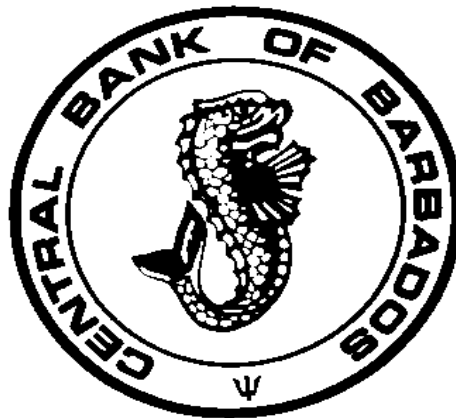


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**SUPPORTING THE GROWTH OF SERVICE EXPORTS IN THE
CARIBBEAN: IS THERE A ROLE FOR POLICY INTERVENTION**

BY

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CENTRAL BANK OF BARBADOS

Supporting the Growth of Service Exports in the Caribbean: Is there a Role for Policy Intervention

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Supporting the Growth of Export Services in the Caribbean: Is there a Role for Policy Intervention

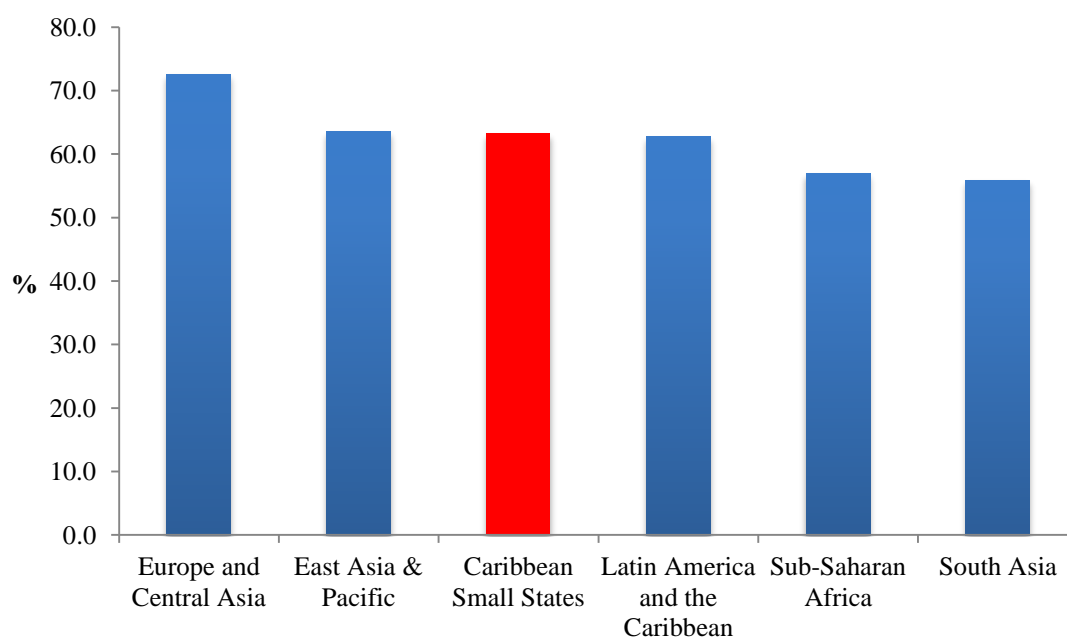
The Caribbean is highly dependent on services as a means of generating growth, employment and foreign exchange earnings. In large measure, however, there is a limited understanding of the factors that encourage service companies in the region to enter foreign markets. This paper uses micro-econometric models of the export propensity of service companies in the region in order to identify the key variables that either support or hinder export services activity in the region. The regression results suggest that company size, export promotion support, the type of industry, the level of informal competition, theft and disorder as well as the availability of labour skills were the most important determinants of the export decision as well as export propensity. In addition, support for export promotion efforts in the Caribbean had the largest marginal effect on firms export decisions. The paper therefore recommends that policymakers in the region need to refocus their policy interventions as most support to date as focused on issues that would enable firms capturing a greater share of the domestic market.

Keywords: Export propensity; Service companies; Policy interventions

1 Introduction

Most Caribbean economies are highly dependent on services for the generation of economic activity and employment opportunities. In 2012, approximately 63 percent of gross domestic product (GDP) in Caribbean Small States was due to the activities of service industries, mainly tourism (Figure 1). In some Caribbean countries, the proportion of economic activity accounted for by services is even higher. In Antigua and Barbuda, the Bahamas, Barbados, Grenada and St. Lucia, more than 80 percent of the economic activity arises due to service related activities, while in Jamaica, St. Kitts and Nevis as well as St. Vincent and the Grenadines the proportion was over 70 percent.

Figure 1: Services (% of GDP) in Various Regions (2012)

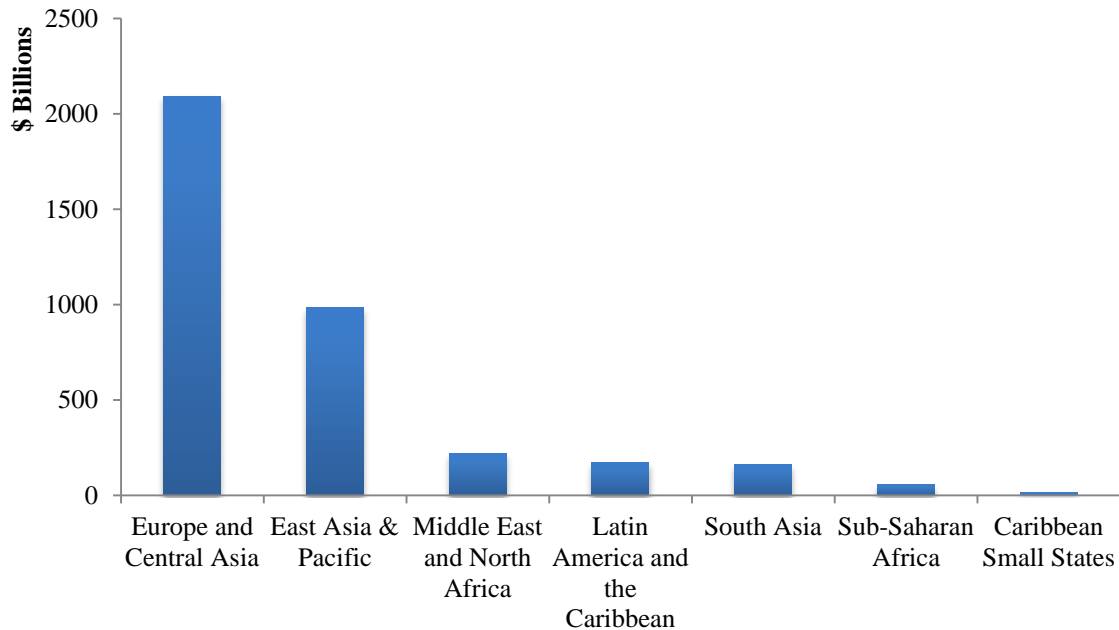


Source: World Bank's World Development Indicators

Services exports from Caribbean small states are miniscule when compared to most other regions (Figure 2). Europe and Central Asia's exports of services in 2012 were

over \$2 trillion, more than double that of the next largest region (East Asia and Pacific). In contrast, service exports from Caribbean small states was just \$16 billion, almost 3 times less than the next region (Sub-Saharan Africa).

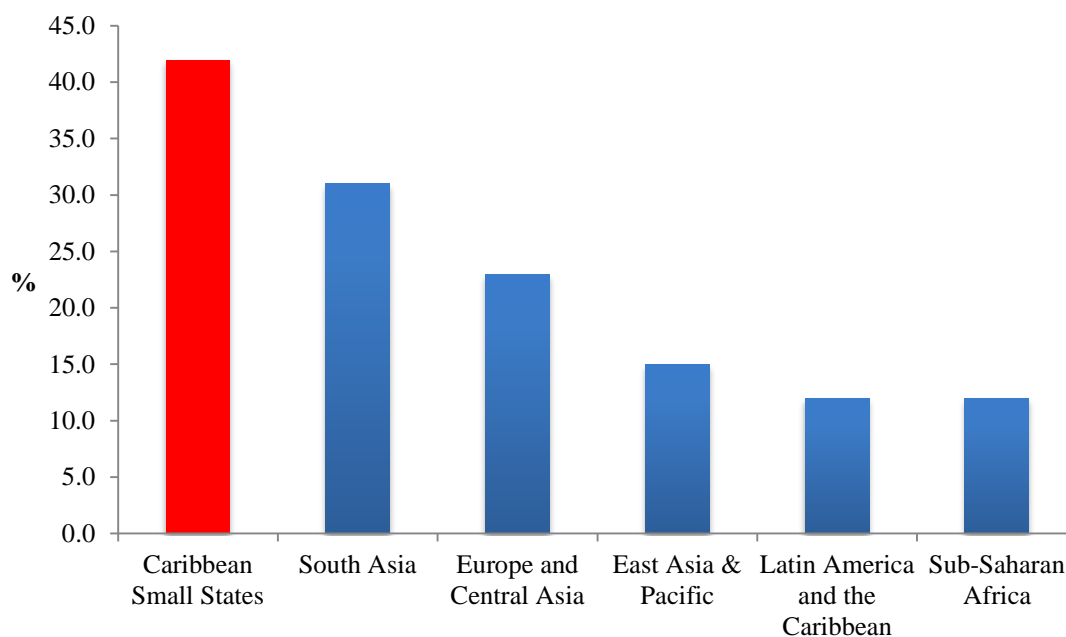
Figure 2: Services Exports from Various Regions (2012)



Source: World Bank's World Development Indicators

Although Caribbean small states only account for a relatively small share of world exports of services, most of these countries are highly dependent on service exports (mainly tourism and financial services). In 2012, more than 42 percent of exports was due to services compared to 31 percent for South Asia and just 23 percent in Europe (Figure 3). Therefore, while relatively small players in terms of overall exports of services, these countries are highly dependent on their service industries to generate economic activity and earn foreign exchange.

Figure 3: Service Exports (% of Exports of Goods and Services) in Various Regions (2012)



Source: World Bank's World Development Indicators

Economic concentration can result in increased economic volatility (Moore & Walkes, 2010), and as a result, Caribbean countries have sought to diversify their economies in order to reduce their vulnerabilities. Unfortunately, there is a high level of concentration within the services industry of most Caribbean economies, mainly in the area of tourism. Erikson and Lawrence (2008) note, however, that by developing competitive Caribbean service industries, the region can create further avenues for sustainable growth, employment and linkages with other areas of the economy.

This paper contributes to the literature in three main areas. First it attempts to identify the potential constraints that size of a firm's home market may have on its potential to export. Second, the authors provide an assessment of the various factors that explain the export performance of firms from small states that have been able to internationalise

by comparing success factors to those found in the literature. Finally, the role of policy interventions to either offset the constraints placed on firms due to their size and/or support internationalisation.

The remainder of this study is structured as follows. Following the introduction, the study reviews the literature to identify key factors that have been found to explain the export propensity of service companies. In Section 3, an assessment of the propensity of Caribbean service companies to export is provided while Section 4 outlines the methodological approach used in the study to explain the propensity of firms to export services. Section 5 provides a summary of the results and the implications for policymakers in Caribbean small states and those interested in supporting the growth of export services generally.

2 Review of Related Literature

2.1 Internationalisation of Services

Most of the literature on the export participation decision has largely focused on the exports of manufacturing industries (Sousa, Martinez-Lopez, & Coelho, 2008). Exporting goods means that the firm will need to engage in supply chain management, transportation, logistics, to name a few, which differ from the requirements for exporting of service companies (Knight, 1999). Edvardsson et al (1993) develops a conceptual framework for analysing the internationalisation of knowledge-sensitive service companies. The process is divided into four stages: prospecting, introduction, consolidation and reorientation. This framework was then evaluated by collecting data

from ten service companies over ten years at different stages of the international process and various service categories in Sweden. Information was obtained from personal interviews and documents that described the internationalisation process. In general the results suggest that successful internationalisation is often associated with offering competitive services at home as well as having financial resources and management capacities for international growth. In addition to the above factors, the results also suggest the importance of dependability and evidence of competence, good judgement and commitment.

It should be noted, however that service companies are very heterogeneous. As a result, the general factors that support internationalisation for one firm might not hold for other enterprises. Vinh et al. (2005) identifies four types of service products: (1) location-free professional services (e.g. consultants); (2) location-bound customized projects (e.g. engineering); (3) standardized service packages (e.g. software); and, (4) value-added customized projects. Given the diversity in service firm types, this might mean that the variables that drive export services may differ from one service enterprise to another. Vinh et al. (2005) segment these companies into four quadrants varying with degree of tangibility and face-to-face contact and identifies eight determinants of export market performance (technical facilitation, process quality, relational competence, cultural sensitivity, country of origin, managing tangible cues, service climate, product differentiability and top management commitment), with some factors being more important for particular cells in the quadrant than others. The authors therefore suggest that researchers should be careful in applying the traditional export performance framework developed for manufacturing companies to service firms.

Most firms in the Caribbean tend to be small firms producing primarily for the domestic market. Therefore, while export market participation provides a larger potential market for the outputs of these firms, resource constraints can act as a significant hurdle. In addition to these domestic constraints, external factors may also significantly affect potential foreign market participation. Laanti et al (2009) examines the issue of international market participation among service companies from small and open economies. The companies studied were all from the telecommunications industry and were all from small open economies. The paper considered five types of factors that potentially could influence the internationalisation decision. These include global factors, industry specific factors, home country factors, company specific factors and host country factors. The methodological approach used was a cross-border multiple-case study approach. The authors found that the determinants of internationalisation of these service companies often varied from the literature examining internationalisation of manufacturing companies. Key home country specific determinants of internationalisation were deregulation developments, growth of the industry, technological developments and industry structure. The authors also mentioned key size constraints such as the size of the domestic markets, limited resources and the need to search for further customers. The paper also suggested that enter foreign markets from a small country can be helpful, as firms tend to underestimate the competitive threat.

2.2 Effectiveness of policy support mechanisms

An increase in export activity benefits domestic economic performance (see Ekanayake 1999; Ram 1987), as such policy makers have long initiated export promotion policies

on the premise that these would allow firms to enter new markets (or become more competitive in existing markets) relative to the export of their goods and services. Government aid is important as export promotion is based on the asymmetry of information and other market failures. There is significant importance of externalities associated with conducting foreign market research as it relates to things such as, consumer preference, business opportunities, quality and technical requirements, etc. and this comes at a hefty cost in which most small to medium-sized firms are either unwilling or unable to pay. Coupled with the cost of breaking into new markets, the level of uncertainty associated with international trade given the differences in legislation has also been identified as a reason why export promotion schemes supported by the public sector are important for exportation (see Greenaway and Kneller, 2005).

Surprisingly, earlier literature suggests that support programmes have been inadequately structured, had limited penetration and as such translated into very little increase in exports (Gray 1997, Seringhaus and Rosson 1990). Furthermore, during the 1980's the World Bank did an assessment on developing countries and in this report they argue that government funded export promotion had no significant effect on increasing exports (See Hogan, Keesing and Singer, 1991). This idea was also supported by Kedia and Chhokar (1986), who found that export promotion programs in the United States had little impact on exports, however their conclusion was that this was due to lack of awareness and given greater penetration results may have differed. However, the idea of lack of awareness was refuted by Seringhaus and Botschen (1991) in the case of Austria and Canada. Surveying the opinion of around 600 firms in Canada and Austria, they found that export promotion initiatives used by firms were low due to the fact that the

programmes were not addressing the needs of exporters. Recent research on the link between programme usage and export performance was tested by Gencturk and Kotabe (2001). Using a sample of 162 US firms, they found that the usage of export programs only increased profitability and did not result in any increase of sales. This suggests that externalities did not exist across firms and export programmes only stood as a transfer of cost from the firm to government. The study also found that exporters with the most experience profited from government programmes more than new exporters, which goes against traditional export promotion policy.

During the last decade there has been a switch in the findings in the literature. The rationale underlying these recent criticisms of Keesing and Singer (1991, 1991a) was that the early failures of export promotion agencies (EPAs) were mainly due to import substitution policies that made the job of EPAs very difficult. Lederman et al. (2006) concluded that national EPAs have on average a strong and statistically significant impact on exports.

Helleiner (2002) during a study of how governments can promote non-traditional exports in Africa recommended that the creation of an adequately funded EPA to help exporters overcome the costs and risks of entering unfamiliar and demanding international markets. Czinkota (2002) argues that governments should seek to find out what firms need to start exporting and alert them when they are ready to extend their product cross borders. This is because many executives do not initiate export activities because of the uncertainty associated with new elements such as variable currency exchange rates, increase in transportation costs, government regulations, new legal and financial systems, among others. The government is well situated to assist firms

overcome such barriers. To add to the argument of Czinkota 2002 de Wulf 2001 posits that the key problem with export promotion programmes was the lack of funding and that well-funded programmes such as the case with Korea, China and Taiwan could overcome bad policy environments.

Macario (2000) identified the policies that determine successes and failures in Brazil, Chile, Colombia, and Mexico. By conducting interviews with firms successful in exportation, she was able to compile a set of recommendations for better efficiency in export promotion agencies. The conclusion of her study was that policies should be directed to firms with new products or firms entering untapped markets, emphasis should be placed on cost sharing to ensure that program contains firms dedicated to export, support should be capped at 2-3 years as to ensure that the program does not morph into a subsidy, the program should be joint between the private and public sectors as agencies subjected to both public and private management tend to perform best.

3 The Data

The data consists of firm level observations for 11 Caribbean countries. The data was obtained from the World Bank's Enterprise Surveys between 2009 and 2010. A common sampling technique – stratified random sampling – was used in all the surveys along with a common questionnaire. This common questionnaire allows for comparison across countries.

The sample for each country was stratified by the firm-size, sector of activity and location within the country. The survey is weighted; therefore the sample represents the

non-agricultural private sector of the economy. It must be noted that the Enterprise Survey does not encompass education and health care within the services sector. Finally the sample used is purely cross-sectional i.e. one observation per firm.

Given the broad scope of the questionnaire only a few elements of the survey¹ relative to the area under review were used:

- 1) General Information – which includes the characteristics of the establishment
- 2) Infrastructure and Service – includes power, water, transport, and communication technologies
- 3) Sales and Supplies – imports, exports supply and demand conditions
- 4) Degree of Competition – number of competitors and technology
- 5) Finance – sources of finance, access to credit
- 6) Business Government Relations – quality of public services, consistency of policy, regulatory compliance costs (management time, bribes)
- 7) Labour – employment, training, skills
- 8) Business Environment – ranking of general obstacles
- 9) Performance – numbers and figures needed to estimate performance or productivity.

The main focus of this research effort is to determine whether policy intervention can help support the export of services in the Caribbean. Therefore we must first take a cursive look at the propensity to export amongst the firms, what type of firm is most likely to export and the composition of exporting firms in each country under review.

¹ Taken from Understanding the Questionnaire (World Bank, 2011)

Figure 4 shows that the propensity (measured by exports as a percentage of total sales) is relatively high relative to the size of firms in the Caribbean, giving the impression that firms are dedicated to supply their services cross borders with exportation ranging from a high of 16 percent of total sales to as low as two 2 percent.

Figure 4: Export Propensity Among Service Firms in Various Caribbean Countries



Source: *World Bank Enterprise Surveys*

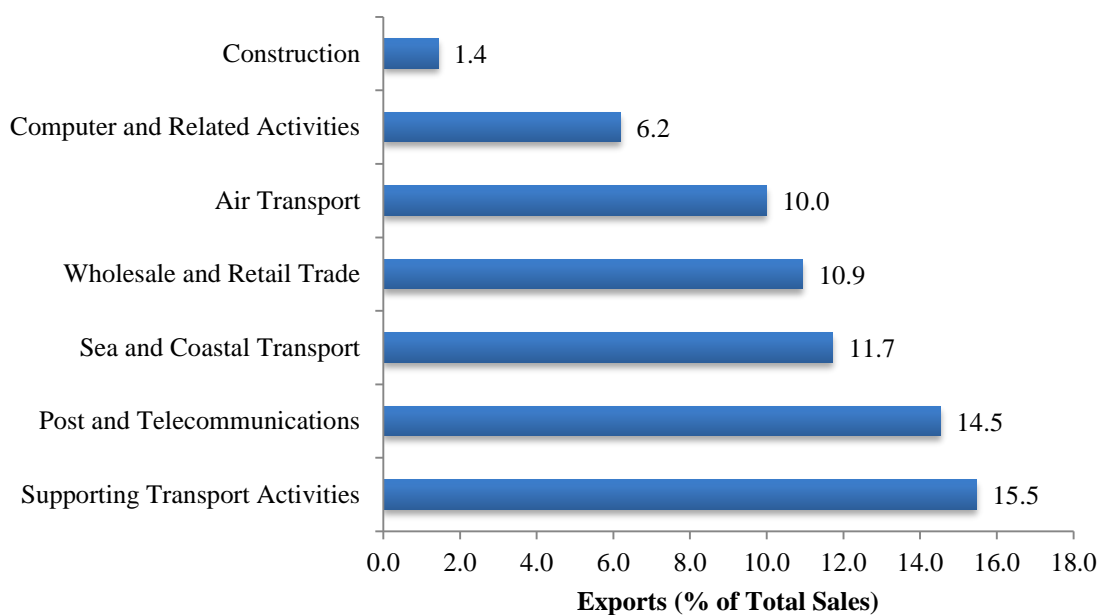
Figure 5 shows that the propensity to export by firm type. The firm type with the largest propensity to export is that classified as “ Supporting Transport Activities” this class includes², activities related to land transport of passengers, animals or freight. This is expected given the regions high dependency on tourism related services. In fact with an average contribution to GDP of 36 percent the Caribbean is labelled as the region most dependent³ on tourism. The other categories that identify the larger exporters are

² This class excludes cargo handling and operation of docking facilities related to pleasure boats.

³ See Sustainability Impact Assessment of The EU-ACP Economic Partnership Agreements: Caribbean Region – Tourism.

post and telecommunications (14 percent), sea and costal transport (12 percent) and wholesale and retail (11 percent).

Figure 5: Export Propensity Among Firms in Various Service Industries

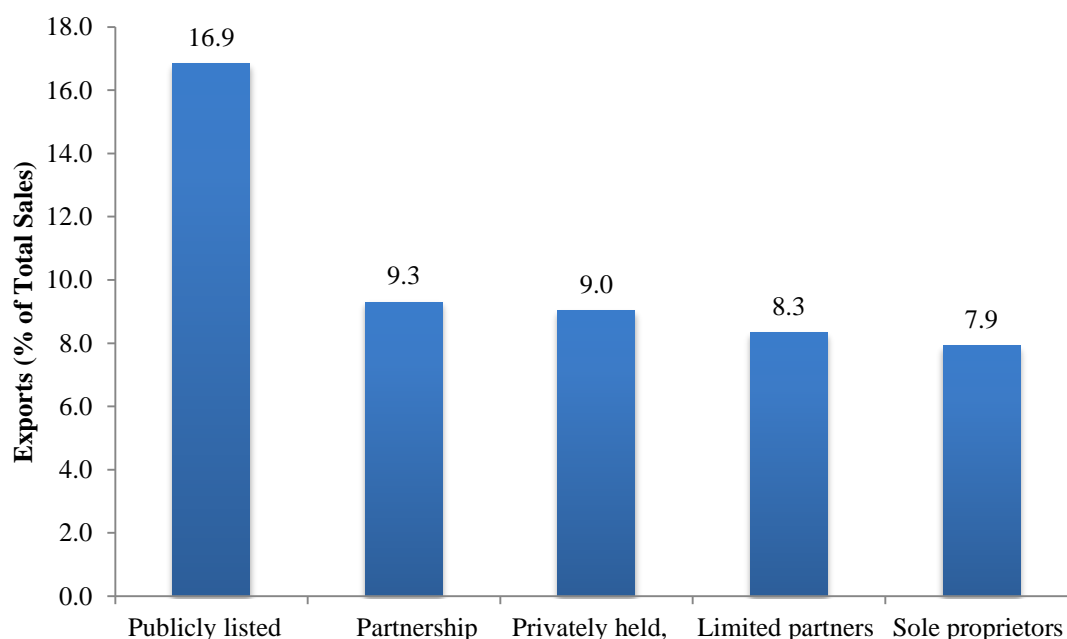


Source: *World Bank Enterprise Surveys*

Figure 6 shows that on average; publicly listed companies have the largest propensity to export with 17 percent of total sales earmarked across borders. Even though for the most part stock markets are underdeveloped within the region, these companies have the ability to raise capital through the issuance of shares and therefore have higher incentives to generate profits to repay promised dividends. Partnerships and privately held companies total exports are about 9 percent of total sales. Even though almost half that of publicly listed companies they too have the burden of profit share and are therefore more likely to look to increase their sales across borders in order to increase profits. Limited partners and sole proprietors have less incentive to take on the risk of

extending their product beyond domestic shores. This may be heavily influenced by the fact that capital required to undertake this cost intensive process may be too costly, personnel may not be sufficiently skilled to undertake this task or parties may just be comfortable with the level of business generated and have no desire to export.

Figure 6: Export Propensity Among Firms by Legal Status



Source: *World Bank Enterprise Surveys*

The types of goods that the region exports do not tend to be unique: the Caribbean, by and large, exports a small set of goods and services that are being produced by other countries around the world. Figure 7 plots the share of the top three export markets against the share of the top three exported products. The exports from most countries in the region are highly concentrated in a few markets, primarily the US and UK and by and large in a few product categories. In St. Kitts and Nevis, for example, the top three markets account for 95 percent of exports, while the top three product categories represent 80 percent of exports.

Figure 7: Product and Export Market Concentration

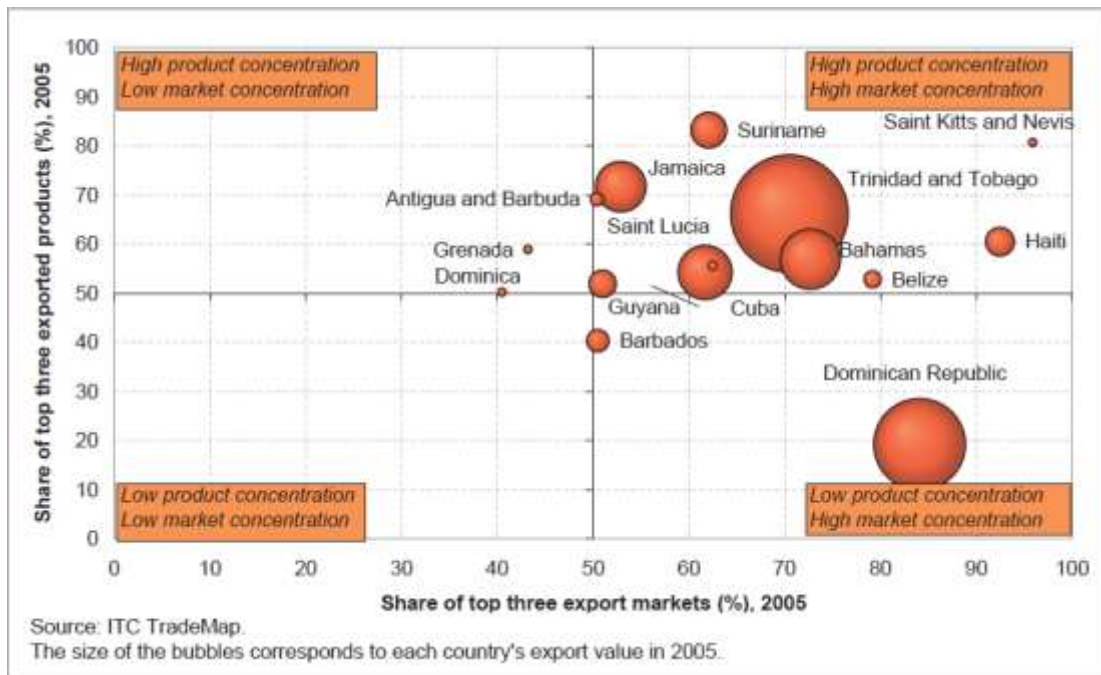


Table 1 provides a summary of the descriptive statistics of the firms in the database. Summary statistics on mean firm characteristics are provided in relation to export participation, foreign ownership, government investment, female ownership, firm age, international quality certification, number of employees and sales. In general, most companies in the database are engaging in some degree of export market participation, even though in some instances this participation is relatively small. In Guyana and Dominica, one-fifth of these companies are owned by individuals not from the host country and very few are state-owned. On average, approximately 1 percent of these firms have female owners and 2 percent or less are internationally certified.

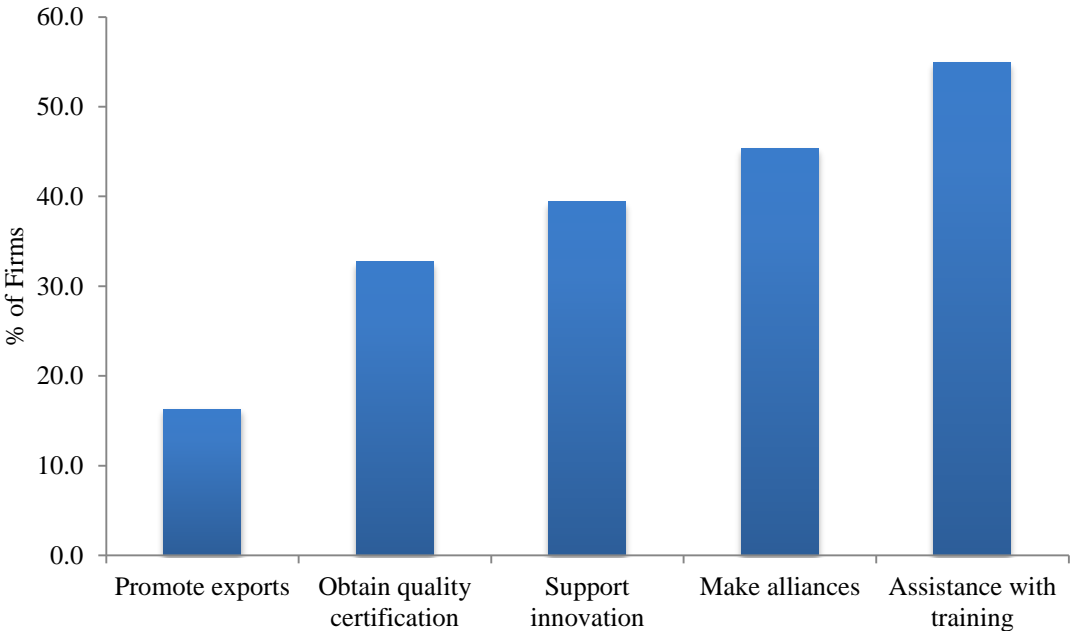
Table 1: Characteristics of Firms in Database

	Antigua and Barbuda	Bahamas	Belize	Barbados	Dominica	Grenada	Guyana	St. Kitts and Nevis	St. Lucia	St. Vincent	Suriname
Exports (% of sales)	9.034	5.851	13.269	9.126	15.680	2.310	8.688	6.471	14.954	7.295	3.571
% Owned by foreign individuals or organisations	8.367	17.333	9.718	13.608	20.107	13.225	20.129	13.926	16.897	12.067	5.065
% Owned by government or state	0.419	0.000	0.000	0.253	0.000	0.217	0.000	0.000	0.000	0.000	0.000
Proportion of firms with female owners	1.795	1.065	1.679	1.519	1.615	0.791	1.312	1.083	1.632	0.657	1.779
Year of establishment	1955	1894	1991	1863	1996	1986	1986	1959	1995	1933	1986
Proportion of firms with internationally-recognised quality certification	1.872	0.361	2.000	1.481	2.000	0.946	1.409	1.430	2.000	1.476	1.766
Number of employees	29.803	77.963	29.692	66.962	21.262	31.039	66.140	29.587	51.586	26.581	43.753
Total Sales	5,718,623	9,090,413	4,076,807	5,707,691	3,031,625	5,222,534	702,000,000	5,915,098	6,197,620	4,763,947	7,995,958

Source: *World Bank Enterprise Surveys*

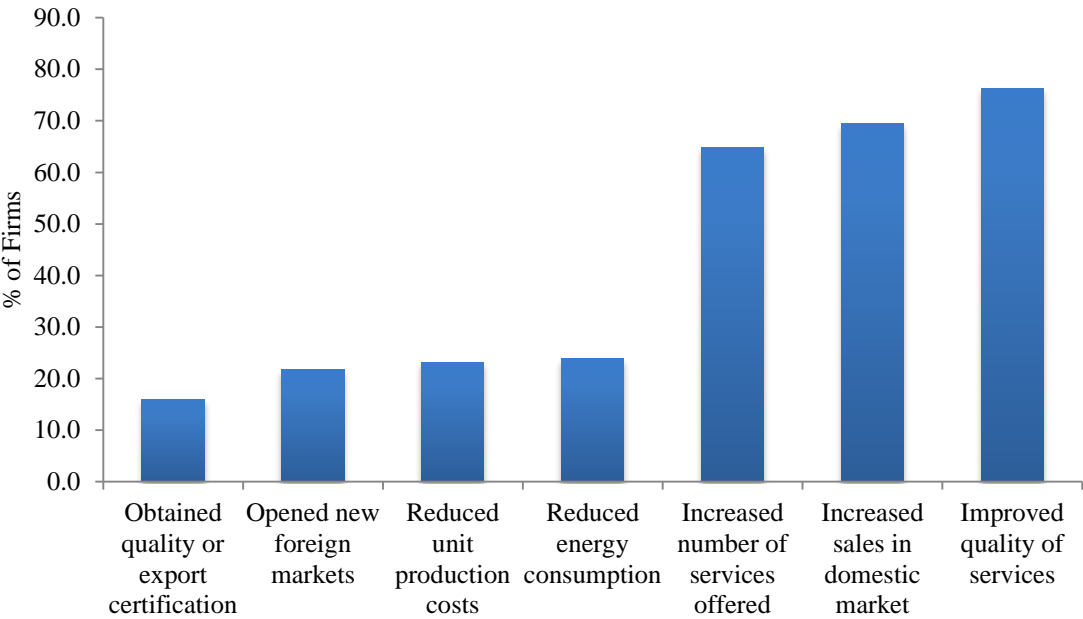
In general, firms that do receive support normally receive this support in the form of assistance for training employees or managers (Figure 8). More than 55 percent of the companies in the database received some type of training for the staff of the establishment. In contrast, only 16 percent of the companies surveyed received any type of support in the area of export promotion. This comparatively low level of support received for export promotion suggests some asymmetry in the objectives of Caribbean policymakers and actual policy implementation. If the main objective of governments within the Caribbean is to support the export of services, then export promotion and facilitation would have to be further dispersed among service companies in the region.

Figure 8: Type of Support Received by Firms



In terms of the impact, Figure 9 suggests that these policy interventions primarily impact on the domestic market success of these companies. More than 60 percent of companies noted that the support they received assisted them in increasing the number of services they offered, expanding their penetration of the home market and enhanced the quality of services they offered. In contrast, less than 20 percent of the companies noted that the support allowed them to obtain quality or export certification or opened new markets.

Figure 9: Impact of Support Received



4 Empirical Methodology

Based on the literature reviewed in Section 2, the following empirical model can be employed:

$$\begin{aligned} \left(\frac{X_i}{S}\right)^* &= \alpha + \beta_1 H_i + \beta_2 R_i + \beta_3 PC_i + \beta_4 HC_i + \beta_5 PS_i + \varepsilon_i \\ \left(\frac{X_i}{S}\right) &= 0 \quad \text{if } \left(\frac{X_i}{S}\right)^* \leq 0 \\ \left(\frac{X_i}{S}\right) &= 1 \quad \text{if } \left(\frac{X_i}{S}\right)^* > 0 \end{aligned} \tag{1}$$

where $\frac{X_i}{S}$ is export propensity, that is the share of exports in total company sales, H_i are indicators of the company's position in the domestic market, R_i reputational indicators, PC_i product characteristics, HC_i home country characteristics and PS_i policy support mechanism.

Equation (1) is a censored regression model where the dependent variable can take a value of 0, if the firm does not export, or some positive value, dependent on export propensity. As noted by Sterlacchini (1999), however, the tobit model imposes a sign restriction on the effect of each explanatory factor on the probability of exporting and export intensity. To evaluate the this restriction, Greene (1993) suggests testing this restriction against an alternative unrestricted form comprising separate probit and truncated regression models for the probability of exporting and export intensity. This likelihood ratio statistic can be computed as:

$$\lambda = -2[\ln L_T - (\ln L_P + \ln L_{TR})] \quad (2)$$

where L_T is the likelihood for the tobit model, L_P is the likelihood for the probit model and L_{TR} is the likelihood for the truncated regression model.

Given the above criticisms, the paper also estimates a more general model specification as outlined by Cragg (1971), where the probability of exporting is independent of the export intensity. There are many reasons to think that the decision of whether or not to export differs from export intensity. For example, once a firm makes a decision to export, the company builds its reputation/brand that may then lead to further export opportunities. To exploit these opportunities, however, might require a different set of characteristics and support mechanisms. In this more general framework, the decision equation is given as:

$$\begin{aligned} \text{Prob} \left[\left(\frac{X_i}{S} \right)^* > 0 \right] &= \Phi(x_i' \gamma), & z_i &= 1 \text{ if } \left(\frac{X_i}{S} \right)^* > 0 \\ \text{Prob} \left[\left(\frac{X_i}{S} \right)^* \leq 0 \right] &= 1 - \Phi(x_i' \gamma), & z_i &= 0 \text{ if } \left(\frac{X_i}{S} \right)^* \leq 0 \end{aligned} \quad (3)$$

The regression equation for the non-limited observations, however, would be given by:

$$E \left[\left(\frac{X_i}{S} \right) | z_i = 1 \right] = x_i' \gamma + \sigma \delta_i \quad (4)$$

Firm level determinants of the export decision are employed in the empirical specification such as age, size, ownership status, industry and dummy variables, which take the value of one if the firm is a multinational, received a subsidy, is foreign-owned and has export experience and zero otherwise. The model also includes sector specific variables with dummy variables indicating if the firm has 3 or more competitors or none.

The inclusion of size and age follows the work of Roberts and Tybout (1997) and Aitken, Hanson and Harrison (1997), to name a few and are included to control for the past performance of the firm. More specifically older and larger firms are more likely to have been successful in terms of profitability and growth in the past and therefore should be more likely to be exporters. Bernard and Jensen (2001) also note that larger firms may have lower average or marginal costs, through economies of scale, which increases the likelihood of exporting.

Dummy variables signifying whether the firm is a corporation or sole owner are also included in the model. These are employed to test whether a particular ownership status is related to the export decision. It is expected that corporations should be more likely to enter foreign markets since they usually have the necessary human resources to enter trade. Three dummy variables representing the sector of business are also included in the model. Multinational enterprises should be more likely to be producing for export (Brainard, 1997), thus a dummy variable which takes the value of one if the firm is a multinational is included in the empirical specification. Ownership status is also differentiated by the inclusion of a dummy indicating whether the firm is foreign or locally owned.

Policymakers in various countries have tried to encourage firms to export by utilizing subsidies or by also acting as a coordinator by actively seeking markets for domestic firms. These encourage internationalization by reducing the cost of entering foreign markets. The final firm specific variable attempts to capture the sunk costs of exporting, similar to Roberts and Tybout (1997), Bernard and Wagner (1998) and Bernard and Jensen (2001). It is expected that those firms with previous experience in export markets should more likely

be exporters in the current period given that they have already paid the sunk costs of establishing an international presence.

The basic export model also includes a sector specific variable, which takes into account the number of competitors of a firm. This variable is included to test whether competition acts as a spur to export activity or if an increase in the number of competitors restricts the size of the firm and therefore makes it less likely to be an exporter.

5 Empirical Results

The regression results for the determinants of service export intensity of Caribbean firms are provided in the Appendix. The tobit regression results, which attempt to model both the export decision and export intensity, are provided first. The model is, however, only able to explain a relatively small proportion of the variation in export intensity (3 percent). This could suggest, as highlighted in the methodological section of the study, that the factors that influence the export decision might differ from those that impact on export intensity. The probit regression results as well as the truncated coefficient estimates are therefore provided in the final two tables of the appendix.

From the tobit model seven factors were identified as being relatively important determinants of the export decision: firm size, whether or not the company received assistance for export promotion, industry dummies, the existence of a website, the degree of competition from informal firms and the extent to which the firm identified theft and

disorder as a constraint to doing business. The negative coefficient on the size variable suggests that smaller Caribbean firms are unlikely to be providing their services outside of their home market. The degree of competition from informal companies and the level of theft and disorder in the country also had a significant negative effect on export intensity.

In contrast, the existence of company website and whether or not the company received support for export motion activities were also positive and significantly related to export intensity. These results are instructive as they suggest that export support for service companies in the Caribbean does yield positive results and to some extent speaks to the efficacy of the export promotion effort in the region. The positive coefficient on the website variable supports the notion put forward by Edvardsson et al (1993) that for service companies, reputation is key when trying to access foreign markets. By having a website, potential customers are not only informed about the existence of a product but can also research the credentials of the service company.

As noted in the methodological section, the factors that influence a company's export decision might differ from those that influence export intensity (i.e. the decision to expand further in foreign markets). Looking first at the export decision, the set of significant explanatory variables is indeed somewhat different. In addition to the variables identified in the previous two paragraphs, the decision to export was also influenced by the availability of skilled labour. Besides the addition of skilled labour as a key explanatory variable, the results were largely similar in terms of directional impact. Most significant, however, companies that received export support were 17 percent more likely to be exporters. The marginal effect of export promotion was greater than that for ownership

status, support for international certification as well as whether or not the company received support to train its labour resources. This result, suggests that the most significant intervention policymakers can do in the Caribbean is to actively help service companies to find and locate potential export markets.

The truncated regression results, only those firms that were exporters, also had somewhat different influences. This suggest that once a firm enters the export market, a different set of characteristics/skills now becomes important as it relates to increasing export intensity. For this regression, the key explanatory variables were size, export promotion efforts, industry, informal competition, theft and the availability of labour skills. The results in relation to export promotion suggests that even after a company penetrates external markets, maintaining support is still necessary for most small firms in the Caribbean. In addition, addressing issues in relation to the enabling market at home are also critical. The unavailability of necessary skills as well as a high level theft and disorder can significantly reduce the export propensity of regional service companies. In addition, the negative coefficient on the size variable in all three regressions is instructive and indicates that export promotion support should not just be aimed at large enterprises.

6 Conclusions

Caribbean small states only account for a relatively small share of world exports of services. Nevertheless, these countries are highly dependent on the exports of services to generate income, employment opportunities and foreign exchange. Given the importance

of services, this paper provides an assessment of those factors that either drive or hinder export market propensity among Caribbean firms.

The results reported in the study suggest that export market propensity is largely related to size, support for export promotion, industry, the degree of informal competition, theft and disorder as well as the availability of labour skills. Of these factors, support for export promotion was most important: firms that received support for export promotion were 17 percent more likely to be providing services outside of the home market. This level of impact was larger than any of the other policy interventions considered including support for training as well as international certification. Indeed, export promotion not only enhances the probability of a firm participating in export markets, it also has a positive impact on export market intensity.

This result, however, suggest that policy interventions in region may need to be shifted some what as most support for service companies in the region tends to be in areas such as staff training, research and development as well as building alliances. These interventions normally enhance the control of the firm over the domestic market, without any necessary benefit in terms of export propensity. Indeed less than 20 percent of the service companies that received support in the region reported that this helped them to penetrate foreign markets. The findings in relation to size are also instructive, as they indicate that size does not inhibit a company's ability to enter foreign markets.

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Appendix – Econometric Results

Table 2: Tobit Regression Results for Export Propensity

Tobit regression	Number of obs	=	1087
	LR chi2(19)	=	129.68
	Prob > chi2	=	0.0000
Log likelihood = -1790.5908	Pseudo R2	=	0.0349

ex_sales	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
lage	-.6536043	4.291672	-0.15	0.879	-9.074669	7.767461
size	-13.60831	7.267396	-1.87	0.061	-27.86831	.6516804
ex_promo	46.60316	8.036189	5.80	0.000	30.83465	62.37167
corp	4.87154	7.260175	0.67	0.502	-9.374285	19.11737
b2a	-.0331304	.2145039	-0.15	0.877	-.4540274	.3877666
b2b	.1049682	.2234191	0.47	0.639	-.3334219	.5433584
b7	-.4681556	.3368172	-1.39	0.165	-1.129054	.1927429
intl_cert	10.30553	8.295777	1.24	0.214	-5.972341	26.5834
industry_travel	60.82111	15.76559	3.86	0.000	29.88607	91.75616
industry_wnr	30.29294	13.46818	2.25	0.025	3.86585	56.72003
industry_cons	-24.76179	17.90543	-1.38	0.167	-59.8956	10.37203
com_website	17.36768	10.21604	1.70	0.089	-2.67811	37.41347
comp_inform	-13.85861	6.801911	-2.04	0.042	-27.20524	-.5119871
constrain_theft	-20.24273	8.415418	-2.41	0.016	-36.75536	-3.730101
elec	-3.55e-06	2.35e-06	-1.51	0.130	-8.16e-06	1.05e-06
labskills	-15.97664	11.07758	-1.44	0.150	-37.71293	5.75964
labregs	1.122616	21.87734	0.05	0.959	-41.80484	44.05007
training	8.442814	7.31387	1.15	0.249	-5.908371	22.794
constrain_taxes	-5.174547	9.899811	-0.52	0.601	-24.59983	14.25074
_cons	-80.24133	30.40349	-2.64	0.008	-139.8987	-20.58398
/sigma	78.30864	4.096832			70.26989	86.34739

Obs. summary: 831 left-censored observations at ex_sales<=0
 256 uncensored observations
 0 right-censored observations

Table 4: Truncated Regression Results for Exporters

Source	SS	df	MS			
Model	22.2432978	19	1.17069988	Number of obs =	1099	
Residual	174.124309	1079	.161375634	F(19, 1079) =	7.25	
				Prob > F =	0.0000	
				R-squared =	0.1133	
				Adj R-squared =	0.0977	
Total	196.367607	1098	.178841172	Root MSE =	.40172	

ex_d	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
lage	-.0055681	.0161754	-0.34	0.731	-.037307	.0261708
size	-.0571082	.0274313	-2.08	0.038	-.110933	-.0032834
ex_promo	.2112767	.0330619	6.39	0.000	.1464038	.2761496
corp	.0257601	.0278262	0.93	0.355	-.0288395	.0803597
b2a	-.0000401	.0008214	-0.05	0.961	-.0016517	.0015715
b2b	.0003361	.0008717	0.39	0.700	-.0013744	.0020466
b7	-.0004257	.0012253	-0.35	0.728	-.00283	.0019786
intl_cert	.0332863	.0321682	1.03	0.301	-.0298329	.0964055
industry_travel	.2608204	.0593627	4.39	0.000	.144341	.3772997
industry_wnr	.0861522	.046865	1.84	0.066	-.0058047	.1781091
industry_cons	-.059688	.0568842	-1.05	0.294	-.1713042	.0519283
com_website	.0572971	.035769	1.60	0.109	-.0128875	.1274818
comp_inform	-.0473268	.0257044	-1.84	0.066	-.0977632	.0031095
constrain_theft	-.064649	.0294756	-2.19	0.028	-.122485	-.006813
elec	-1.70e-08	1.19e-08	-1.43	0.153	-4.03e-08	6.32e-09
labskills	-.0710826	.0384102	-1.85	0.064	-.1464498	.0042845
labregs	-.0434304	.078314	-0.55	0.579	-.1970955	.1102347
training	.0347173	.0276093	1.26	0.209	-.0194568	.0888913
constrain_taxes	-.0060514	.0358577	-0.17	0.866	-.0764101	.0643073
_cons	.1480348	.1083871	1.37	0.172	-.0646385	.3607082