



**Inter-American
Development Bank**

Caribbean Country
Department

TECHNICAL NOTE

No. IDB-TN-578

Policy Benchmarking for Productivity and Growth

**Review and Proposed
Framework for the Caribbean**

Michael D'Acosta
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August 2013

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2013

**Cataloging-in-Publication data provided by the
Inter-American Development Bank
Felipe Herrera Library**

D'Acosta, Michael.

Policy benchmarking for productivity and growth : review and proposed framework for the Caribbean / Michael D'Acosta, Karl Melgarejo, Valerie Mercer-Blackman.

p. cm. — (IDB Technical Note ; 578)

Includes bibliographic references.

1. Economic development—Caribbean Area. 2. Industrial productivity—Caribbean Area.
I. Melgarejo, Karl. II. Mercer-Blackman, Valerie. III. Inter-American Development Bank.
Country Department Caribbean Group. IV. Title. V. Series.

IDB-TN-578

<http://www.iadb.org>

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Policy Benchmarking for Productivity and Growth: Review and Proposed Framework for the Caribbean

Michael D'Acosta, Karl Melgarejo and Valerie Mercer-Blackman*

Abstract: This paper contributes to the analysis of the Caribbean's growth performance by setting out a framework for benchmarking indicators of key micro drivers and related structural policies that help explain differentials in productivity and real GDP per capita across the region, and relative to non-regional benchmark countries. The framework is adapted from the OECD's *Going for Growth* exercises. Its emphasis on micro-drivers in the labor market and the business environment aims to help shift the focus of the current discussions on growth from macroeconomic considerations (e.g. fiscal sustainability, exports) toward an exploration of productivity, which the literature identifies as the principal constraint to growth in the Caribbean and elsewhere. Potential advantages of a benchmarking-for-growth framework include knowledge sharing of the policies and performance indicators related to productivity in the Caribbean and appropriate benchmark countries. This could help stimulate further research and public discussion on the underlying factors behind the divergence in incomes as well as on the policies and environments that contribute to those differentials. An initial exercise highlights issues with restrictions for starting a business, the tax burden, the cost of imports and infrastructure deficiencies as potential barriers to growth.

JEL codes: B41, O10, O20, O43

* This paper is the first stage of a project originated at the Caribbean Department of the Inter-American Development Bank (IDB). The authors would like to thank Alain de Serres, Orsetta Causa and Susana Zmidova from the OECD Economics Department for their valuable contributions; Inder Ruprah, Andrew Powell (IDB) and participants of the 5th Biennial Business and Finance Conference, (UWI St. Augustine, Port of Spain) and the 33rd Seminar of the Central Bank of Barbados. The paper also benefitted from discussions with Desiree Field Ridley (CARICOM) and the economics team of the Caribbean Development Bank headed by Justin Ram. The ideas expressed in this paper are the authors.

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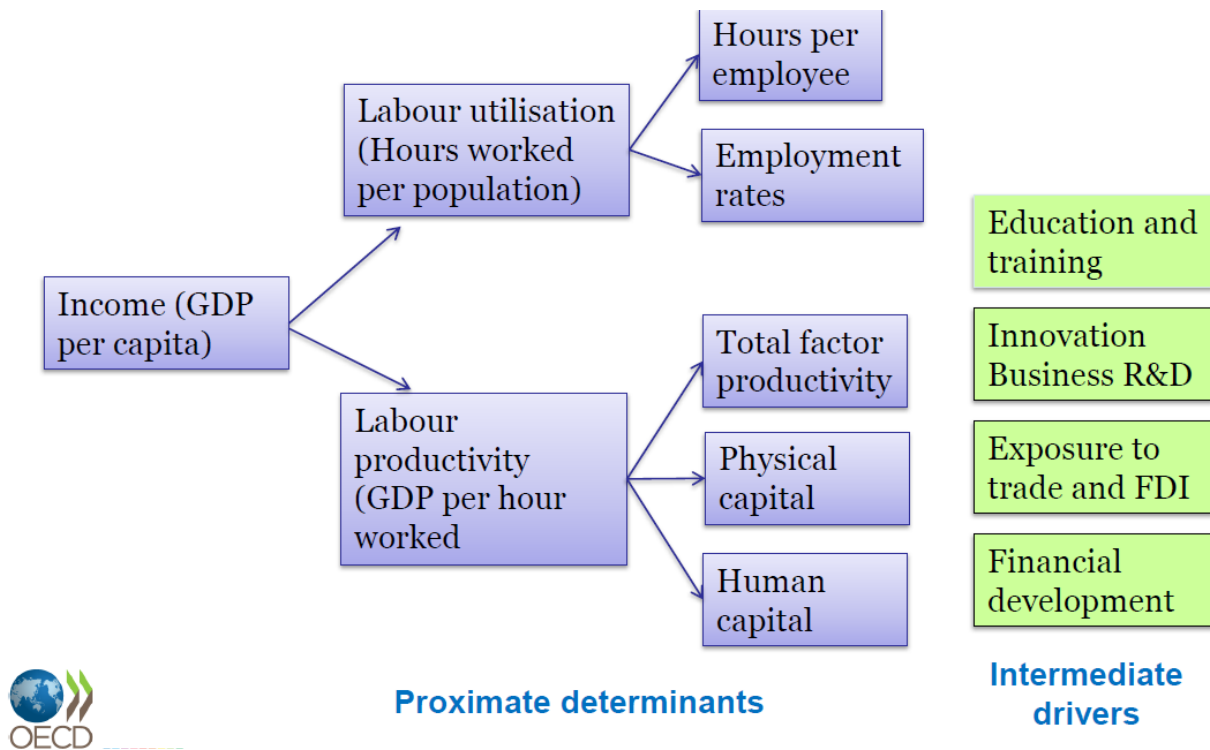
I. Introduction: A New Way to Look at Economic Growth and Growth Policies in the Caribbean

The global recovery from the deepest recession since the Great Depression has brought to light the importance of structural reforms in the growth process. For the case of the Caribbean, the manifestation of structural gaps of the economies has been large fiscal deficits, growing current account imbalances, and as a result, stubbornly high debt ratios for many countries. Partly as a result of the severity of the fiscal woes in many Caribbean countries, and partly as a result of the lack of good data on labor productivity, labor markets and physical capital, there has been minimal attention paid to the structural performance and policies of these economies.

This project is the first step to trying to change the focus of the way we look at economic growth in the Caribbean. It takes off from a methodology developed by the OECD for its member-countries in 2005, which analyzes countries' performance on growth, and the policies designed to foster sustainable, long-term growth. The methodology examines factors that impact labor productivity, labor utilization, human capital and physical capital, variables which by their very nature change slowly over time. Macroeconomic indicators are generally considered important for regulating the business cycle, which by definition are short-term in nature. Of course a debt-burdened economy will find it hard to jump-start growth in the short-term, so one expects less reforms during a time of fiscal austerity in some areas. Nonetheless, the ultimate creator of economic growth is not a low primary surplus, for example, but a well-educated, productive workforce able to use adequate physical capital efficiently and with minimal barriers.

Economic growth studies have clearly identified the main drivers of growth (Figure 1). The interrelations among those drivers can vary across countries and across time. The implicit model behind the OECD 'Going for Growth' exercise is that growth can be decomposed into labor productivity (a quality measure) and labor utilization (a quantity measure), which in turn can be further decomposed into proximate determinants. These are, for the case of labor utilization, employment levels and hours worked. For the case of labor productivity, the typical growth accounting factors: physical capital, human capital and total factor productivity. In turn, we know that aspects such as education and training, innovation and business research, openness to trade and foreign investment, as well as stable financial development are the intermediate drivers of this growth, that somehow impact the more proximate determinants in various ways well-documented in the economic literature. Policies that directly boost the intermediate drivers or the proximate determinants will be beneficial for economic growth. These can be decomposed into a set of policy indicators.

Figure 1: Implicit Simple Model behind OECD’s ‘Going for Growth’ Exercise



Given these factors, the OECD has identified a set of ‘policy indicators’, in other words, measurable indicators over which the authorities can have an influence over the growth process. It then matches them with the ‘performance’ that it portends to influence. There can also be indicators that hinder growth, for example, corruption in contracting of public investment (which is detrimental, say, to the development of infrastructure). While there are many more policy indicators than performance indicators, the literature and quantitative analysis help match each type of indicator in a meaningful way. The last section illustrates how this has been adopted for the Caribbean countries.

The policy and performance indicators are then compared to a benchmark. The comparisons allow benchmarking countries to identify gaps in their performance in the key micro-drivers of real incomes, and differences in their policy stance relative to those in benchmark countries.¹ The comparisons provide a starting point for considering corrective measures to narrow performance and policy gaps.

Preliminary results of the benchmarking study for the six Caribbean countries members of the IDB—The Bahamas, Barbados, Guyana, Jamaica, Suriname and Trinidad and Tobago—are presented here to illustrate the adaptation of the OECD’s Going for Growth exercise to the circumstances of the Caribbean. The lack of good data, information and analytical studies on the Caribbean countries, compared to that of the OECD’s, as well as important differences in the structural features of the Caribbean countries compared to the

¹ Micro-drivers defined as factors that influence labor productivity, labor utilization, and the business environment.

OECD countries imply that the mapping from the OECD exercise to the Caribbean exercise required many steps and assumptions. Nonetheless, the preliminary results seem consistent with what we know about these economies. The lack of information does not mean that a policy indicator is more or less important in the Caribbean. A case in point is the incentives for women to enter the workforce. While there is scant data on this compared to the OECD, whatever indirect evidence exists suggests that this is just as important, if not more, in a Caribbean country. Indeed, the low participation rate of women in Guyana has come out as a possible constraint on growth.

The next step in this project is to produce a full presentation of the results for discussions with country policy-makers. About three policy areas will be identified per country, which require the most work. These policy areas fulfill the following conditions: (1) the performance indicator related to the policy is substantively below the ‘benchmark’ or chosen comparator; and (2) the policies that could lead to improve that performance are either non-existent or ineffective in some way. Identifying these areas would allow policy-makers to focus their efforts on actions that can have the biggest impact. In other words, there is an implicit recognition that a government cannot tackle all problems during its few years in office, but can be effective by concentrating on a few. Moreover, many data and information gaps will be evident in the course of the exercise, and we hope that this will guide the identification of data-gathering efforts that the countries and regional and international institutions can carry out in the near future.

Potential advantages of a benchmarking for growth framework include knowledge sharing of performance and policies related to productivity in the Caribbean. Dissemination of this knowledge could help stimulate further research and public discussion on differentials in productivity and real incomes across the region and relative to levels in benchmark countries. It could also contribute to the analysis of policies that contribute to those differentials.

The outline of the paper is as follows: Section II briefly describes the growth performance of the Caribbean over the past 40 years. Section III reviews the literature on benchmarking productivity and real incomes. It is followed in Section IV by a summary of the OECD’s approach to benchmarking micro-drivers of productivity and real incomes, while Section V looks at benchmarking methods and practices in other institutions. Section VI lays out a proposed framework for benchmarking micro-drivers of productivity and real incomes in the Caribbean, while Section VII provides some cautionary notes on the application of benchmarking. Section VIII describes a preliminary exercise to benchmark the six IDB-member Caribbean countries using this adapted methodology. A final section concludes with an outline for moving the proposal forward.

In sum, this paper contributes to the analysis of the Caribbean’s growth performance by setting out a framework for benchmarking structural policies that determine differentials in productivity and real GDP per capita across the region, and relative to non-regional benchmark countries. The framework is adapted from the OECD’s *Going for Growth* exercises.² In line

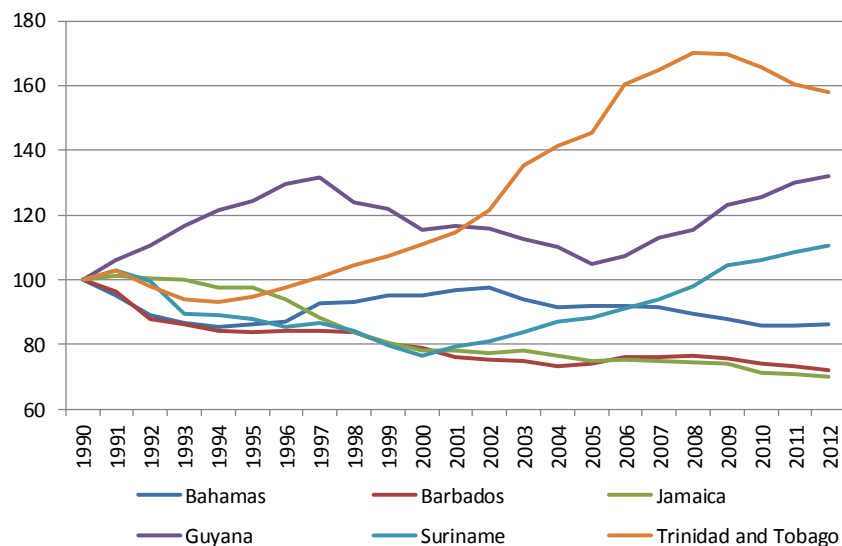
² For details on these exercises, see <http://www.oecd.org/economics/goingforgrowth>.

with those exercises, benchmarking is used as an analytical tool that provides snapshot comparisons of performance and policy indicators between benchmark countries, i.e. strong performers in a particular policy area, and benchmarking countries.

II. The challenge of Growth in the Caribbean

Much of the English-speaking Caribbean is experiencing a period of sustained slow growth. Over the period 2001-2011 the average annual rate of real GDP growth was about 2½ percent.³ And since the 1970s Caribbean countries as a group have experienced a marked deterioration in real GDP per capita relative to other small countries. This has been the case for tourism dependent economies as well as commodity exporters.⁴ The result of this malaise has been stubbornly high rates of poverty and unemployment in some countries and growing crime and insecurity. Also, heavy debt burdens and high public expenditure relative to a small tax base have diverted the attention of policymakers almost exclusively toward mitigating fiscal crises.

Figure 2: Real GDP relative to the United States of 6 Caribbean countries, 1990=100



In two countries, Guyana and Suriname, the economy has shown evidence of dynamism since 2009, with growth rates averaging 4 to 4½ per cent a year. However, sustaining growth in these countries is not yet assured because of weaknesses in institutions and the business environment combined with low labor utilization and productivity. Reflecting these longstanding constraints, Guyana's real GDP per capita remains the lowest in the English speaking Caribbean

³ See IMF, 2012. The average falls to 2 percent a year if the growth rates of Trinidad and Tobago and Suriname (both averaging about 5 percent a year) are excluded.

⁴ Melgarejo and Ruprah, 2012.

and among the lowest in the Latin America and Caribbean region.⁵ Trinidad and Tobago is by far the best performer during the 23 years since 1990, however, much of that growth came from production of oil and natural gas (in particular the latter), and this windfall is not expected to continue.

There has been no shortage of diagnoses of the factors responsible for the Caribbean malaise.⁶ They include:

- Inappropriate government policies, particularly related to public sector management and debt;
- Low factor productivity stemming from the quality of human capital;
- A business environment constrained by low labor productivity, lengthy bureaucratic procedures, inadequate infrastructure, and the prevalence of crime and insecurity;
- Poor export performance and the need to increase the range of high-value-added exports of goods and services;
- Weak institutions of governance and social cohesion; and
- Geographical characteristics, including vulnerability to climate-related events.

The recent global crisis has brought these issues to the limelight again, and many Caribbean countries re at a stage in which they are eager to reexamine their development model. Despite the many common feature of the region, reassessments of the models will need to take into account each country's set of resource endowments, binding constraints, and policy space. For example, resource rich countries such as Trinidad and Tobago will have to consider policies that optimize resource use, while ensuring higher economy-wide productivity and an adequate regulatory framework for its key energy industry. Service-based economies facing tight fiscal constraints, on the other hand, would emphasize policies to to promote greater private sector investment, higher labor productivity, and diversification into a range of services other than leisure-related tourism.

III. The Literature on Benchmarking Productivity and Real Incomes

Policy benchmarking along the lines undertaken by the OECD and other institutions promotes knowledge sharing or policy transfer, based on the premise that in a global economy in which productivity is the key determinant of income growth, continuous information on the effectiveness of policies and practices to promote productivity is essential.⁷ Framed in this way, policy benchmarking can be viewed as comprising these main components:

⁵ IMF, 2012.

⁶ For a sampling of these diagnoses see the periodic regional reports by the CDB, ECLAC, IDB, IMF, UNDP, and the World Bank.

⁷ On this point see Dolowitz and Marsh, 2000, Smith, 2001, Porter, 2003, Chen and Dahlman, 2005, and Delgado and others, 2012.

- Emphasizing the central role of factor productivity, and in particular, labor productivity, as the key determinant of real incomes. Complementary determinants are the rate of labor utilization and a business environment supportive of productivity, entrepreneurship, and innovation.
- Assembling knowledge on those factors which contribute to labor productivity in higher-income or faster-growing economies, or alternatively, determining the factors responsible for weak labor productivity in lower-income or slower-growing economies.
- Calculating the performance and policy gaps between the benchmarking countries and the benchmark (target) countries.
- Based on the stock of knowledge on benchmark countries, recommending policies which have the potential to increase productivity in the benchmarking countries.
- Monitoring progress in narrowing the gaps in performance, and disseminating this information to the public.

The intellectual underpinnings of this framework can therefore be seen as associated with two main pillars of research. The first links real income to domestic productivity, while the second uses benchmarking as a tool for identifying gaps in productivity and considering policy options to address those gaps.

Linking productivity to real income

On the first strand there is a large body of literature. Perhaps the most unequivocal statement of this position is that of Krugman (1994), whose review of the performance of the U.S., the European Community, and Japan during 1959-1990 concludes that:

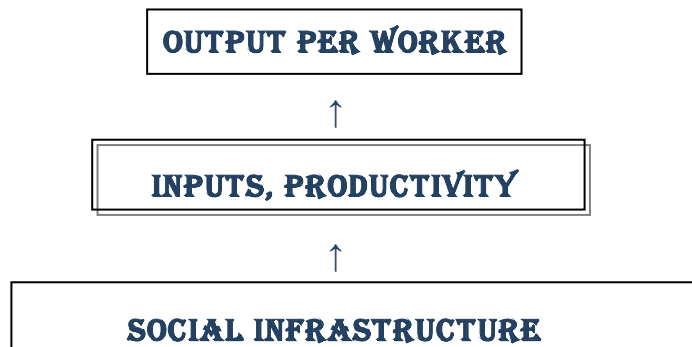
“In each case, the growth rate of living standards essentially equals the growth rate of domestic productivity.” (p. 34).

Similarly, in his work on the micro-foundations of income growth Porter (2003) concludes that:

“A nation’s standard of living is determined by the productivity of its economy, which is measured by the value of goods and services produced per unit of the nation’s human, capital, and natural resources. The central challenge of economic development, then, is how to create the conditions for rapid and sustained productivity growth.”
“True competitiveness .. is measured by productivity.” (p. 31)

Porter goes on to observe that most discussion of competitiveness and economic development is still focused on the macroeconomic, political, legal, and social circumstances that underpin a successful economy. While these broader conditions are necessary, they are not sufficient. Wealth is created at the microeconomic level of the economy, rooted in labor productivity, the sophistication of companies, and the quality of the microeconomic business environment. Unless these microeconomic capabilities improve, macroeconomic, political, legal, and social reforms will not bear full fruit.

Exploration of the links between knowledge, labor productivity, and growth is also carried out in World Bank research, which describes a virtuous circle of robust relationships among those variables.⁸ In addition, UNIDO’s various Industrial Development Reports emphasize the close link between the stock of knowledge across countries and income differentials.⁹ Other research along these lines includes that of Hall and Jones (1999) whose work on differences in output per worker across countries highlights the role of “social infrastructure.” This construct is determined by government policies, institutions and the environment in which labor and business operate. Their analytical framework can be summarized as:



It follows that achieving higher real incomes requires a set of policies, institutions, and overall environment that combine to boost labor productivity. Along these lines also, Delgado and others (2012), in their study of the determinants of competitiveness, conclude that it is linked robustly to the microeconomic environment (even after controlling for historical institutional and national endowments) as well as to productivity, defined as output per employed person, and the ability of a country to mobilize the workforce.

Turning to Latin America, research on the growth diagnostics of that region also points to the vital role of productivity in determining the long term growth of real income. A recent example of this research concludes that:

“Low productivity and slow productivity growth as measured by total factor productivity, rather than impediments to factor accumulation, are the key to understanding Latin America’s low income relative to developed economies. ... The main development policy challenge in the region involves diagnosing the causes of poor productivity and acting on its roots.”¹⁰

In the Caribbean region also there is a growing body of research highlighting the key role of employment and labor productivity in promoting growth and real incomes.¹¹ This has origins in a longstanding preoccupation of governments, central banks, academia, and the IFIs with the region’s external competitiveness, national productivity, and the performance of key sectors, such as tourism, sugar, and bananas. Much of this literature comprises individual country

⁸ World Bank, 2007a.

⁹ UNIDO, 2011.

¹⁰ Daude and Fernández-Arias, 2010.

¹¹ See, for example, ECLAC, 2012, Craigwell and Warner, 2003, Downes, 2003, Thacker, Acevedo, et al, 2012, and Thomas and Serju, 2009.

studies by the IFIs and the CDB.¹² Downes's (2003) work on Jamaica on behalf of the IDB, for example, points to low labor productivity, associated with a shortage of skilled labor and inadequate technology, as the key factor explaining the country's slow growth in real incomes since independence. Other constraints to productivity include barriers in some industries to the entry of new firms and poor infrastructure. The World Bank (2011) also links Jamaica's sluggish post-independence growth to low productivity stemming from weak human capital, high rates of crime, and a distortionary tax structure.

In the Africa region, estimates by McKinsey and Company (2010) show that over the past 20 years the source of three-quarters of the continent's increase in GDP per capita was the expanding workforce, with the remainder derived from increased productivity. For the EU area, research by Barkbu and others (2012) concludes that labor, product market, and pension reforms could boost output by 4½ percentage points over the next five years. A quarter of this additional growth would derive from positive cross-country and cross-reform spillovers.

Benchmarking for analyzing productivity and real income differentials

On the second strand of literature, i.e. the use of benchmarking in analyzing productivity and income differentials, the literature has been less prolific. Research is being done on a regular basis mainly in the institutions involved in benchmarking exercises (the EU, OECD, WEF, and IMD), and has centered on methodological issues, case studies, and progress reports. At the OECD, for example, the research has covered topics such as adapting benchmarking in times of crisis, taking stock of benchmarking exercises, and identifying new priority policy areas.

Other contributions utilize benchmarking in frameworks for assessing growth performance across countries or regions with a focus on macroeconomic performance, while recognizing the importance of micro-drivers. A recent example is the work on the East African Community by McAuliffe, Saxena, and Yabara (2012). The authors assess the prospects for transforming the recent growth performance of EAC countries into sustained growth by benchmarking their performance against that of countries which achieved growth accelerations and sustained growth. The authors find that the benchmark countries which achieved sustained growth were able to (i) maintain low inflation and fiscal deficits, (ii) encourage investment which supported improved productivity, (iii) liberalize financial markets to help mobilize high domestic savings into private sector credit, and (iv) develop competitive external sectors and better current account balances. The paper calls for policies to achieve these goals supported by stable institutions, a nurturing business environment, and export diversification. One of its conclusions is that benchmarking countries should remove the bottlenecks affecting infrastructure and the quality of human capital.

Another study benchmarks the growth performance of the West Africa Economic and Monetary Union (WAEMU) countries against that of sub-Saharan Africa's top non-oil

¹² In their work on competitiveness beginning in the 1980s, much of the focus of the IFIs was on the appropriateness of the real exchange rate.

exporters (IMF, 2010). While noting that the factors explaining the divergence between the groupings are complex, the research highlights the importance of political stability as well as improved investment, trade, and non-price competitiveness (incorporating the quality of institutions, infrastructure, and costs). Financial market development and sound health and education variables are also underscored.

Johnson, Ostry, and Subramanian (2007) use a benchmarking approach to compare Africa's current growth performance and constraints with those of successful Asian countries which experienced a sustained growth trajectory despite initial weak institutions. The conclusions point to the importance of manufactured exports and of improving the efficiency of product markets by avoiding high business and trade costs as well as exchange rate overvaluation.

Benchmarking for growth has also encompassed trade diversification. Papageorgiou and Spatafora (2012) benchmark diversification patterns in low income countries (LICs) against those in more advanced economies when the latter registered LIC income levels. The authors observe that in a 20-year period after each group of countries first attained a real GDP per capita of \$1,200 (LICs achieved this level in the early 1990s) the benchmark countries achieved greater diversification and notably faster growth than did the LICs.

Finally, Lin (2012) has proposed that developing countries benchmark their industrial strategy to that of the more dynamic economies with endowment structures similar to theirs. His proposal is based on the forecast that as wages and other costs rise in the dynamic economies such as China, they will be forced to locate their labor-intensive manufacturing operations in other countries. This transition has already begun. Lin suggests that in order to benefit from the potential increased demand for labor developing countries will need to focus on tradable goods and services in which they have a comparative advantage, support private firms which are engaged in those activities, and improve infrastructure and the business environment.

Benchmarking in the Caribbean

Benchmarking in the Caribbean is not new. Over the past decade exercises have been undertaken in key areas, such as tourism, public utilities, education, and the foreign investment environment. In the tourism sector, an annual benchmarking survey of the region's hotels has been conducted by KPMG for several years. The surveys permit comparisons of responses across countries related to selected financial performance indicators, cost and revenue measures, and prospects for the industry.¹³ In education, a 2004 study by the World Bank took initial steps to develop a database of comparable education indicators in Belize, Dominica, Dominican Republic, Grenada, Guyana, Jamaica, St Kitts and Nevis, St Lucia, St Vincent and

¹³ KPMG, 2011.

the Grenadines and Trinidad and Tobago. The study proposed methods for using these indicators to analyze performance and develop recommendations.¹⁴

In the area of the investment environment, benchmarking surveys to capture data and perceptions were conducted by the World Bank and MIGA in 2004 and 2007. The 2004 survey assessed (i) the relative importance of factors that could influence foreign investors' location decisions in the Caribbean region, and (ii) the attractiveness of the different countries for foreign direct investment (FDI). Key conclusions pointed to the priority which investment firms attach to political stability, infrastructure, labor productivity, and the supply of skilled labor.¹⁵ The 2007 exercise used surveys and interviews, statistical indicators, and field visits to assess comparative operating costs and investing conditions in three industries: export services, food processing, and tourism, located in Belize, Jamaica, and St. Lucia.¹⁶

As regards micro-policy benchmarking in the Caribbean region, Drzeniek-Hanouz, Mia, and Trujillo-Herrera (2009) assess the competitiveness of five CARICOM countries (Barbados, Guyana, Jamaica, Suriname, and Trinidad and Tobago) using the benchmarking methodology of the WEF's *Global Competitiveness Report 2009-2010*.¹⁷ The results show that Barbados was the only country that outperformed the average competitiveness score for Latin America and Caribbean, based on its strong institutions, infrastructure, and health and education systems. The analysis points to marked differences in competitiveness strengths and weaknesses across the grouping, despite their geographic proximity. The divergence reflects the countries' different stages of development, with the result that the competitiveness priorities in some countries (Guyana, Jamaica, and Suriname, which are at the earlier stage of development) differ from those at the more advanced stages (Barbados and Trinidad and Tobago). Such differences underline the need for strategies tailored specifically to the conditions in each country. Also, the results of the GCI for 2011-2012 were used as a basis for an assessment of Jamaica's competitiveness by the Planning Institute (PIOJ, 2011). That assessment was accompanied by a listing of the government's strategies to address the weaknesses identified in the report.

IV. The OECD Approach to Policy Benchmarking

The motivation for the *Going for Growth* initiative stemmed from indicators that emerged in the 1990s and the first half of the 2000s that pointed to a weakening of convergence in economic performance among OECD member countries. This finding was at odds with a major pillar of the OECD's objectives, which is that members' living standards should converge over time. Concerns about the slow pace of convergence combined with growing evidence from research work that the main determinant of real income growth was

¹⁴ World Bank, 2004a.

¹⁵ World Bank, 2004b.

¹⁶ The fourth country included was the Dominican Republic.

¹⁷ The comparator countries were Costa Rica, Dominican Republic, Panama, Cyprus, Malta, and Mauritius. Caribbean performance was also benchmarked against the regional average score for Latin America and the Caribbean.

productivity, fueled by the drivers of knowledge, entrepreneurship, technology and innovation, and human capital.¹⁸ In this context, it was clear that income convergence required a focus on microeconomic reforms that nurture productivity, supported by a strengthening of benchmarking and peer review to help push forward implementation. Recognition of the need for this two-pronged approach crystallized into the launch in 2005 of the *Going for Growth* exercises. These are aimed at evaluating the progress made by each member to address weaknesses which have been identified in the performance of the key drivers of productivity and incomes. Beginning in 2011 the OECD has included the BRIICS countries in its analysis.

The *Going for Growth* exercises begin by identifying five productivity-related policy priorities for each member country. These are selected on the basis of the relative performance of the country in the areas (e.g. education or skills levels) addressed by those policies, and the potential of the policies to promote higher real incomes. Three of the policy priorities are based on internationally comparable policy indicators that have been linked empirically by the OECD to economic performance. The other two are determined mainly through a judgment of the most binding constraints on income growth, based on the OECD's ongoing country analysis and expertise. The policy priorities and related indicators have centered on reforms in the labor and product markets. However, other priorities include innovation, the public finances, and reforms in the health, education, and housing sectors. Over time, the framework allows for changes in policy priorities based on new information, assessments of progress made, and the emergence of more urgent priorities.¹⁹ In the BRIICS priorities include strengthening property rights and legal institutions, reducing income inequality, removing obstacles to competition and investment, upgrading education attainment, and curbing informality in the labor market.

The next step in the *Going for Growth* process comprises discussions with each member on measures that would help narrow the gaps in performance and policies highlighted by the indicators. These discussions, which form part of the OECD's surveillance and peer review mechanisms, are informed by the policy stance in benchmark countries; i.e. those countries which have experienced better than average performance. The chief economist of the OECD described the exercise in these terms in 2006:

*“Emulating best practice is how economies that are lagging behind can achieve economic convergence.”*²⁰

Following the discussions, reports on the OECD's assessment and recommendations are finalized and made available to the public.

Since its inception the *Going for Growth* exercises have helped sharpen the analysis of lagging growth, employment, and incomes in OECD countries and promoted policy debate

¹⁸ OECD, 2005b.

¹⁹ See OECD, 2005b, and Appendix 1 for details on the methodology.

²⁰ Cotis, 2006.

by disseminating reports to the public. Also, the exercises have prompted modest action by most countries on the policy priorities identified.²¹ However, the main catalyst for reform in recent years has been the debt crisis in the EU, with the most deep rooted changes, including in the difficult areas of labor and welfare policies, taking place in those countries which have embarked on conditional financial assistance programs from the EU and the IMF. In the BRIICS the urgency for reform has been lower than in Europe, but some countries have made progress in product market regulations, state control, and basic education.²²

A major challenge for the *Going for Growth* exercises has been acknowledging that reform in normal times is a gradual and incremental process. This is particularly the case for reforms aimed at job creation. Also, reforms are often beset by concerns by the public and influential lobbies about short term costs.²³ Another challenge has been to ensure that the exercises are adapted to changing circumstances. In response to the debt crises in some EU member countries, for example, the OECD has devoted considerable attention to highlighting how its reform proposals, including on job creation, measures to secure savings in health care systems, and pension reform, could help ease immediate fiscal pressures and promote medium term sustainability while avoiding increased unemployment.²⁴

On possible next steps in the OECD methodology of benchmarking proposals are being discussed to expand the performance indicators to include broader measures of well-being and “green growth.” In elaborating this point, the institution’s chief economist observed that:

*Growth in our new model would be more inclusive than before the crisis, since exclusion and widening inequalities can damage long-term welfare. Moreover, improving the quality of life would be recognised as a distinct, desirable and measurable outcome of policy.*²⁵

V. Other Exercises in Benchmarking

Background

Efforts by countries to benchmark policies and performance against those of higher-income or faster growing economies have been ongoing for several decades. Some historical accounts point to antecedents in the wide-ranging economic and social reforms which accompanied the transformation of Japan during the Meiji period (1868-1912).²⁶ The push toward modernization through industrialization required the rapid acquisition of knowledge from

²¹ Over the 2005-2009 period two thirds of OECD countries took legislative action on at least one of the policy priority areas in each year. (OECD , *Going for Growth*, 2010).

²² OECD, *Going for Growth*, 2013.

²³ These include, for example, the adjustment costs of reducing barriers to entry to certain industries, such as the retail trade, or reforms aimed at job protection which could increase unemployment temporarily (Cacciatore and others, 2012).

²⁴ <http://www.oecd.org/economy/goingforgrowth2011dividendsfromstructuralreforms.htm>

²⁵ Padoan, 2012.

²⁶ Strang, 2010.

western countries in science and technology, infrastructure development, industrial operations, and the financial system. Notably, one of the distinguishing features of the Japanese experience was the emphasis on adapting knowledge of western policies and practices to the country's social and cultural tenets.

During the 1980s and 1990s country initiatives took the form initially of adapting corporate benchmarking techniques to assess the efficiency of public services, such as transportation, healthcare, or benefits administration, against private sector comparators. Subsequently these services were benchmarked against what were judged to be best practices in the public sector. In the U.K, for example, periodic benchmarking exercises carried out by the Department of Business Innovation and Skills compared British indicators of productivity, the business environment, infrastructure, and research and development with those of a range of other countries.²⁷

Perhaps the main impetus for policy benchmarking in recent years has been globalization and its ramifications. With income growth dependent on a country's ability to match or exceed the productivity of competitors, policymakers have been obliged to turn their attention to identifying gaps in productivity and emulating the policies and practices in high performance countries. Put alternatively, the globalization of trade, finance, and services has been accompanied by policy globalization as governments look increasingly to other countries for information, ideas, and guidance in developing their responses to policy challenges.²⁸

The effects of globalization have also been evident in countries' various obligations associated with membership in international organizations (e.g. the OECD, BIS, FSB, IMF, WTO, and ILO) which promote best practices through forms of benchmarking or standard-setting in areas like corporate governance, labor and product market policies and financial sector regulation. The IMF, for example, has established best practices covering transparency in fiscal and monetary policies as well as in data quality and dissemination standards. Also, the Financial Stability Board (FSB) reports on countries' adherence to international standards on information exchange and cooperation in banking supervision and securities regulation.²⁹

Benchmarking and regional convergence

Another major driver behind policy benchmarking has been the work on convergence among EU countries. One of the outputs from this work has been the European Commission's *Internal Market Scoreboard*, which ranks member countries' performance in implementing legislation required for internal market convergence. The scoreboard aims to help speed up the implementation of internal market rules through public and business pressure. On results, the transposition deficit, i.e. the percentage of directives not transposed into national law, fell from 6

²⁷ For summaries of experiences with the use of benchmarking to promote public sector reform in the UK, Sweden, Finland, New Zealand, and Denmark, see OECD, 1997.

²⁸ Dolowitz and Marsh, 2000, and OECD, 1997.

²⁹ http://www.financialstabilityboard.org/publications/r_121102a.pdf.

percent in 1997 to 0.9 percent in May 2012.³⁰ On the policy side, the EU's Stability and Growth Pact (SGP) comprises a framework of surveillance over rules and benchmarks to guide the coordination of fiscal policies across the EU. Benchmarking and peer review are aimed at learning from the successful policies of countries, encouraging reform, and enhancing transparency.³¹ The SGP framework incorporates medium term budget targets, an expenditure benchmark, and procedures for curbing excessive deficits and debt.³² A country which does not comply with these rules can face fines or a suspension of Cohesion Fund financing from the EU.

Variations of benchmarking exercises have also been undertaken in other regional groupings. Much of this work has been supported by the regional development banks, which have used benchmarking to measure the performance of specific sectors (e.g. telecommunications, education, health) against those of other regions. In Latin America and the Caribbean, for example, research by the IDB on the region's productivity relative to Asia can be traced back to 2004.³³ And in the Caribbean benchmarking studies have been undertaken in areas including the investment climate, education, and tourism. Also, at the Asian Development Bank a recent study benchmarks the performance of the state enterprise sector in Papua New Guinea relative to those in other Pacific island economies with the aim of "... identifying key performance drivers and reform strategies that can guide future policy action."³⁴ The bank has also undertaken research on developing indices for benchmarking export competitiveness in small economies.

The World Bank

In the World Bank two major projects use benchmarking to rank countries' performance in the areas of the business environment and progress toward a knowledge economy.³⁵ The ease of doing business index is based on the premise that jobs and incomes are the main determinants of well-being, and since the key providers of jobs are private businesses, a regulatory environment conducive to business is essential for successful economies. Another initiative, the Knowledge Assessment Methodology (KAM) benchmarks countries' capacity to compete in what the Bank terms the "Knowledge Economy."³⁶

The *ease of doing business index* provides a measure of the regulations facing small and medium-sized companies. It ranks 185 countries by calculating the simple average of the rankings for each of 10 measures included in the index. The measures are starting a business,

³⁰ http://ec.europa.eu/internal_market/score/docs/score25_en.pdf; and Iannou et al, 2008.

³¹ Iannou and others, 2008.

³² Current rules define as excessive fiscal deficits in excess of 3 percent of GDP, and public debt in excess of 60 percent of GDP.

³³ Lall, Albaladejo and Moreira, 2004.

³⁴ ADB, 2012.

³⁵ Another benchmarking exercise by the Bank is the Country Policy and Institutional Assessment (CPIA) which ranks how a country's policy and institutional framework contributes to poverty reduction, sustainable growth, and the effective use of development assistance.

³⁶ The Bank defines the Knowledge Economy as one in which knowledge is acquired, created, disseminated, and used to enhance economic development (Chen and Dahlman, 2005).

securing construction permits, electricity supply, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency. Data for the rankings are derived from documentation on domestic laws, regulations, and administrative requirements, supplemented by inputs from local expert respondents and public officials. In the 2013 index the top five countries were Singapore, Hong Kong SAR China, New Zealand, the United States, and Denmark.³⁷

The *Knowledge Assessment Methodology* calculates rankings of about 140 member countries on their capacity to compete in the knowledge economy. It is guided by the principle that investment in knowledge that contributes to increased productivity and growth, and the benchmarking of knowledge-related policies, are essential for increased real incomes and welfare. Under the methodology the knowledge economy rests on four main pillars: the economic and institutional regime, education and skills of the population, the information infrastructure, and the supportive framework for innovation. These pillars are disaggregated into twelve indicators, which themselves are composites of a total of 83 structural and qualitative variables. Data sources include the World Bank, international and national institutions, and the WEF. Each country's Knowledge Economy Index (KEI) is calculated as the simple average of the normalized values of the twelve indicators. The latest index (for 2008) ranks Denmark, Sweden, Finland, Netherlands, and Norway at the top of the list of high-performing knowledge economies.³⁸

The private sector

In the private sector, three major providers of benchmarking analysis and rankings have been the World Economic Forum, the IMD, and the Heritage Foundation.³⁹ Each of these institutions aligns its work to different dimensions of country performance. The WEF focuses on national competitiveness, the IMD on the business environment, and the Heritage Foundation, on measures of what it terms “economic freedom.” Their objectives and methodology are summarized below:

World Economic Forum

The WEF defines competitiveness as “.. the set of institutions, policies, and factors that determine the level of productivity of a country,” calculated as the weighted average of a large number of macroeconomic and microeconomic variables.⁴⁰ The institution's research has produced an important body of analytical work linking competitiveness to economic performance in a benchmarking framework.⁴¹ Its annual Global Competitiveness Reports (GCRs) rank countries by their score on the Global Competitiveness Index (GCI), which is a widely used measure of competitiveness in

³⁷ World Bank, 2012a.

³⁸ www.worldbank.org/kam.

³⁹ Other institutions offering rankings of countries according to different criteria include Transparency International (on transparency and corruption), the UNDP (human development), and UNIDO (industrial performance).

⁴⁰ Schwab, 2012, p. 4

⁴¹ See for example, Porter, 2003 and the research presented in the various annual editions of the GCR.

academic research and country analysis. The variables used in the GCI are grouped into twelve pillars of competitiveness: institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, labor market efficiency, financial market development, technological readiness, market size, business sophistication, and innovation. These pillars are assigned different weights in line with the stage of development of each country. Data sources include international organizations and an annual executive opinion survey. The 2012-2013 GCR provided rankings for 144 countries, with the list headed by Switzerland, Finland, Sweden, the Netherlands, Germany, and the United Kingdom.⁴²

IMD⁴³

The World Competitiveness Yearbook (WCY) of the IMD provides an annual assessment or ranking of the capacity of countries to foster an environment in which businesses can compete. The WCY divides the environment facing business into four components: economic performance, government efficiency, business efficiency, and infrastructure. These are further disaggregated into 5 sub-headings for a total of 20 sub-headings, each of which has an equal weight (5 percent) in the calculation of the consolidated index. The sub-headings in turn are broken down into a total of more than 300 variables or indicators which are derived from national or international institutions and business surveys. Measurable indicators, e.g. GDP, account for two-thirds of the weighting in the overall index, while survey responses account for the remainder. In the latest edition of the WCY the report covered 59 countries, with Hong Kong SAR, the United States, Switzerland, Singapore, and Sweden securing the highest scores.⁴⁴

The Heritage Foundation

The Foundation calculates an Index of Economic Freedom from ten components (“Freedoms”) which are grouped into four broad categories:

- Rule of Law (property rights, freedom from corruption);
- Limited Government (fiscal freedom, government spending);
- Regulatory Efficiency (business freedom, labor freedom, monetary freedom); and
- Open Markets (trade freedom, investment freedom, financial freedom).

Each component is equally weighted and scored on a scale of 0 to 100, with 100 representing the maximum freedom. A country's overall economic freedom score is calculated as a simple average of its scores on the 10 components. Scoring is done on the basis of information obtained from a wide variety of published sources, including from international, regional, and national organizations. Additional sources comprise news/media reports and individual contacts. The 2013 Index of Economic Freedom

⁴² For a summary of the methodology of the GCI, see Drzeniek and others, 2009.

⁴³ IMD refers to the International Institute for Management Development, Lausanne.

⁴⁴ For a summary of the IMD methodology, see <http://www.imd.org/research/publications/wcy/upload/nutshell.pdf>.

covered 185 countries and the 5 top ranked were Hong Kong SAR, Singapore, Australia, New Zealand, and Switzerland.⁴⁵

The review above highlights the extent to which benchmarking has become an important tool for countries seeking to improve productivity, growth, and incomes. It also shows how global and regional institutions as well as the private sector have used benchmarking as an instrument in their research and diagnostic work, in the development of standards, and in the dissemination of information on policy stances in different countries. By providing a diagnostic framework for identifying strengths and weaknesses in the key drivers related to the benchmarking objective, the tool has helped identify those policies, regulations, and institutions which require improvement. In addition the knowledge available in benchmark countries can serve as a guide to policies that would address those weaknesses.

VI. A Proposed Framework for Benchmarking Productivity & Real Incomes in the Caribbean

The objective of a benchmarking exercise for the Caribbean would be to collect, present, and disseminate indicators on how Caribbean countries compare with each other and non-regional benchmark countries regarding indicators of labor productivity, labor utilization, and the business environment. In focusing on these three areas, the exercise borrows from the OECD's Going for Growth methodology, which aims at identifying performance and policy gaps in those areas with a view to boosting real incomes in lagging member countries. The emphasis on labor-related indicators is also consistent with the literature on growth in the Caribbean, which acknowledges the importance of macroeconomic stability in promoting an environment conducive to stability, but increasingly identifies low factor productivity, and particularly labor productivity, as the key determinant of sluggish growth and adverse income differentials. By presenting periodic snapshots of how economies compare with each other in terms of performance and policies related to labor and the business environment, a Caribbean exercise could help promote policy changes to narrow differentials and raise real incomes in lagging countries.

The choice of the indicators would depend on the extent to which their inclusion is supported by the literature, case studies, and diagnostic exercises on Caribbean productivity and growth, as well as by the availability and comparability of indicators across countries.⁴⁶ The indicators would also reflect the structure and other characteristics of Caribbean economies. For these reasons some structural policy indicators used by the OECD in its Going for Growth exercises are not at this time included in the list of proposed Caribbean indicators. Examples include the tax wedge on labor, the implicit tax on returning to work, and trade union

⁴⁵ Heritage Foundation, 2012.

⁴⁶ The exercise will use a range of sources for indicators that are comparable, current, and credible. Indicators derived from perceptions will be used sparingly and in cases where statistics on a key policy area are unavailable. Sources will include the World Bank, UNDP, ILO, Penn World Tables, the WEF, and Caribbean statistical resources.

density rates.⁴⁷ Similarly, the list of proposed Caribbean indicators includes variables not covered by the OECD, including internet access in schools, and measures of brain drain, crime, and the reliability and cost of electricity.⁴⁸ It is also proposed that the indicators for the Caribbean include the size of the informal economy, income inequality, and poverty, reflecting the incidence of these features in some of the region's countries, as well as the literature linking informality with low productivity, and increasing income inequality with unsustainable growth.⁴⁹ Table 1 shows a preliminary mapping from the OECD Going for Growth Indicators to the proposed set of indicators for the Caribbean using the various criteria already mentioned.

Table 1. Selecting 'Going for Growth' Policy Indicators for the Caribbean based on OECD indicators: Availability and Relevance

Going for Growth's Structural Policy Indicators	It has been shown to be relevant for growth with adaptation to the Caribbean	Interpretation still applicable, despite differences in structure of OECD and Caribbean	Current availability of data to measure indicator (OBT means that it can be obtained with some resource investment in Carr GfG)	Comment if indicator is likely to be modified to be relevant for the Caribbean
Labor Utilization Indicators				
Cost of Labour	N	Y	N	Informality raises cost of labor
a. Minimum Wages (% of median wage)				Some studies show informal sector tends to be less productive
b. Minimum cost of labour / sum of wage level and social security paid by employers (% of median)				
Net income replacement rates for unemployment - Percent of earnings	N	N	N	
a. Short term (1st y)				
b. Long term (after 5 y)				
Average tax wedge on labour (% of labor compensation)	N	N	N	
a. At 100% of average worker earnings, single person without children				
b. At 167% of average worker earnings, single person without children				
Marginal tax wedge on labour (% of labor compensation)	N	N	N	
a. At 100% of average worker earnings, single person without children				
b. At 167% of average worker earnings, single person without children				
Implicit taxes on continued work at older ages (% average earnings)	N	Y (maybe)	OBT	Demographic profile may indicate not yet a constraint
a. Implicit tax on continued work: early retirement				
b. Implicit tax on continued work: old-age pensions				
Average tax wedge - single parent vs. second earner (%)	N	N	N	But need data on 2-income hhs
Public expenditures on childcare services (% GDP)	N	maybe	OBT	unlikely (family childcare structures)
Implicit tax on returning to work	N	N	N	
a. Second earner taking up employment				
b. Lone parent taking up employment				
Net cost of childcare (% of average wage)	N	maybe	N	
a. Couple				
b. Lone parent				
Income support for disability and sickness	N	N	N	
a. % of pop. aged 20-64 years-old receiving disability benefits				
b. Numb. Of weeks lost due to sickness leave				
Employment Protection Legislation (index scale)	N	N	some sectors	May be a problem due to large public sector emoluments
a. Protection for regular employment				
b. Protection for temporary employment				
c. additional protection on collective dismissals				
Collective bargaining prevalence	N	N	OBT	Not sure, need to check public sector
a. Coverage rates of collective bargaining agreements				
b. Trade union density rates				

1/ For the Caribbean this has been interpreted as the extent of the restriction for the entry into the market

2/ 'OBT' means that a more thorough exercise would permit us to obtain this data, although it is not currently easily available

⁴⁷ Over time, however, a research program on benchmarking could explore the relevance of OECD and other indicators for the region.

⁴⁸ These reflect the literature on Caribbean growth and productivity (World Bank, 2011, United Nations, 2007), as well as the results of periodic surveys of business.

⁴⁹ On these points see IDB, 2013 and Berg and Ostry, 2011.

Table 1 (continued)

Going for Growth's Structural Policy Indicators	It has been shown to be relevant for growth with adaptation to the Caribbean	Interpretation still applicable, despite differences in structure of OECD and Caribbean	Current availability of data to measure indicator (OBT means that it can be obtained with some resource investment in Carr GfG)	Comment if indicator is likely to be modified to be relevant for the Caribbean
Business environment indicators				Corruption, transparency and accountability indicators fit in here.
Product market regulation (index) 1/	N	maybe	OBT	Need to take large export sectors into account-use indicators of export restrictiveness
a. Restrictiveness of economy-wide product market regulation				
b. Restrictiveness of overall administrative regulations				
State control of business operations (index)	Y	Y	OBT	
a. Public ownership				
b. State involvement in business operations				
Administrative burdens on start-ups (index)	Y	Y	Y	Including conditions for FDI startups.
a. Administrative burdens for corporations				
b. Sector specific administrative burdens				
Barriers to entry (index)	Y	Y	OBT	Costs should include those of running businesses, including security and availability of adequate infrastructure)
a. Legal barriers to entry in industries				Maybe a problem of overly generous incentives/preferential treatment for some FDI
b. Complexity of regulatory procedures				Dependence on tariffs for fiscal revenue has new implications
Barriers to foreign direct investment (index)	Y	Y	Y	Local transportation issues important, as well as costs. More a competitiveness\than a regulatory issue
Restrictiveness of external trade tariffs (index)	Y	Y	OBT	
Sectoral regulation in the transport sector (index)	N		OBT	
a. Airline				
b. Rail				
c. Road				
Sectoral regulation in the energy sector (index)	N	Y	OBT	Issue of structure of sector and costs and reliability of energy.
a. Energy				
b. Gas				
Sectoral regulation in the post and telecommunications sector (index)	N	Y	OBT	Could be an issue. Cellphone and internet connectivity depend on sector.
a. Telecommunication				
b. Post				
Sectoral regulation in retail and professional services (index)	N	N	OBT	Local market small and dominated by imports. Crime and its deterrence may have an impact
a. Retail				
b. Professional services				
Labor productivity				
Educational attainment (% population aged 25-34 & 45-54)	N	Y	OBT	
a. Upper secondary education				
b. Tertiary education				
Graduation rates in upper secondary and tertiary education	N	Y	OBT	Brain drain an issue
a. Upper secondary education				
b. Tertiary education				
Educational achievement (average of PISA scores in reading, maths and science)	Y	Y	N	
Health expenditure (% GDP)	Relate to poverty and high morbidity rates	Y	Y	Need to look at indicators of well-being in health
Other/physical capital				(as opposed to spending)
Producer support estimate to agriculture (% of farm's receipts)	N	N	N	Impact of agricultural agreements still an issue for some
Public investment (% GDP)	Y	Y	Y	Important but not readily comparable to OECD
Infrastructure	Y	Y	OBT	Likely not rail
a. Rail density				
b. Road density				
Financial support for private R&D investment	Mostly about converging	N	OBT	Need to look at innovation efforts such as clusters.
a. Direct public funding of business R&D (% GDP)				
b. Rate of tax subsidies for one dollar of R&D				

1/ For the Caribbean this has been interpreted as the extent of the restriction for the entry into the market

2/ 'OBT' means that a more thorough exercise would permit us to obtain this data, although it is not currently easily available

In light of the urgency of fiscal sustainability and reform in the Caribbean it is important to consider how this issue could be addressed in a benchmarking for growth framework. As noted in Section III the OECD's experience has shown that the recent fiscal crisis in some EU countries has helped propel long-delayed reforms in politically-sensitive areas such as labor markets and welfare systems. These reforms have been targeted at rekindling growth while supporting fiscal sustainability. In addition, the experience shows that reforms aimed at

improving the efficiency of government expenditure can be productivity-inducing, including through actions to enhance monitoring and performance assessment, transparency and competition in procurement, and benchmarking against practices in other countries.⁵⁰ The implications for the Caribbean are that efforts toward fiscal reform and improving productivity are not mutually exclusive. Indeed, one of the few positive consequences of fiscal crises could be that the sense of urgency creates the political conditions and public support for labor, enterprise, and institutional reforms that were ignored in the past because of inertia and complacency. The proposed framework therefore suggests that for each country and for the region as whole, the benchmarking reports be prefaced by a summary of the macroeconomic situation and policy priorities, and that the indicators include measures of the quality and monitoring of public expenditure, as well as of the quality of institutions of governance and accountability (Appendix 2).

On benchmark countries Mauritius appears to be an appropriate, initial comparator. It is a small island economy with a population of 1.3 million, dependent on tourism and primary commodities. The country faces constraints similar to those in the Caribbean: vulnerability to climate change, infrastructure bottlenecks, scarce human resources, and large public companies. But Mauritius also has sound economic fundamentals, a strong export orientation, a track record of reform implementation, openness to foreign direct investment, and high rankings for governance and as a business location.⁵¹ As the benchmarking exercises begin to incorporate country studies, however, the Caribbean's diversity will require diversity in the selection of benchmark countries. For Trinidad and Tobago, for example, an exercise could include as benchmark countries similar oil and gas producers and a separate exercise on benchmarking the performance of the country's dominant oil and gas sector. For The Bahamas and Barbados, benchmarks would include other small, high income, tourism- and service-based countries.

Proposed steps in the framework are as follows:

Step 1

Assemble key performance and policy indicators associated with labor productivity, labor utilization, and the business environment.

For *performance indicators*, the main variables are:

- Real GDP per capita;
- Labor productivity (measured as real GDP per employed person);
- Labor utilization (the rate of participation in the labor force);
- A measure of private and/or foreign investment activity.

⁵⁰ OECD, *Going for Growth*, 2013.

⁵¹ Source: World Bank: <http://data.worldbank.org/country/mauritius>.

Policy indicators include:⁵²

- Availability of skills and quality of education;
- Disincentives to work and/or employ;
- Expenditure on infrastructure or measures of infrastructure quality;
- Barriers to entry of new firms, including the length and costs of administrative procedures to register new firms;
- Tax rate on business earnings;
- Incidence of crime;
- Quality of institutions and public expenditure.

Step 2

For Caribbean and benchmark countries for which data are available compare performance indicators over time as well as the behavior of the performance indicators against related policies, for example:

- *labor productivity* against available policy indicators related to labor productivity, such as educational attainment, quality of education, brain drain, etc;
- *labor utilization* against indicators including, for example, disincentives to the participation of females in the labor force; and
- *business activity* against regulations on trade, investment, or business startups.

Step 3

On the basis of the performance and policy gaps revealed in the comparisons, analytical work on performance-policy relationships, as well as a qualitative assessment, a shortlist for each country priority policy areas that appear to require improvement is created.⁵³ The qualitative analysis would incorporate the results of other assessments of the policy areas identified for improvement as well as analyses of the relationship between performance and policies in other Caribbean and benchmark countries. A country's performance and policy ranking well below the Caribbean average, or the level of the non-regional benchmarks, would suggest a potential priority area.

Step 4

The institution conducting the benchmarking exercise would discuss with government, private sector, and other representatives in each country policy priorities that emerge from the exercise. The discussion would be informed by an analysis of the factors accounting for the differences in the policy indicators as well as the policies in the better-performing and benchmark countries. However, priorities will ultimately be determined by the circumstances of each country. Finalized policy priorities that emerge after each country discussion will take the form of a list of

⁵² These are defined as indicators which are influenced or determined by government policies. For a more comprehensive list, see Appendix 2.

⁵³ For a sample set of charts that compare labor productivity and utilization over time and the relationship between productivity and four policy variables, see Appendix 3.

key actions needed to improve labor productivity, labor utilization, and the business environment. The list of policy actions should be seen as steps toward the ultimate goal of increased productivity, and not as a replica of the policies in benchmark countries.

In light of the heavy burden of periodic policy discussions that already take place between Caribbean governments and regional and international institutions, a benchmarking exercise of the type outlined here will likely secure better traction with policymakers if incorporated into ongoing consultations by the benchmarking institution on country strategies, project development, or technical assistance. Under such an arrangement the results of the benchmarking exercises would supplement other analyses (including on macroeconomic and social issues) to permit more comprehensive, multi-dimensional assessments.⁵⁴

Step 5

The agreed lists of policy priorities for all Caribbean countries would be consolidated by the benchmarking institution into a periodic *Report on Benchmarking Productivity and Real Incomes in the Caribbean*. This document, containing an umbrella report on the region as well as country pages, would be made available online to the public. It would be prefaced by a summary of the macroeconomic environment and priorities of the region and each country, but will focus on assessments of the indicators of labor productivity and utilization as well as the business environment.

Step 6

Subsequent reports would incorporate continuous revisions of the methodology, data sources, analytical aspects, and policy priorities, based on new information, emerging priorities, and feedback from policymakers, researchers, the business community, and the public. The reports would also document the actions being taken and the progress made by each country in narrowing the gaps, permitting an ongoing information exchange on countries' policy choices and experiences.

VII. Cautionary Notes on Benchmarking

The need for care in applying benchmarking techniques to corporate performance or cross-country growth and productivity analysis has been a feature of these exercises since their inception. Key concerns expressed during the heyday of corporate benchmarking included those related to the choice of benchmark firms and the risks of adopting “best practices” in the

⁵⁴ A recent IMF paper on jobs and growth provides an example of the need to incorporate microeconomic factors into assessments of growth performance and potential (IMF, 2013). It notes that low female labor force participation, for example, represents a missed opportunity to strengthen economic development in many countries, and sees scope for a more systematic integration of fiscal policy advice aimed at encouraging more labor force participation, job creation, equity in income distribution, and protection for the most vulnerable.

presence of firmly entrenched corporate cultures. In country work the literature addresses concerns about the policy transfer aspects of benchmarking and features of the methodology.

Policy transfer concerns

Concerns about the policy transfer aspects revolve around the potential pitfalls in extending the use of benchmarking from a diagnostic tool that identifies differences in performance and policies to one that prescribes policy solutions. The basis of this concern is linked to the recognition that benchmarking is perhaps most useful and uncontroversial in bringing to the attention of policymakers and the public the differences in the performance and policies of countries as regards the key drivers of productivity and incomes. In lagging countries such information can help motivate action aimed at closing those gaps. However, moving from the identification of gaps to treating the policy stance in benchmark countries as a guide to policies in other countries represents a leap because it seeks to apply a set of “best practices” to countries characterized by diversity. Dolowitz and Marsh (2000) point to the underlying assumption in benchmarking that the policies which have been successful in one country will be successful in others. However, they caution that this assumption may be unwarranted because the benchmarking country might have insufficient information about how the policy is implemented in the successful country, or that crucial aspects of the policy’s success might not be transferable to the receiving country. Smith (2001) summarizes this point well:

“Diversity implies that there is no single best way to do anything or to reach any target, and so any overarching single ‘guide’ or indicator for performance ought to be treated with suspicion.”

Lall (2004) also cautions that while benchmarking exercises can be useful in pinpointing performance differences, the methodological weaknesses of exercises of the type carried out by the WEF and IMD make them ill-suited to serve as a guide to policymaking.

Practitioners of benchmarking, such as the OECD, recognize these concerns. However, they point out that their approach is part of a mutually agreed surveillance process which allows flexibility by adapting policy recommendations to the special circumstances of each country.⁵⁵ Improved employment performance, for example, might be achieved by policies to either encourage foreign investment or provide greater non-wage incentives for women to participate in the labor market, or both. Adapting policies to country circumstances helps avoid the risk that benchmarking exercises do not degenerate into searches for across-the-board “rules of thumb” which are not adequately calibrated.⁵⁶

Even when there is willingness or political consensus to act on the results of benchmarking exercises, the literature has called attention to issues surrounding the implementation capacity in the benchmarking country. Bulmer and Padgett’s 2005 review of EU experience

⁵⁵ OECD, 2005a.

⁵⁶ Rodrik, 2004.

points to the importance of the institutional context in the policy transfer process, i.e. the effectiveness or credibility of the implementing institutions in the benchmarking countries. In addition to capacity issues, OECD research has shown that successful policy benchmarking requires that implementation efforts be coordinated across all the areas of weakness; i.e. that work be carried out in a concerted manner across all the areas of policy weakness identified in the exercises. Attention to this is particularly important in cases where there is a risk that the policy agenda could be skewed by domestic lobbies keen to pursue only those reforms which are beneficial to their interests, while undermining other key policy priorities.⁵⁷

Another concern is the risk that benchmarking can result in a form of competitive “scorecard maximizing” behavior in which the incentives for policymakers become the attainment of high scores in themselves, rather than the achievement of substantive progress in reform. In addition, with policy reform incentives in a benchmarking framework focused on the weaker performers, there is a risk that there could be little incentive for performers at the average or above-average levels to press ahead with additional reform.⁵⁸

Concerns on methodology

On methodology, concerns about benchmarking methods are associated mainly with the data used in the construction of indicators of economic performance. These concerns include issues of comparability, reliability, and availability of the indicators, as well as the use of surveys and qualitative assessments to fill gaps in the data and capture perceptions of performance. A key point is that while institutions like the OECD and World Bank try to use comparable sources of information for their indicators, care needs to be taken to ensure that differences in indicators, such as those of labor productivity, are not affected by differences in statistical methodology, the unavailability of indicators, or the non-uniform blending of data from statistical sources and surveys.⁵⁹

More generally, to the extent that some methodologies incorporate large numbers of variables which are aggregated into indicators, they give rise to questions about the relevance and need for so many variables, and the robustness of the causal links between the variables, the composites, and productivity and incomes. In this connection, Lall’s review of the WEF methodology suggests that to be analytically acceptable, benchmarking exercises should be

“... more limited in coverage, focusing on particular sectors rather than economies as a whole, and using a smaller number of critical variables rather than pulling in everything the economics, management, strategy and other disciplines suggest.”⁶⁰

⁵⁷ Schludi, 2003.

⁵⁸ OECD, 1997.

⁵⁹ OECD, 2005, Smith, 2001.

⁶⁰ Lall, 2001.

These concerns touch also on the considerable resources required for the collection, updating, and processing of large databases used in benchmarking exercises, and on the need to ensure that the costs are warranted by the benefits.⁶¹

A final comment addresses data which have emerged from the U.S in recent years that raise questions about who benefits from the increased labor productivity that benchmarking aims to promote. Some estimates show, in part, that while productivity has risen sharply (by 22 percent since 2000) workers' hourly pay has stagnated. The implication is that increased labor productivity in recent years has resulted in greater income inequality as the benefits have accrued mainly to the corporate sector, including shareholders and executives.⁶² The decoupling of average real wages from rising productivity also characterizes the labor situation in other regions, including many OECD and BRIICS countries.⁶³ These developments conflict with the assumption that higher productivity benefits all, and benchmarking frameworks will need in future to incorporate analyses of inequality in their assessments of performance and policies.

VIII. Benchmarking 6 Caribbean Countries: a Preliminary Analysis.

This section shows the results of benchmarking policies for growth of the six IDB-member countries. First we explain how we defined the appropriate performance and policy indicators to be used, already armed with the choice criteria defined in Table 1. Second, we explain how each policy indicator is matched with a performance indicator given currently available data. The results allow us to identify about three set of indicators that policy-makers in these countries should focus on to foster long-term growth. The results need to be considered as an illustration of the adopted methodology and not a well-debated and concluded process, which is what it ultimately should be.

Three-step process to derive indicators.

a. Defining Performance and policy indicators

Following the Going for Growth exercise, performance indicators were selected by including those indicators that are closely related to the main drivers of real income and which are also available for the Caribbean region. For example, GDP per worker was selected as a performance indicator given that it is one of the two main determinants of per capita output (labor productivity); on the contrary, we didn't include any measure of total factor productivity even when it is a relevant indicator given that it is not currently available in the Caribbean region. On the other hand, policy indicators consist of those variables that reflect the policy stance among different sectors in the economy and which are also believed to have an important impact

⁶¹ OECD, 1997.

⁶² Lowrey, 2013.

⁶³ OECD, 2012

on economic activity--or on some of its determinants. Examples are: tax rates, cost to import and export, procedures to start a business, etc. It is important to mention that we also included some indicators based on perceptions such as those available in the Competitiveness Report. Examples are: quality of electricity supply, quality of the educational system, quality of roads, etc. Ideally opinion survey data would not be used, but for many indicators it is the only existent data.

b. Matching performance and policy indicators

For each performance indicator, a group of policy variables was selected based on whether the literature supports its relevance and whether their correlations are ‘coherent’. For instance, labor productivity was matched with education enrollment and quality of electricity supply, not only because these last two indicators are considered productivity drivers but also because their correlation was positive for the Caribbean region. The list of matching pairs used is described in Appendix 3.

c. Identification

Finally, we determine the critical indicators for each performance indicator. The idea is to select performance indicators that are lagging behind the benchmark, and given those, the corresponding worst-performing relative policy indicator. In this way, we are addressing only those policies that are lagging and need to be improved in order to boost real incomes of each country.

Following the OECD, a graph with four quadrants is created where, for each country, each performance indicator is compared against the benchmark, And the corresponding policy indicator is also compared. This can be described in a 2-dimensional graph with performance on the y axis and policy on the x axis. Each indicator is defined as:

$$D_{ij} = ((I_{ij} - \mu_j)) / \sigma_j \quad (1)$$

Where:

D_{ij} : Country i normalized gap for indicator j

I_{ij} : Country i performance or policy indicator j

μ_j : Benchmark value of performance or policy indicator j

σ_j : Cross-country standard deviation for indicator

For the Caribbean this result is typically going to be less accurate than the OECD, all else equal. One of the large problems is that many of the indicators are survey-based, and not actual measures. For example, questions about the burden of taxation, the reliability of electricity, and the company spending on R&D (to name a few indicators), are based on the ‘Doing Business’ survey of the World Bank and not on actual measurement of these variables. It means that they are based on perceptions and so can be difficult in terms of comparability with other countries,

including the benchmark country. Nevertheless, it is all that is available for many of the policy variables. The set of indicators used (depending on availability) were also matched with various performance indicators to increase robustness.

In addition to Mauritius, two other set of ‘benchmarks’ were developed for comparability.

From a set of almost 60 small economies, defined as those with less than 3 million people, we excluded the 6 Caribbean countries and were left with the so-called ‘Rest of Small Economies ‘ (ROSE for short). From these we created yet other two subsets, the commodity-exporting and the tourism-dependent ROSEs. The first group are economies defined as those with less than 3 million people where their exports of goods are higher than their export of services. The average value of each of their indicators were used to compare with the 3 commodity-exporting Caribbean economies: Guyana, Suriname and Trinidad and Tobago, as defined in equation 1 above.

Results

The preliminary results suggest that the business climate and the quality of infrastructure are the greatest barriers to growth in the Caribbean (see Table 2 below and the graphs in appendix 4). The graphs in appendix 4 show the problematic performance/policy pair (plotted in red) that are contained in the lower-left quadrant for every country graph This quadrant indicates that the country is below the benchmark in both performance and the degree of policy progress, and thus gives a first clue about the problematic areas requiring attention. The table below takes three worse-performing policy indicators under this criterion for each country and each benchmark (listed in order). Compared to Mauritius, the first part of the table suggests that the tourism-exporting countries need to improve the rules for setting up and registering a business, but they also face high costs in the form of high taxes on businesses⁶⁴ and high import costs. The high taxes points to a heavy burden on some businesses, although some other sectors may benefit from specific incentives and tax waivers, which themselves are distortionary. In Guyana the infrastructure deficits are relatively more of a barrier to growth, partly related to its relatively low income per capita. Finally, in Jamaica the business cost of crime and violence is identified as the most problematic barrier.

Using the average of the rest of small economies (ROSEs) that are mostly service exporters as a benchmark brings to light more problems in infrastructure for tourism exporting countries than before. For example, now the quality of port infrastructure comes out as an issue for The Bahamas. The cost of importing (for Barbados) and the cost of exports (for Jamaica) also come to light. The difference in the emphasis of the policies probably in part reflects the fact that Mauritius has a friendly and efficient climate for business compared to the Caribbean, but the

⁶⁴ This variable is a combination of profit tax (% of profits), labor tax and contribution (% of profits), and other taxes (% of profits) taken from the World Bank. It is intended to reflect the tax burden on businesses. Nonetheless, it is not possible to tell from the indicator if the tax is broadly levied, meaning that many firms might be exempt

infrastructure gap is less stark. In other words, the Caribbean countries' deficiencies in this area stand out more.

When we compared the three Caribbean commodity-exporting countries to the average of ROSEs commodity exporters, the issue of deficits in the quality of infrastructure stand out more. The quality of port infrastructure comes out as an issue for Trinidad and Tobago, as well as electricity provision for the case of Guyana, all of which have affected growth. At the same time, Trinidad and Tobago fares relatively well compared to that benchmark, as is evident from the fact that most of the policy/performance pairs are in the top right quadrant in the corresponding figure in Appendix 4, indicating relatively better performance/policies relative to the benchmark. This contrasts with the graphs for Jamaica and Suriname compared to the ROSEs benchmark, in which the lower left quadrant is heavily populated, indicating many constraints on growth.

Table 2. Preliminary Results from the three most Pressing Policy areas identified as impacting Growth for the 6 Caribbean countries (in order of importance)

1) Benchmark against Mauritius

The Bahamas	Procedures to register a Property (number)	Cost to import (US\$ per container)	Business tax rate/burden (%)
Barbados	Cost to import (US\$ per container)	Time to register a Property (days)	Business tax rate/burden (%)
Guyana	Quality of electricity supply *	Quality of port infrastructure	Business costs of crime and violence (value)
Jamaica	Business costs of crime and violence *	Business tax rate/burden (%)	Quality of math and science education
Suriname	Business impact of rules on FDI	Procedures to Start a Business (number)	Time to register a Property (days)
T&T	Procedures to register a Property (number)	Cost to import (US\$ per container)	Procedures to Start a Business (number)

2) Benchmark against Rest of small economies (population less than 3 million)

The Bahamas	Quality of port infrastructure	Business tax rate/burden (%)	Time to register a Property (days)
Barbados	Business tax rate/burden (%)	Time to register a Property (days)	Cost to import (US\$ per container)
Jamaica	Business costs of crime and violence *	Business tax rate/burden (%)	Cost to export (US\$ per container)

3) Benchmark against 'Rest of Small Economies' that are also commodity-exporting economies

Guyana	Business costs of crime and violence (value) *	Quality of electricity supply *	Quality of port infrastructure
Suriname	Time to Start a Business (days)	Procedures to Start a Business (number)	Time to register a Property (days)
T&T	Procedures to register a Property (number)	Company spending on R&D	Quality of port infrastructure

Source: authors' calculations using data from Doing Business, Enterprise Survey, ILO, World Bank, WTO and World Economic Forum

The variables related to physical infrastructure and the high costs of imports and exports affect productivity per worker though their effect on the capital stock. Administrative barriers may have an effect through the impact on efficiency of enterprises, which ultimately affects total factor productivity. Removal of obstacles and development of network and transport infrastructure can have a positive impact on productivity and growth in OECD countries, according to recent literature (see Egert (2009) and Sutherland, et. al. (2009). Regarding high and distortive tax rates, some evidence from Portugal seems to indicate that tax simplification, at least in such a middle-to-high income country, promotes economic growth (see Pena, 2010). There is not much empirical evidence in the Caribbean due to scant data.

IX. Conclusions

This paper aims to contribute to the analysis of the growth performance of CARICOM countries by proposing a framework to benchmark micro-structural indicators that are associated with productivity and real GDP per capita. The methodology is adapted from the OECD's annual *Going for Growth* exercises, which promote closer convergence in members' real GDP per capita levels by identifying cross-country gaps in indicators associated with key micro-drivers of productivity. Those exercises form the basis for annual, publicly available assessments by the OECD of progress being made by each member in addressing the performance gaps, and for discussions between the OECD and each member on policies to do so.

The proposal described in the paper would help carry forward the work on growth and benchmarking in the Caribbean in two ways. First, it would be focused on key factors that contribute to real GDP per capita: labor productivity, labor utilization, and the business environment, and the micro-drivers associated with each. In doing so, work on the proposed methodology would supplement other efforts to re-balance the analysis and discussions on Caribbean growth toward the underlying factors that drive the behavior of firms and labor market participants. While macroeconomic factors are also important, there is already an ample supply of detailed macro-analyses that assess comparative performance in those areas. Second, by assembling and disseminating all available information on labor- and business environment-related indicators that influence productivity the methodology could promote knowledge sharing and sharpen the analysis of differentials in productivity and real incomes within CARICOM, as well as between CARICOM and benchmark countries. In summary, a focus on quantitative indicators of labor and the business environment, comparative analysis, and more public discussion can contribute to a deeper understanding of income differentials and a sounder basis for policy action. Depending on the availability of data, the methodology could also help enhance the analysis of gender and sectoral aspects of the labor market.

The contribution of the exercise will depend on the extent to which concerns in the literature about the application of benchmarking can be addressed. Priorities include close collaboration with country representatives and ensuring that successful policies in benchmark countries are adapted to the conditions and implementation capacity in the benchmarking countries. Regarding the methodology, since benchmarking is indicator-based, the credibility of

the exercises will depend on the availability and reliability of indicators, their comparability with those of other countries, and the extent to which their association with productivity is established. Qualitative assessments to supplement the indicators will be essential given the diversity of the region and the unevenness of the data.

In the period ahead work will continue on ways to improve the methodology, including through additional research on possible indicators and the choice of benchmark countries.

This will need to be done in consultation with member countries (including their productivity councils or equivalents and the business sector) and institutions such as The Caribbean Growth Forum, CARICOM, the Caribbean Development Bank, and the UWI. Following these discussions a benchmarking exercise for the region could be initiated, perhaps through a pilot on one of the countries. The tool could then begin to evolve into a useful new analytical and policy supplement for addressing the overarching challenge of improving productivity, growth, and income inequalities in the Caribbean.

Appendix 1

Appendix 1. The OECD's Going for Growth Methodology: Key Elements

Origins: Launched in 2005 as a new form of surveillance over members' performance in the four main micro-drivers of productivity and growth identified in the 2001 OECD Growth Project. These are: entrepreneurship, innovation, information and communications technology (ICT), and human capital.

Objective: With a view to boosting growth and raising living standards, identify the main gaps in structural performance indicators associated with each of the four micro-drivers. Gaps are defined as differences relative to the average for OECD countries. This analysis forms the basis for annual reports by the OECD on progress being made by each member in addressing the performance gaps, and for discussions between the OECD and each member on policies to do so. These steps help improve convergence in real GDP per capita.

Going for Growth identifies five reform priorities for each OECD country (i.e. five areas of policy strengthening identified by the stance of that policy relative to OECD best practice) that are assessed as among the most binding constraints to convergence in real GDP per capita. A policy area is selected as a priority for reform only if weaker than average *performance* is identified in the area affected by the policy. Each reform priority is treated as equally important.

- Three of the five policy priorities are based on internationally comparable policy indicators which have been linked empirically by the OECD to various aspects of economic performance.
- The other two policy priorities are mostly based on a judgment of the most binding constraints on living standards derived from the OECD's country expertise.

Priorities have centered on productivity-boosting reforms in the labor market. However, others include actions to increase labor utilization and make product markets more efficient and innovative, as well as reforms in the health, education, and housing sectors. Recent priority policy areas have included:

Labor markets:

- Reforming tax systems (e.g. shifting from taxes on labor/business to taxes on consumption).
- Boosting educational quality, including through teacher training and increased access to technology.
- Reducing disincentives to labor market participation by women, young people, and older workers.
- Ensuring that legal minimum wages do not outpace productivity.
- Avoiding labor regulations that constrain labor turnover and entry into the labor market.

Product markets

- Improving public infrastructure.
- Reducing barriers to business startups and competition, including state enterprise control of specific business sectors.
- Lowering tax rates on business income.
- Simplifying business regulation.

Benchmark countries for each micro-driver are selected mainly on the basis of performance indicators. These include labor productivity, labor utilization, and their sub-components. Information on the indicators is obtained mainly from the OECD's database supplemented by qualitative assessments and periodic country surveys conducted by the OECD. For each of the indicators the business/policy environment is also collected and analyzed. The business/policy environment is defined as the mix of opportunities, obstacles, and government policies and regulations and is measured by quantitative and qualitative factors. The analysis identifies key areas for improvement in the business/policy environment using as a reference point the comparable environment in benchmark countries. For example, a weak growth driver, such as lagging labor productivity in a low-income OECD country, may be related to an indicator like educational attainment. Addressing this gap will include consideration of policies of higher productivity countries with better indices of educational attainment. However, it is recognized that no single best policy in a benchmark country can be applied uniformly across countries working toward policy improvements. The analysis highlights the main challenges for each policy area and related policy responses in the top-performing countries; however it also emphasizes the need for a national evaluation of the appropriateness of policies or the adaptation of best practice/policies to the situation and institutions in each benchmarking country.

Appendix 2

Appendix 2: Initial List of Selected Policies and Indicators Related to Labor Utilization and Productivity and the Business Environment in the Caribbean⁶⁵

1. Labor utilization

- Allow greater flexibility in working hours and more part-time and work-sharing arrangements.
 - Ratio of women in the employed labor force (A).
 - Ratio of women in the labor force (A).
- Increase the availability of, and incentives for, childcare and pre- and post-school facilities.
 - Spending on childcare and pre/post school activities (A).
- Make age-related early retirement rules more flexible; increase the maximum age for retirement in certain professions, such as teaching.
 - Maximum retirement age, by profession (A).
- Reduce tax rates on income from labor so that they do not constitute a disincentive for continued work.
 - Tax rates on earned income (A).

2. Labor productivity

- Raise education attainment levels, indicators of education quality, and technology proficiency.
 - Quality of education system (PISA or equivalent) (S).
 - Test scores in reading, math, and science (A).
 - Enrollment rates: primary, secondary, and tertiary (A).
 - Graduation rates: primary, secondary, and tertiary (A).
 - Trained teachers: primary and secondary (in percent) (A).
 - Internet access in schools (A)*.
 - Internet users/100 population (A)*.
 - Internet broadband users/100 population (A)*.
 - Measure of brain drain (A)*.

3. The business environment

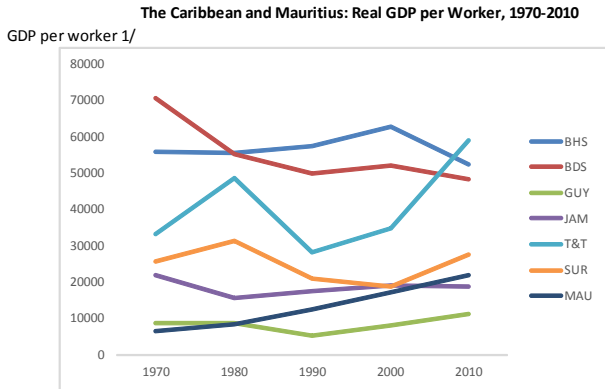
- Increase promotion of trade and foreign investment.
 - The cost of exporting/importing a standard container (A)*.
 - The number of days required to release a container to an importer (S)*.
 - The quality of port infrastructure (S)*.
 - Barriers to foreign investment, including in public utilities (A).

⁶⁵ A: available for some or all countries; S: available through survey data; *: not included among OECD structural policy indicators.

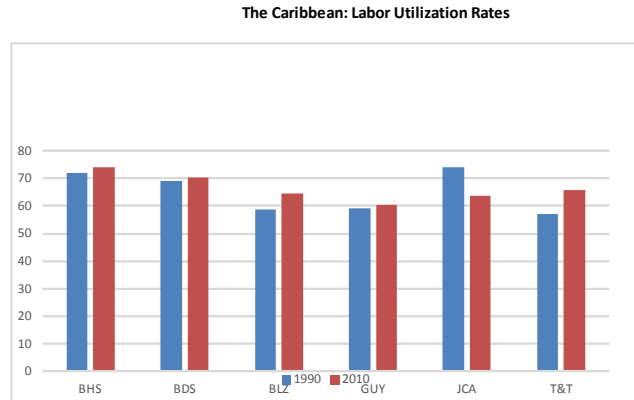
- Improve the reliability of electricity supply; benchmark costs and performance against other regional countries.
 - Reliability of electricity supply (S)*.
 - Average cost per Kwh of electricity for business (A)*.
- Upgrade the transportation infrastructure.
 - Quality of road transportation (S)*.
- Tackle and reduce growing crime and concerns about insecurity.
 - Incidence of violent crime/1,000 population (A)*.
 - Business costs of crime (S)*.
- Simplify business regulations, permits, licenses, and the time needed for bureaucratic procedures.
 - The number of procedures for starting a business (A).
 - The number of days required to secure startup permits (S).
 - The number of procedures for registering property (A).
 - The number of days required to register property (S).
- Lower taxes on business earnings.
 - Tax rate on profits (A).
- Strengthen the competition framework, particularly related to entry of firms into industries and monopolies.
 - Extent of state participation in business/trade activities (e.g. through state enterprises) (A).
 - Entry requirements for the mobile and telecommunications services sector (A).
- Take steps to reduce the size of the informal sector and income inequality.
 - Size of the informal economy (A)*.
 - Indices of income inequality and poverty (A)*.
- Improve the quality of institutions related to governance, accountability, and public expenditure.
 - Country rankings on governance, transparency, and accountability (S)*.

The following figure 3 compares the Caribbean countries' performance to Mauritius using various indicators.

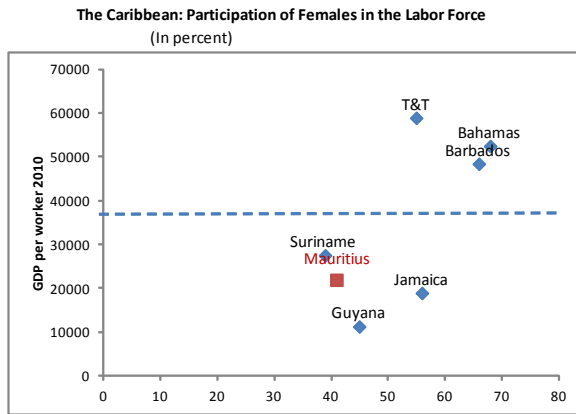
Figure 3: Performance Indicators: Comparing Mauritius and the Caribbean



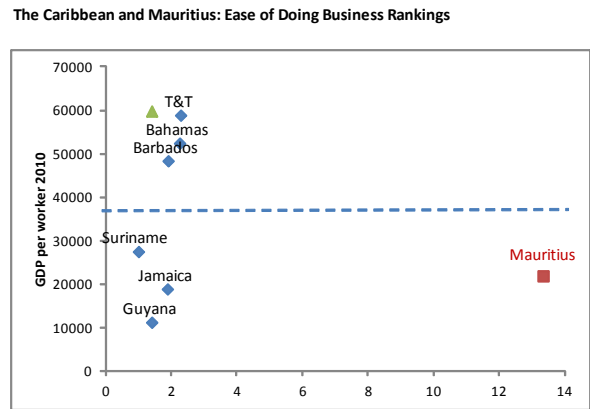
1/ 2005 In PPP Converted GDP Chain per worker at 2005 constant prices
Source: Penn World Tables.



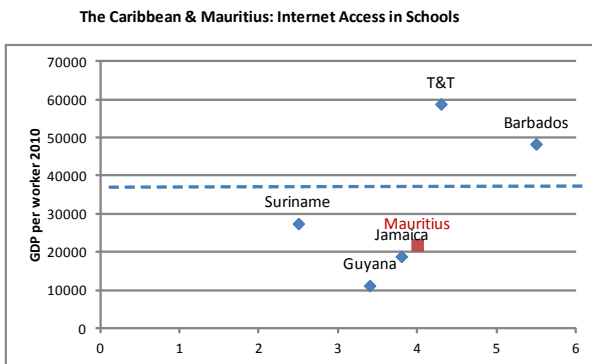
Source: ILO



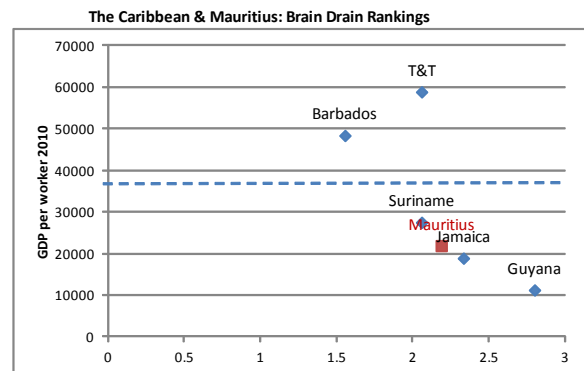
Sources: ILO and World Economic Forum.



Source: World Economic Forum.



Source: World Economic Forum



1/ Higher rankings reflect larger brain drain.
Source: World Economic Forum

Appendix 3: Matching the Policy Indicators to Performance Indicators

The following performance indicators were matched with the policy indicators below each heading for the Caribbean exercise

Performance Indicator 1: GDP per worker 2010

- Secondary education enrollment, gross (value)
- Tertiary education enrollment, gross (value)
- Internet access in schools
- Brain drain
- Quality of the educational system
- Quality of math and science education
- Internet users %
- Fixed broadband Internet subscriptions (%)
- Quality of electricity supply
- Quality of roads
- Business costs of crime and violence (value)
- Interest rate spread (2009)

Performance Indicator 2: GDP per worker (growth) 2010-2000

- Total tax rate (% profit)
- Primary completion rate-Male (2009)
- Primary completion rate-Female (2009)

Performance Indicator 3: GDP per worker (growth) 2010-2005

- Total tax rate (% profit)
- Company spending on R&D
- Primary completion rate-Male (2009)
- Primary completion rate-Female (2009)

Performance Indicator 4: Total investment (growth) 2012-2002

- Total tax rate (% profit)
- Company spending on R&D
- Cost to import (US\$ per container)
- Procedures to Start a Business (number)
- Time to Start a Business (days)
- Procedures to register a Property (number)
- Time to register a Property (days)

Performance Indicator 5: Total investment (% GDP) 2012-1993

- Interest rate spread (2009)
- Quality of port infrastructure
- Procedures to Start a Business (number)

Time to Start a Business (days)
Time to register a Property (days)

Performance Indicator 6: Foreign Direct Investment (FDI) (% GDP) 2011-2002

Quality of electricity supply
Quality of roads
Company spending on R&D
Business impact of rules on FDI
Cost to export (US\$ per container)
Time to export (days)
Quality of port infrastructure
Procedures to Start a Business (number)
Time to register a Property (days)

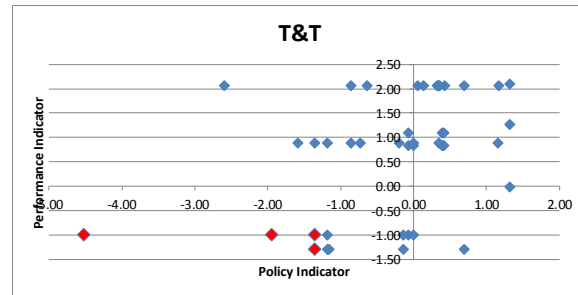
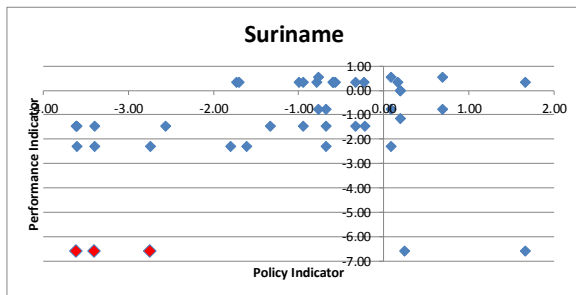
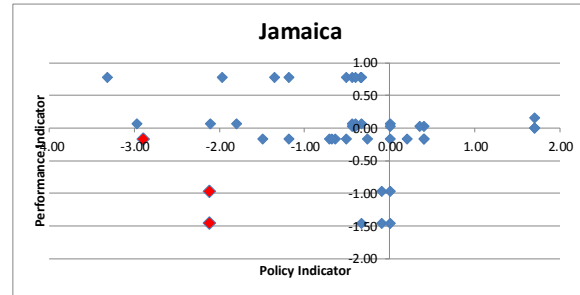
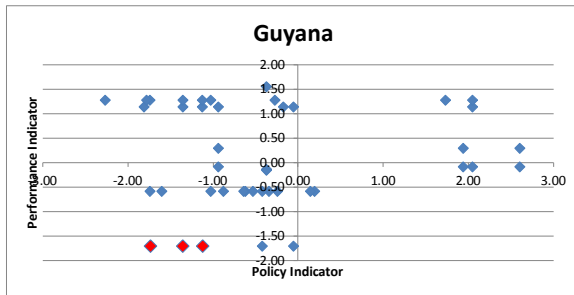
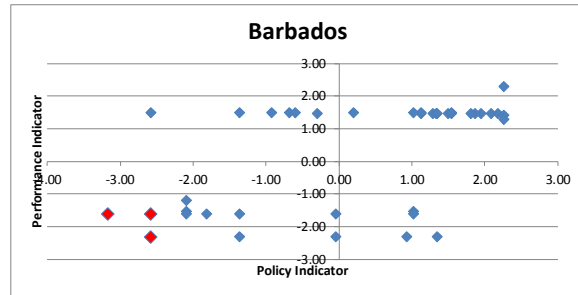
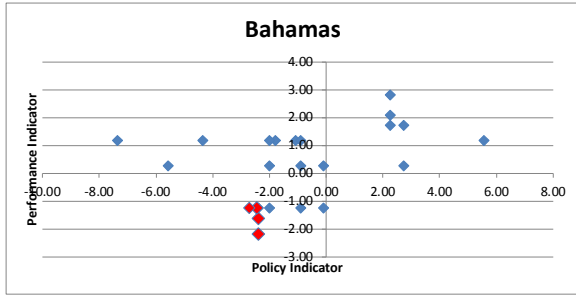
**Performance Indicator 7: Labour Force by level of education (secondary)
Female % of labor force (2009)**

**Performance Indicator 8: Labour Force by level of education (tertiary)
Female % of labor force (2009)**

**Performance Indicator 9: Employment to Population ratio
Female % of labor force (2009)**

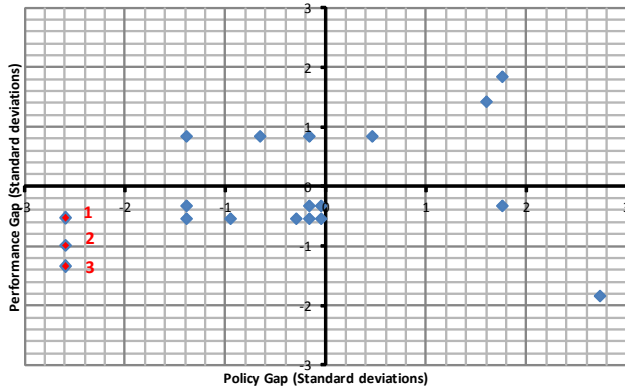
Appendix 4: Figures showing Results of Caribbean Benchmarking

Comparing performance and policies using Mauritius as a Benchmark



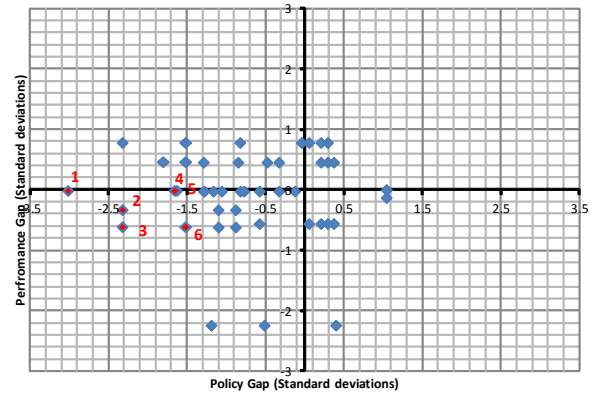
Comparing Performance and Policy Indicators using Tourism Dependent Countries as a Benchmark.

The Bahamas



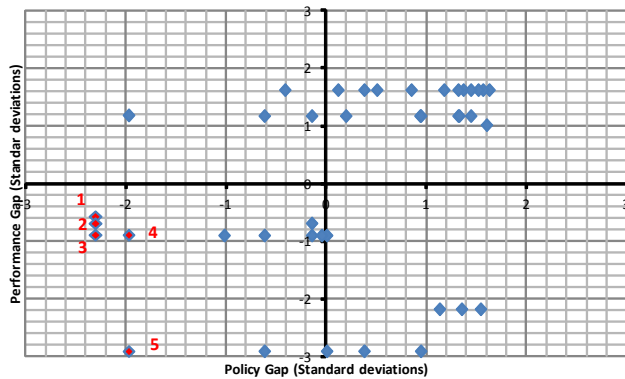
Note: Numbers correspond to the following ordered pairs: 1.- (Total Tax rate; Total investment growth in 10 years) / 2.- (Total Tax rate; Per worker GDP growth in 10 years) / 3.- (Total Tax rate; Per worker GDP growth in 5 years)

Jamaica



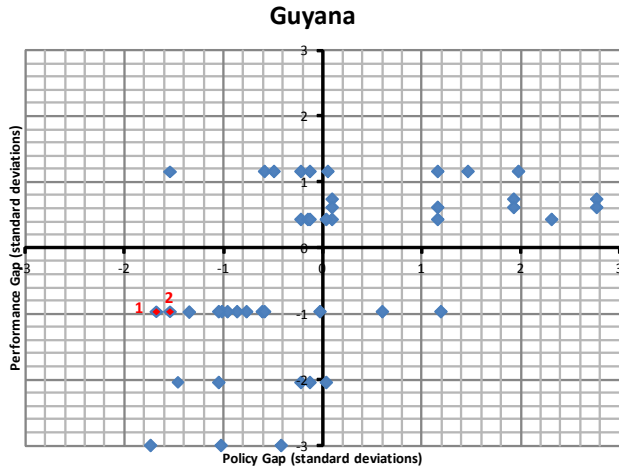
Note: Numbers correspond to the following ordered pairs: 1.- (Business costs of crime and violence; GDP per worker 2010) / 2.- (Total Tax rate; Per worker GDP growth in 10 years) / 3.- (Total Tax rate; Per worker GDP growth in 5 years) / 4.- (Quality of math and science education; GDP per worker 2010) / 5.- (Fixed broadband Internet subscriptions; GDP per worker 2010) / 6.- (Company spending on R&D; Per worker GDP growth in 5 years)

Barbados

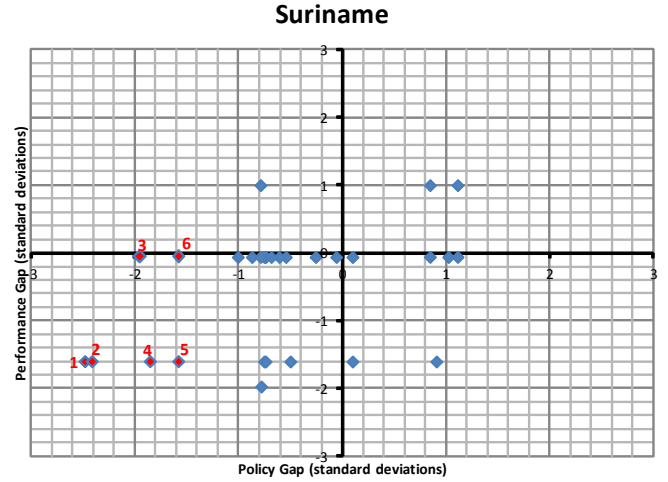


Note: Numbers correspond to the following ordered pairs: 1.- (Total Tax rate; Per worker GDP growth in 10 years) / 2.- (Total Tax rate; Per worker GDP growth in 5 years) / 3.- (Total Tax rate; Total investment growth in 10 years) / 4.- (Time to register a property; Total investment growth in 10 years) / 5.- (Time to register a property; Total investment-to-GDP ratio in 20 years)

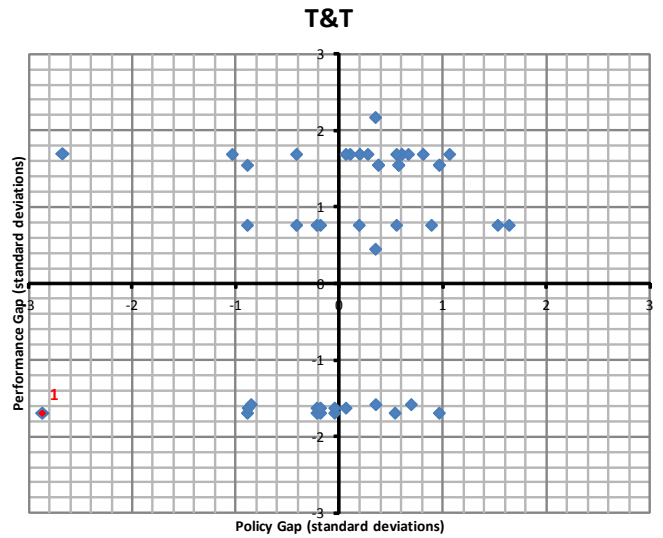
Comparing Performance and Policy Indicators using Commodity Dependent Countries as Benchmarks.



Note: Numbers correspond to the following ordered pairs: 1.- (Quality of electricity; GDP per worker 2010) / 2.- (Business costs of crime and violence; GDP per worker 2010)



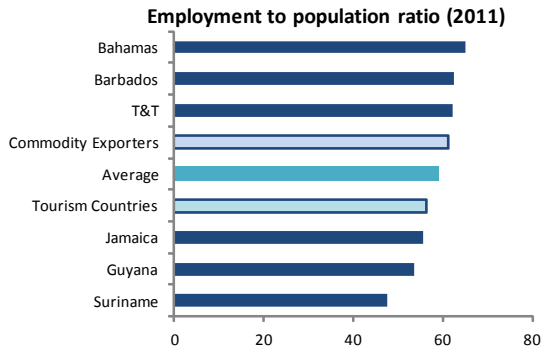
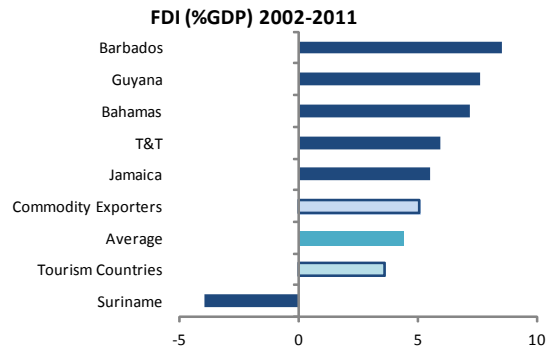
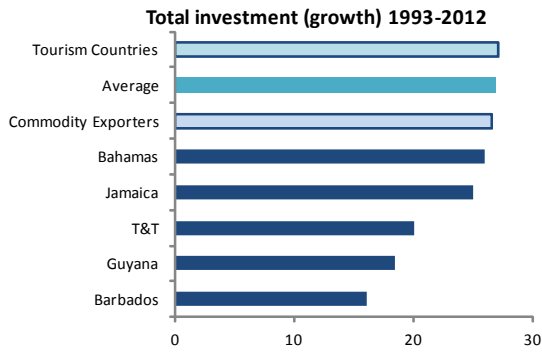
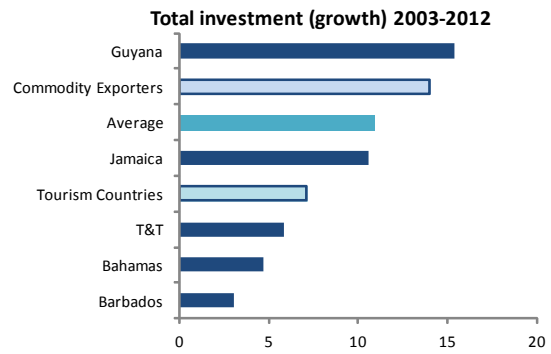
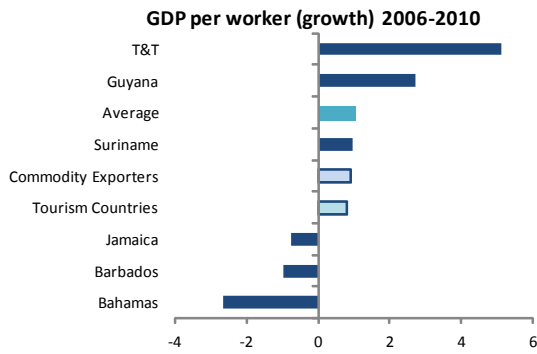
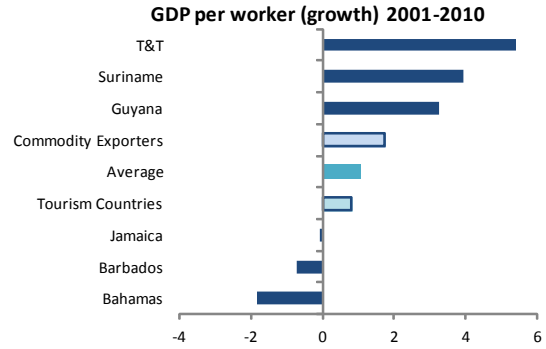
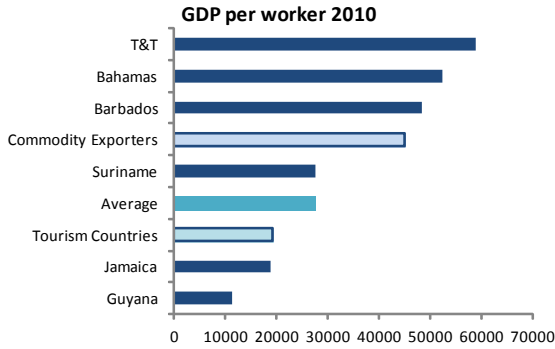
Note: Numbers correspond to the following ordered pairs: 1.- (Procedures to Start a Business; FDI growth in 10 years) / 2.- (Time to register a Property, FDI growth in 10 years) / 3.- (Internet access in schools; GDP per worker 2010) / 4.- (Business impact of rules on FDI; FDI (% GDP) in 10 years) / 5.- (Company spending on R&D; FDI (% GDP) in 10 years) / 6.- (Company spending on R&D; Per worker GDP growth in 5 years)



Note: Numbers correspond to the following ordered pairs: 1.- (Procedures to register a Property; Total investment growth in 10 years)

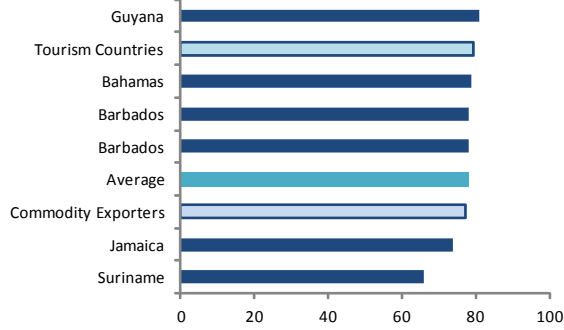
Appendix 5. Comparative Outcomes of Performance and Policy Indicators.

I. Performance Indicators

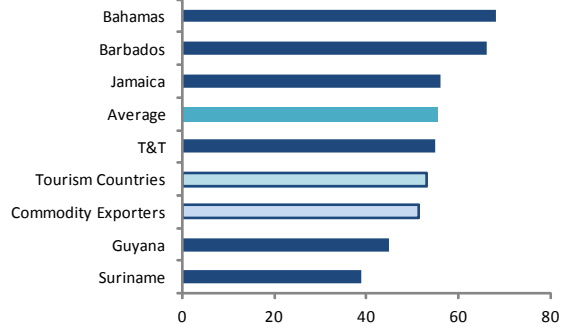


Policy Indicators

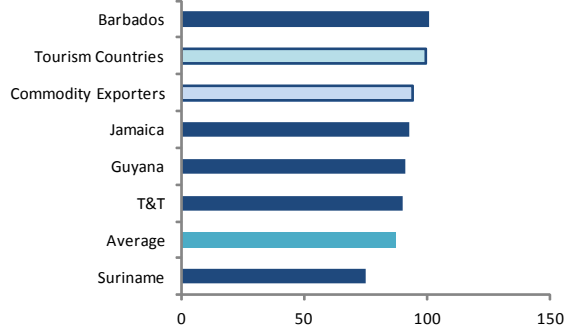
Participation % of age 15 and older (Male) 2009



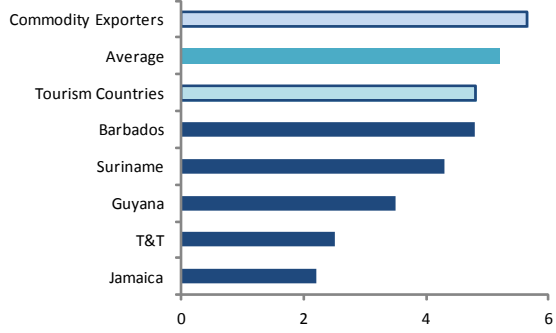
Participation of age 15 and older (Female) 2009



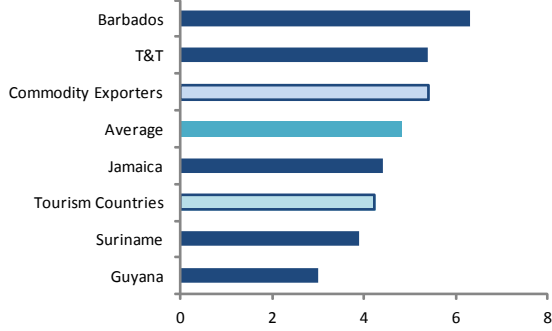
Secondary education enrollment rate



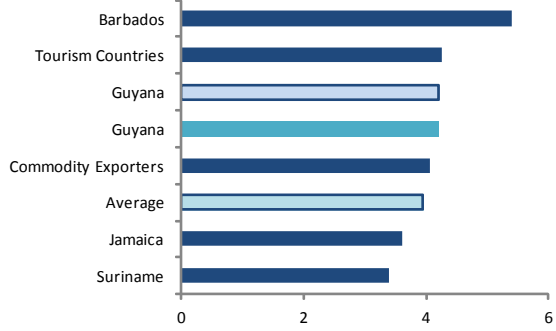
Business costs of crime and violence



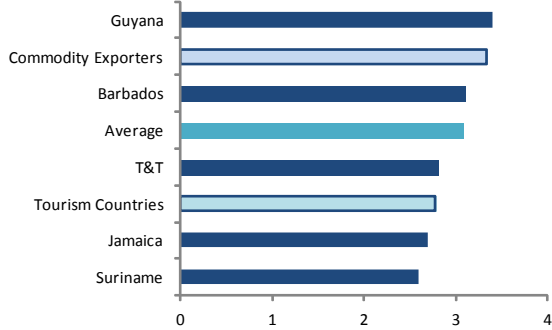
Quality of electricity supply



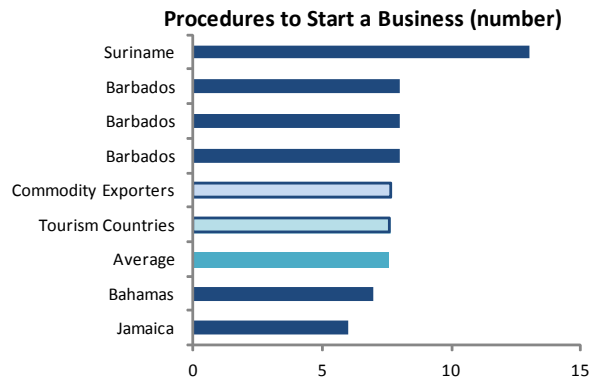
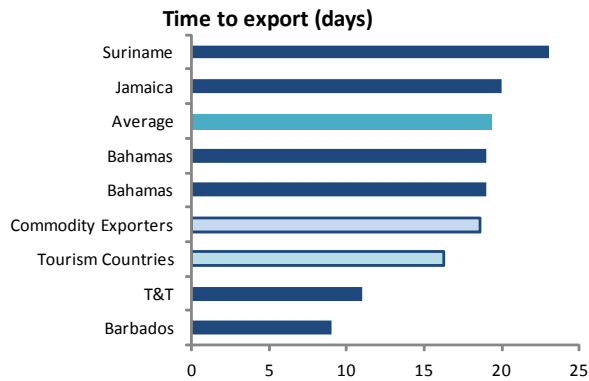
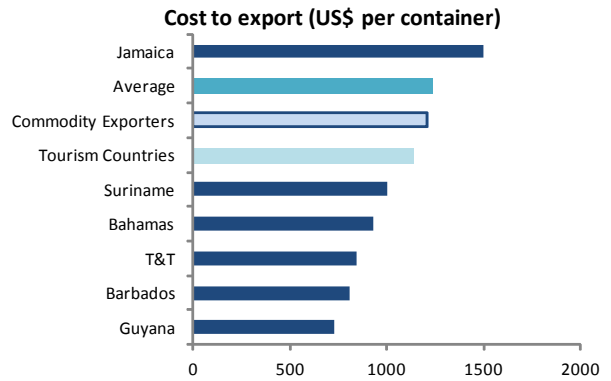
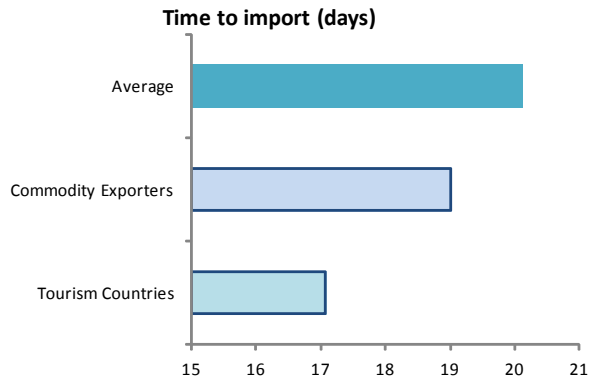
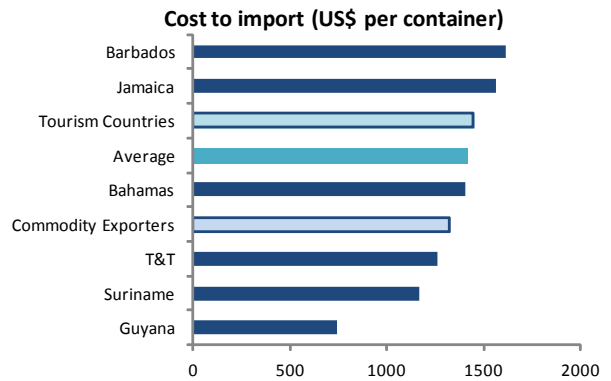
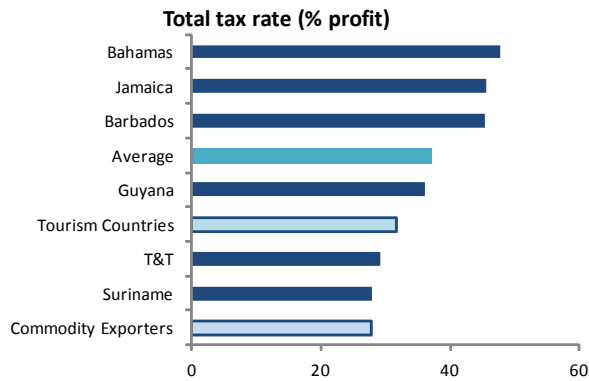
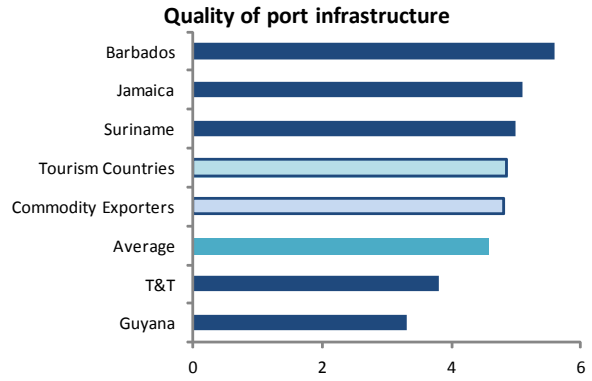
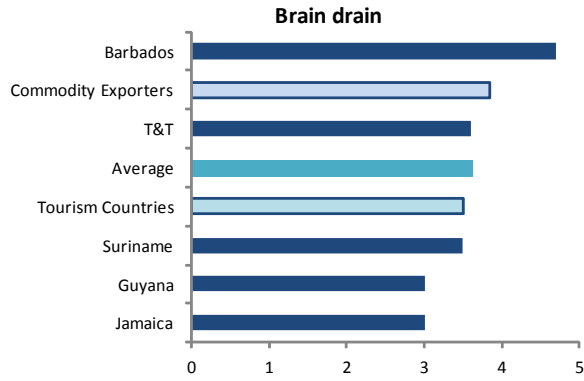
Quality of the education system



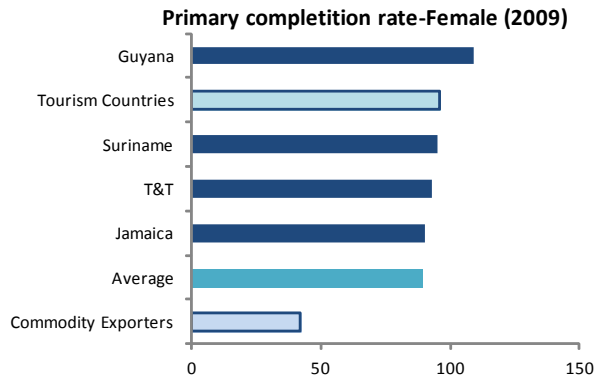
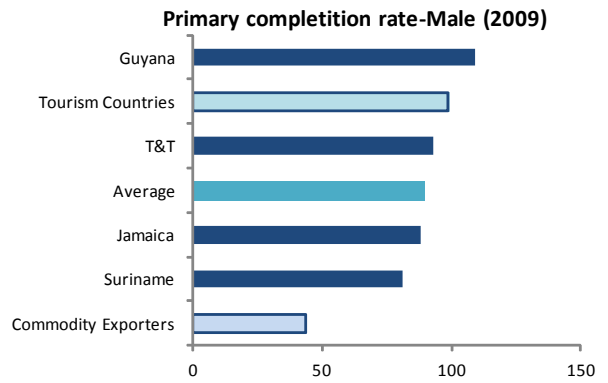
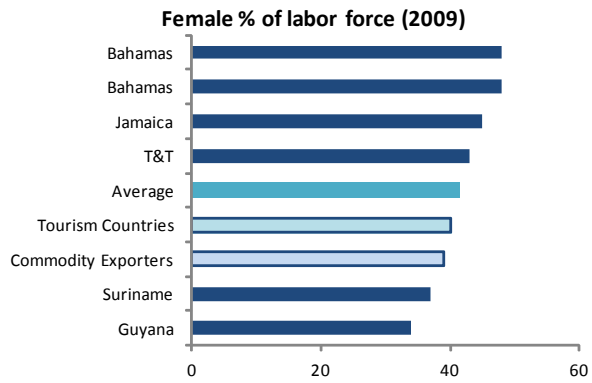
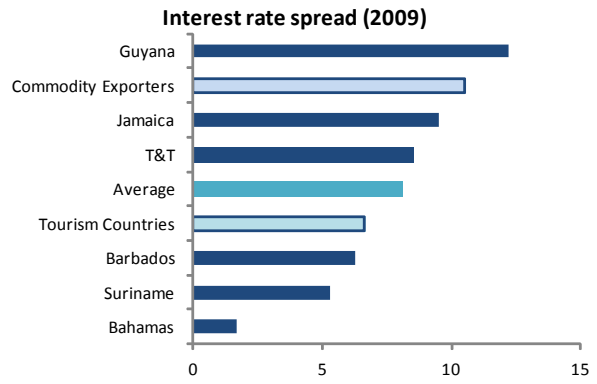
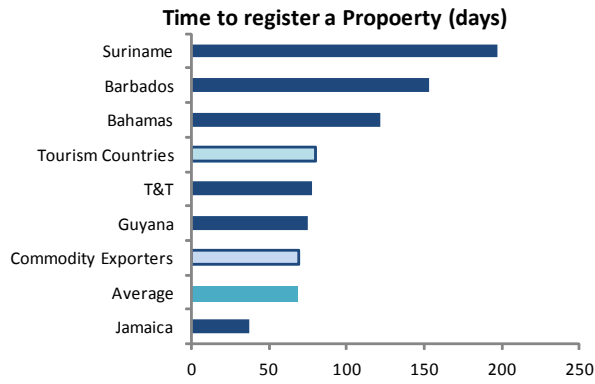
Company spending on R&D



Policy Indicators II



Policy Indicators III



Sources: World Bank, International Labor Organization, and Authors' Calculations.

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