<b>t</b>
Preference margin	0.660	0.117	5.620
Log of export value	0.081	0.011	7.730
Log of total US imports	(0.032)	0.011	(3.000)
Quota dummy	0.148	0.028	5.290
Constant	(0.077)	0.329	(0.234)
Observations	1112		

Source: World Bank staff calculations

## Annex IV. Labor Market Regression Results

**Table AIV.1: Wages**

Dependent variable: Ln hourly wage					
Sample: Employed workers age 15-64, non-zero wages					
	Men		Women		Men and Women
	Public	Private	Public	Private	Pooled
	(1)	(2)	(3)	(4)	(5)
pre-primary	0.000	0.172	0.000	0.000	0.168
	(0.000)	(0.304)	(0.000)	(0.000)	(0.296)
primary 1-4	0.293	0.155	-0.453	0.149	0.152
	(0.163)	(0.042)**	(0.206)*	(0.099)	(0.036)**
primary 5-8	0.465	0.286	-0.176	0.269	0.281
	(0.161)**	(0.042)**	(0.197)	(0.100)**	(0.036)**
secondary	0.938	0.522	0.125	0.530	0.541
	(0.166)**	(0.046)**	(0.207)	(0.105)**	(0.039)**
vocational	1.400	0.840	0.386	0.960	0.901
	(0.303)**	(0.136)**	(0.259)	(0.200)**	(0.092)**
university	1.597	1.099	0.608	1.070	1.132
	(0.168)**	(0.054)**	(0.209)**	(0.110)**	(0.042)**
post university	1.959	1.600	1.002	1.842	1.686
	(0.258)**	(0.162)**	(0.252)**	(0.199)**	(0.093)**
potential experience	0.056	0.041	0.021	0.025	0.037
	(0.007)**	(0.003)**	(0.007)**	(0.005)**	(0.002)**
potential experience <sup>2</sup>	-0.001	-0.001	-0.000	-0.000	-0.001
	(0.000)**	(0.000)**	(0.000)**	(0.000)**	(0.000)**
tenure (years)	-0.011	-0.012	0.013	0.001	-0.006
	(0.011)	(0.007)	(0.010)	(0.012)	(0.004)
tenure <sup>2</sup>	0.001	0.001	-0.000	0.000	0.000
	(0.000)	(0.000)*	(0.000)	(0.001)	(0.000)**
part-time	0.392	0.387	0.291	0.481	0.408
	(0.069)**	(0.029)**	(0.052)**	(0.041)**	(0.020)**
mining	0.000	0.495	0.000	0.000	0.471
	(0.000)	(0.198)*	(0.000)	(0.000)	(0.192)*
manufacturing	0.202	0.264	0.175	0.226	0.253
	(0.338)	(0.044)**	(0.486)	(0.148)	(0.037)**
utilities	0.095	0.465	0.434	0.424	0.382
	(0.200)	(0.156)**	(0.311)	(0.304)	(0.091)**
construction	0.151	0.628	0.000	0.705	0.623
	(0.602)	(0.044)**	(0.000)	(0.265)**	(0.041)**
wholesale, retail trade	0.002	0.282	0.137	0.111	0.245
	(0.276)	(0.038)**	(0.316)	(0.141)	(0.032)**
tourism	0.177	0.245	0.536	0.176	0.232
	(0.591)	(0.061)**	(0.382)	(0.145)	(0.043)**
transportation, communications	0.048	0.434	0.261	0.383	0.419
	(0.218)	(0.043)**	(0.332)	(0.194)*	(0.038)**

**Table AIV.1: Wages (continued)**

	Men		Women		Men and Women
	Public	Private	Public	Private	Pooled
	(1)	(2)	(3)	(4)	(5)
financial services	0.135 (0.207)	0.457 (0.059)**	0.410 (0.314)	0.453 (0.153)**	0.462 (0.045)**
community, social, personal services	0.101 (0.203)	0.368 (0.055)**	0.297 (0.282)	0.105 (0.144)	0.252 (0.039)**
HH services, extra-territorial	0.000 (0.000)	1.136 (0.694)	0.000 (0.000)	0.892 (0.436)*	0.973 (0.334)**
FTZ	0.000 (0.000)	0.000 (0.000)	0.215 (0.420)	0.000 (0.000)	-0.083 (0.045)
government employee	-0.187 (0.109)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
public enterprise employee	0.000 (0.000)	0.000 (0.000)	0.064 (0.102)	0.000 (0.000)	0.083 (0.061)
own account worker		-0.014 (0.036)		0.194 (0.061)**	
rural	-0.233 (0.064)**	-0.220 (0.027)**	-0.262 (0.066)**	-0.164 (0.051)**	-0.206 (0.021)**
Santo Domingo	0.119 (0.077)	0.065 (0.031)*	0.061 (0.073)	0.061 (0.048)	0.071 (0.022)**
remittances	0.294 (0.134)*	0.085 (0.060)	0.082 (0.097)	0.027 (0.068)	0.070 (0.038)
licensed firm	0.047 (0.209)	0.031 (0.029)	0.510 (0.252)*	0.086 (0.053)	0.018 (0.022)
1-10 employees	-0.937 (0.585)	-0.068 (0.034)*	0.000 (0.000)	-0.239 (0.048)**	-0.102 (0.025)**
public					-0.117 (0.036)**
female					-0.203 (0.019)**
Constant	1.655 (0.303)**	1.969 (0.067)**	1.961 (0.434)**	2.004 (0.180)**	2.040 (0.052)**
Observations	529	4081	470	1632	7038
R-squared	0.5356	0.3269	0.4151	0.3108	0.3416

Standard errors in parentheses

\* significant at 5%; \*\* significant at 1%

**Table AIV.2: Enrollment**

Probit regression: Probability of being enrolled in school		
Sample: Children age 7-14		
	<b>Boys</b>	<b>Girls</b>
	<b>(1)</b>	<b>(2)</b>
age	0.001 (0.001)	0.001 (0.001)
rural	0.020 (0.007)**	-0.001 (0.006)
presence of children under age 6	-0.009 (0.008)	-0.009 (0.007)
HH income	0.000 (0.000)	0.000 (0.000)
presence of woman other than mother	0.010 (0.008)	0.005 (0.007)
female headed HH, no adult male	0.017 (0.007)*	-0.009 (0.014)
male headed HH	0.018 (0.012)	-0.009 (0.008)
father's education primary 1-4	0.016 (0.008)*	0.006 (0.011)
father's education primary 5-8	0.033 (0.007)**	-0.005 (0.015)
father's education secondary	0.037 (0.007)**	0.015 (0.009)
mother's education primary 1-4	-0.006 (0.016)	0.015 (0.006)*
mother's education primary 5-8	0.005 (0.013)	0.016 (0.007)*
mother's education secondary	0.020 (0.011)	0.021 (0.006)**
mother's education university		0.013 (0.008)
father absent	0.042 (0.015)**	0.002 (0.015)
mother absent	-0.040 (0.023)	0.002 (0.012)
Observations	1746	1817
LR chi2	64.35	26.63
P>chi2	(0.00)	(0.05)

Standard errors in parentheses

\* significant at 5%; \*\* significant at 1%

**Table AIV.3: Labor Force Participation**

Probit regression: Probability of participating in the labor force						
Sample: Men and women age 15-64; boys and girls age 10-14						
	Men	Women	Men	Women	Boys	Girls
	(1)	(2)	(3)	(4)	(5)	(6)
pre-primary	-0.088 (0.167)	0.038 (0.211)	-0.048 (0.169)			
primary 1-4	0.069 (0.017)**	0.072 (0.030)*	0.031 (0.009)**	0.050 (0.040)	0.712 (0.841)	0.398 (2.851)
primary 5-8	0.016 (0.019)	0.078 (0.029)**	0.025 (0.011)*	0.064 (0.040)	0.844 (0.712)	0.189 (1.679)
secondary	0.012 (0.019)	0.135 (0.030)**	0.025 (0.011)*	0.123 (0.043)**		
vocational	0.112 (0.034)**	0.273 (0.073)**		0.193 (0.108)		
university	0.028 (0.021)	0.370 (0.028)**	0.040 (0.009)**	0.405 (0.042)**		
post university	0.122 (0.045)**	0.515 (0.042)**	0.038 (0.009)**	0.467 (0.082)**		
age	0.059 (0.002)**	0.070 (0.003)**	0.013 (0.003)**	0.050 (0.006)**	0.126 (0.102)	0.031 (0.027)
age <sup>2</sup>	-0.001 (0.000)**	-0.001 (0.000)**	-0.000 (0.000)**	-0.001 (0.000)**	-0.005 (0.004)	-0.001 (0.001)
free union	-0.002 (0.019)	-0.017 (0.019)	0.002 (0.008)	-0.002 (0.022)		
divorced	-0.152 (0.067)*	0.156 (0.040)**				
separated	-0.099 (0.032)**	0.124 (0.026)**				
widowed	-0.076 (0.071)	0.140 (0.038)**				
single	-0.147 (0.021)**	0.034 (0.026)				
dependency ratio	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)
HH size	-0.009 (0.003)**	-0.006 (0.005)	-0.000 (0.003)	-0.008 (0.008)	-0.004 (0.004)	-0.001 (0.001)
woman present other than mother					0.007 (0.014)	0.001 (0.004)
woman present other than wife	-0.061 (0.014)**		-0.014 (0.011)			
woman present other than self		-0.010 (0.019)		-0.005 (0.028)		
presence of children under age 6	0.069 (0.012)**	0.002 (0.016)	0.015 (0.009)	-0.029 (0.024)	0.035 (0.017)*	0.005 (0.005)
rural	0.013 (0.011)	-0.133 (0.015)**	0.011 (0.008)	-0.154 (0.021)**	0.035 (0.015)*	0.004 (0.004)
share of public employment	-0.129 (0.141)	0.357 (0.196)	-0.262 (0.117)*	0.167 (0.278)	0.020 (0.137)	0.108 (0.056)

**Table AIV.3: Labor Force Participation (continued)**

	<b>Men</b>	<b>Women</b>	<b>Men</b>	<b>Women</b>	<b>Boys</b>	<b>Girls</b>
	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>
FTZ share employment	-0.238 (0.112)*	0.416 (0.152)**	-0.350 (0.087)**	0.353 (0.218)	-0.069 (0.117)	0.051 (0.043)
remittances	-0.192 (0.034)**	-0.133 (0.023)**	-0.114 (0.035)**	-0.009 (0.045)	0.021 (0.071)	
female headed HH, adult male present		0.006 (0.024)	-0.057 (0.021)**	0.130 (0.037)**	0.039 (0.037)	-0.001 (0.006)
male headed HH	0.005 (0.012)	-0.092 (0.024)**			0.022 (0.018)	0.000 (0.005)
child of HH head					0.027 (0.013)*	0.002 (0.004)
spouse pre-primary				0.106 (0.301)		
spouse primary 1-4			-0.004 (0.014)	0.057 (0.040)		
spouse primary 5-8			0.004 (0.013)	0.061 (0.039)		
spouse secondary			-0.005 (0.016)	0.011 (0.043)		
spouse vocational			-0.121 (0.101)	-0.111 (0.111)		
spouse university			0.014 (0.016)	-0.013 (0.049)		
spouse post university			-0.038 (0.070)	0.321 (0.136)*		
spouse government employee			-0.009 (0.021)	-0.005 (0.034)		
spouse PE employee				-0.040 (0.059)		
spouse self-employed (non-prof.)			-0.014 (0.017)	-0.059 (0.023)*		
spouse unemployed abierta			-0.003 (0.029)	0.233 (0.064)**		
spouse unemployed ampliada			0.019 (0.013)	0.061 (0.069)		
spouse inactive			0.002 (0.012)	-0.001 (0.041)		
spouse domestic service			-0.012 (0.021)	0.186 (0.119)		
Observations	6656	6795	2845	3141	1265	1167
Pseudo R sq	0.278	0.1558	0.2137	0.1214	0.0718	0.1436

Standard errors in parentheses

\* significant at 5%; \*\* significant at 1%

**Table AIV.4: Unemployment**

Probit regression: Probability of being openly unemployed (abierta) or discouraged (ampliada)				
Sample: Labor force age 15-64				
	Abierta		Ampliada	
	Men	Women	Men	Women
	(1)	(2)	(3)	(4)
pre-primary				0.022 (0.280)
primary 1-4	0.013 (0.017)	0.088 (0.068)	-0.010 (0.009)	-0.002 (0.035)
primary 5-8	0.035 (0.017)*	0.061 (0.054)	-0.003 (0.009)	0.002 (0.034)
secondary	0.036 (0.018)	0.108 (0.060)	-0.004 (0.009)	-0.004 (0.034)
vocational	0.193 (0.085)*	0.081 (0.108)	-0.020 (0.017)	0.021 (0.076)
university	0.048 (0.024)*	0.085 (0.056)	-0.017 (0.008)*	-0.089 (0.029)**
post university	0.157 (0.100)	0.036 (0.101)		
age	-0.002 (0.001)	-0.009 (0.003)**	-0.002 (0.001)	-0.001 (0.004)
age <sup>2</sup>	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)*	-0.000 (0.000)
single	0.050 (0.015)**	0.020 (0.023)	0.023 (0.012)	-0.024 (0.028)
free union	0.025 (0.011)*	0.027 (0.017)	0.005 (0.009)	0.045 (0.021)*
divorced	-0.020 (0.019)	0.045 (0.037)	0.027 (0.036)	-0.023 (0.037)
separated	0.045 (0.023)*	0.018 (0.023)	0.021 (0.017)	-0.035 (0.026)
widowed	0.027 (0.060)	-0.021 (0.029)	-0.019 (0.025)	-0.039 (0.036)
dependency ratio	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)*	0.000 (0.000)
HH size	0.002 (0.001)	0.005 (0.003)	0.001 (0.001)	-0.000 (0.004)
spouse of HH head	-0.002 (0.016)	-0.003 (0.018)	0.026 (0.021)	-0.009 (0.024)
child of HH head	0.032 (0.013)*	-0.000 (0.017)	0.027 (0.012)*	0.030 (0.027)
other relation to HH head	0.041 (0.017)*	0.010 (0.021)	0.032 (0.016)*	0.039 (0.032)
rural	-0.030 (0.006)**	-0.039 (0.010)**	-0.012 (0.005)*	0.027 (0.017)

**Table AIV.4: Unemployment (continued)**

	<b>Abierta</b>		<b>Ampliada</b>	
	<b>Men</b>	<b>Women</b>	<b>Men</b>	<b>Women</b>
	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>
remittances	0.061 (0.023)**	0.027 (0.022)	0.076 (0.024)**	0.047 (0.030)
first time job seeker			0.560 (0.039)**	0.650 (0.024)**
Observations	5114	2933	5413	3572
LR chi-sq	216.32	167.98	784.76	971.17
pseudo- R sq	0.1	0.096	0.315	0.28

Standard errors in parentheses

\* significant at 5%; \*\* significant at 1%