



**THE IMPACT OF SMALL SIZE AND OPENNESS ON  
FISCAL POLICY AND PERFORMANCE**

by

Kevin Woods  
Eastern Caribbean Central Bank

Presented at the Annual Review Seminar, Research Department,  
Central Bank of Barbados  
July 25 - 28, 2000

**Research Project**

**By**

**Kevin Woods**

**THE IMPACT OF SMALL SIZE AND OPENNESS  
ON FISCAL POLICY AND PERFORMANCE**

**1. Introduction**

This paper has as its objective the investigation, based on empirical evidence, of whether a positive correlation exists between the size of a country and the level of the overall balance as a proportion of GDP. Essentially the approach will be based on an attempt to establish a link (if such exists) between the factors emanating from small size, and the manner in which they influence government's fiscal performance and their approach to fiscal policy. The findings based on the data analysis will be used to make certain inferences on what influences the choice of a particular type of policy in small states particularly as it relates to the OECS.

The number of studies available on the factors characteristic of small states, and the special circumstances they face is certainly voluminous. Especially in this era of globalisation, studies on the challenges peculiar to small states given the new "international architecture" are seemingly en vogue. But while there is a lot said in the literature regarding circumstances unique to small states this paper attempts to carry these extensively documented concepts a little further. Not only will the paper make reference to familiar terms such as size, openness and vulnerability -the descriptive jargon commonly associated with small states - but it will do so while attempting to link these concepts, establishing how these interrelate and impact on the role of the state. The paper seeks to access this impact particularly with regard to the government's fiscal operations.

To accomplish this, first there is a need to identify or distinguish small states from larger ones. As the paper maintains -like so many other references- the selection process is in itself fraught with controversy, however some attempt will be made to implement a selection criteria based on generally established ranks and classifications. From this the data will be divided into two series in order to apply some preliminary analyses. Some basic descriptive statistics will be generated from tests done on the overall balance /GDP ratios, derived from the data set for both large and small countries. The purpose of these tests is to determine whether there are any significant differences in the means of both data series which might lay the basis for further investigations. Pending the outcome of these tests, investigations will be made in order to ascertain where there exists a positive correlation between the size of a country and the level of its overall balance as a percentage of GDP.

Following this introduction will be a review of the literature highlighting some of the prevailing ideas on the constraints imposed on small states by virtue of their small size. From a theoretical standpoint the notion that size brings with it certain inherent advantages will be critically examined. The advantages associated with small size will be juxtaposed with the limitations. This hopefully will provide the backdrop within which some association can be established between the influence of size and the government's fiscal performance. Having established a conceptual framework of the manner in which size relates to the overall balance as a percentage of GDP of the public sector, the actual data will be used in an attempt to verify this. The results will be used to arrive at certain conclusions and possible policy recommendations.

## 2. Literature Review

### Is Bigger Really Better?

It has long been espoused by economists that there are inherent advantages associated with large size or as it is often termed - 'critical mass'. Not only in the field of

economics but in almost every aspect of life and field of academic thought the cliché 'bigger is better' often attaches itself to the perception, that the proliferation of any subject in question, is invariably accompanied by cost savings which are achieved by subdividing the associated costs over a large area. This manner of reasoning is predicated on the basic concept of economies of scale which suggests that there are gains by way of reduced average costs of production per unit of output, arising from increasing the size of the plant, business or industry. In suitable circumstances, large-scale production leads to important economies in the use of (a) Land - it is most likely that a doubling of production requires twice as much land; (b) Labour - persons with specialised knowledge and skill may devote all of their time to the tasks they perform most efficiently; (c) Capital - specialised units of equipment may be brought into use and fully employed; (d) Marketing - advertising costs per unit may be less; (e) Buying - raw materials may be bought more cheaply by buying in bulk; (f) Finance - a large firm can usually raise new capital more easily and cheaply than a small firm; (g) Research - development costs are spread over many more units." <sup>1</sup>

Implicit in this postulation is that the converse may apply to smaller or absolutely small units - the smaller the firm or industry the greater the cost burden which is spread among the individual units. "The word small refers to size, power or importance of something. In general, it implies lack of ability/capacity to do certain things in comparison to others."<sup>2</sup> Hence the cost savings which may accrue to larger firms or entities associated with their 'largeness' may not be realised by 'small' ones. Small firms cannot easily increase production in the short-run - neither can large firms for that matter- hence output, at least in the short-run is restricted and by extension opportunities for cost savings. Although large firms may face a similar constraint in the short-run, if they do eventually extend their production frontiers, for example, by doubling the area of land under production, it often does not imply a concomitant increase in overheads or variable costs to achieve this. Often the marginal costs per unit are progressively reduced to a point, at which significant cost reductions may be

<sup>1</sup> Economics Dictionary by Donald W. Moffat. Pp.72

<sup>2</sup> Symposium on Small States "Problems and Opportunities in a World of Rapid Change": By B.Baaro

reaped. It therefore becomes obvious that in such an instance efficiencies would be realised.

In regards to Labour, it cannot easily be subdivided and deployed in specialist roles thus contributing to increased efficiencies in the case of small firms. This inability to optimally implement a division of labour arises out of the absence of a sufficient number of persons to be assigned to specific tasks thus exploiting the efficiencies they will generate as they progressively shorten their learning curves.

Small firms at times are unable to fully benefit from the efficiencies derived from capital outlays. Often the scale of operations of the small firm may fail to justify reasons for undertaking large capital investments, while the extent of the small firm's resources may restrict its ability to incur that desired capital investment. It is therefore evident that potential cost savings through intensive capital investment may be unattainable in many cases for small firms whereas the potential of such savings is to a great extent germane to the engaging in intensive capital investment on the part of large firms.

To be fair however, smallness with respect to firms should not always be viewed as a disadvantage. On the contrary in some respects it presents distinct advantages. The economies of scale reaped by a large firm through increasing returns to scale in time taper off to constant returns to scale eventually decelerating to diminishing returns if the firm's expansion continues unchecked. These diseconomies are eventually realised as growth brings with it a new set of challenges and complexities that impose added difficulties on the management of the firm. "The expansion of a firm may make more difficult the ENTREPRENEUR'S tasks of organisation and co-ordination, and this could result in inefficiency. The supply of managerial ability is not unlimited and the delegation of decision taking and supervision becomes increasingly difficult..."<sup>3</sup>. Very often pivotal decisions that can be made in small firms in a matter of hours have a much longer gestation period in the case of large firms.

<sup>3</sup> A New Dictionary of Economics; Philip A.S. Taylor; pp.176

Being small almost coerces certain firms to be creative and revolutionary in their competitive strategy, whether this displays itself in their approach to marketing or the type of methods utilized in production. Visible manifestations of these revolutions are such phenomena as 'Niche Marketing' where small firms seem to be especially cutting-edge, as well as team oriented methods of production characterised by lateral in favor of vertical/top-down communication/centralised strategic planning. Larger firms react more slowly to these developments as they have a more established foothold in the market by virtue of their large size and therefore possess little incentive to change. Very often though, these revolutions in 'the way the firm does business' yield significant efficiencies to small firms that are only incorporated later on by large firms because:

" A high degree of specialisation often accompanies large scale, and this means that it is less easy for the firm to change its structure or the nature of its effort..."<sup>4</sup>

On the matter of niche marketing small firms can very often take advantage of this as their small size renders them unobtrusive to their larger competitors and less likely to quickly arouse their attention. The innovative actions of similar sized firms, to large ones often register on the 'radar' of their competitors because of the significance of their market share. In response the 'offending firm' may incur the ire of the observer firm through imitation strategies or more active responses in the form of predatory pricing.<sup>5</sup>

#### Constraints Imposed On Small Countries by 'Smallness'

The basic concepts which outline a small firm's activities and characterise it as such can by extension be applied to related subject areas namely small countries. Such comparisons include among others the costs of operating governments in small countries as opposed to their counterparts in large countries. The operations of

<sup>4</sup> A New Dictionary of Economics; Philip A.S. Taylor; pp.176

<sup>5</sup> A firm will not enter a market if it expects continued losses after entry. One way in which an existing firm can create such an expectation is to cut prices below costs whenever entry occurs and to keep them there until the entrant goes bankrupt. The existing firm sacrifices profits while doing this, but it sends a discouraging message to potential future rivals, as well as to present ones. Even if this strategy is costly in terms of lost profits in the short run, it

governments, even countries for that matter are typified by the functions of individual firms or industries that engage in productive activities whether these are goods or services, thereby rendering the analogy appropriate.

Generally speaking small size does bring with it certain inherent characteristics unique to small countries. "Smaller economies (and relatively less developed economies) exhibit certain economic and structural features which make them more vulnerable to external fluctuations in output and demand, including the limited size of their domestic markets, a pronounced dependence on external trade, relatively undiversified economic structures, narrow tax bases and higher costs of infrastructure and public administration."<sup>6</sup>

Another disadvantage of smallness is what is termed as 'the loss of agglomeration economies'. This term merely suggests that some activities thrive on the existence of other activities. This manifests itself in clustering, with the result that certain economic activities naturally gravitate to areas where other directly or indirectly related activities already exist. It is for this reason that such phenomena as urbanization and industrial zones have sprung up. It can readily be seen that the opportunities for establishing such synergies are often more limited in countries characterized by small size.

Another difficulty is that imposed by the constraint of critical mass. For certain activities to take place a certain minimum size is necessary. For this reason industries of a certain scale will not be attracted to small states on account of the inability of these countries to amass the requisite technical and academic personnel in sufficient numbers. Any industry thus established will likely face serious challenges attempting to compete against much larger industrialized nations given their comparatively small scale of operation.

---

may pay for itself in the long run by creating reputational effects that deter the entry of new firms or other times or in other markets that the firm controls.

<sup>6</sup> Organization Of American States, Inter-American Council For Integral development Special Committee On Trade. "Small And Relatively Less Developed Economies And Western Hemisphere Integration." Pp.5 par. 3

Additionally a small state by virtue of its size is limited in the range of activities in which it can engage when compared to larger ones. "This tends to have a subtle impact on the information needs in a small state, on its capacity to develop productive flexibility, and on the ability to reduce its vulnerability to the inevitable and untoward shocks which affect the external environment"<sup>7</sup> What this translates to is an undiversified export base which portends to a concentration of exports into a few sectors, one or two, making the economy extremely vulnerable to world market conditions. The small domestic market in itself is usually accompanied by the tendency towards a high degree of specialization in output and exports. The limitations directly related to the issue of vulnerability will be developed further later on in the discussion

Other disadvantages of smallness have to do with the repercussions in the economy caused by corporate failure. These effects could be more pronounced in a small state owing to the number of firms and the scale of operations in that particular industry. As was established previously, owing to the limited range of activities in which small states can engage, this constraint often spawns industries characterised by a relatively small numbers of firms. There may be a dominant firm along with follower firms (in the case of price leadership models) or a few firms of a similar size, irrespective of the structure the effect is very similar. If for whatever reason one of these firms forecloses then the impact is often that of protracted economic disruptions and social dislocations through the loss of employment. Whereas, these jobs may not be easily recouped as the skills possessed by these individuals may not be easily transferable within and to another industry in small countries, in large countries the unemployment slack can be more easily absorbed by competing firms in the industry. Such rational gains currency by virtue of the fact that in the case of small countries:

"...the failure of a single project can be far more devastating than in a large. This is because more of its eggs are likely to be in one basket."<sup>8</sup>

---

<sup>7</sup> Symposium on Small States "Problems and Opportunities in a World of Rapid Change"

<sup>8</sup> Symposium on Small States "Problems and Opportunities in a World of Rapid Change"

Yet another glaring characteristic of small states is that they are "highly susceptible to natural disasters that regularly cause severe economic disruptions through infrastructure damage; production, export, and income losses; and foregone development opportunities"<sup>9</sup>their high susceptibility to natural disasters which in many cases is well in keeping with their 'small' physical size. Small states face among other things the threat of earthquake, hurricanes and other tropical cyclones as well as tornadoes and floods. These natural phenomena inflict severe damage on the countries' infrastructure, export capacity, and opportunities for continuous development.

As was established in the case of small firms - and applies with comparable vigor with reference to small states - all is not gloom and doom for small states. In fact with the advent of globalization small states have tended to reap certain benefits from which they may have otherwise been precluded. In a presentation to the ECCB's 3<sup>rd</sup> Annual Conference on Development commenting on the way forward for the OECS states in the newly emerging international order, Professor C. Y. Thomas commented that "Globalisation and liberalisation foster an open competitive world economy. This would in turn improve global resource allocation, by carrying the benefits of specialization to the world level, through fostering economic restructuring and industrial re-organisation, providing for the wider availability of technology, and providing as well opportunities and gains to be made by far-sighted, risk-taking entrepreneurs. From this perspective, globalisation and liberalisation would certainly bring benefits to producer and consumers alike, everywhere."<sup>10</sup> Globalisation has created opportunities for small states through the expansion of communication and transportation lines as well as an accompanying fall in these service costs over the past 20 years. These advances have allowed small states to remain competitive through expansion of their tourism and service industries (e.g Seychelles and Mauritius). Although it might be contended that the benefits of globalisation have not been equitably reaped by all countries, it would be equally true to

<sup>9</sup> Making Small States less Vulnerable: Supporting Development during Globalization, A report prepared by the Commonwealth Secretariat-World Bank; Joint Task Force on Small States; August 1999.

contend that without it the rise in living standards experienced in some poor countries might never have been realised.

Other advantages of smallness are outlined in studies undertaken by William Easterly and Aart Kraay who examined microstates with a population of 1 million or less. Their conclusions with respect to the advantages small states enjoy are "...after controlling for a range of factors, we find that microstates have on average higher income and productivity levels than small states, and grow no more slowly than large states (italics ours). Per capita GDP growth rates are more volatile in microstates, due to their much greater exposure to international trade and fluctuations in their terms of trade. However any growth disadvantages of this greater volatility are more than outweighed by the growth benefits of trade openness reaped by microstates by virtue of their necessarily large trade volumes. Finally, microstates are well positioned to take advantage of opportunities in international risk sharing, since the correlation of economic fluctuations in microstates with the world business cycles is surprisingly low."<sup>11</sup>

This latter point can be attested to by the relatively minimal impact that the economic turbulence originating in South-East Asia and subsequently affecting Russia and Brazil had on the OECS from July 1997 to 1999 for instance.

Another perceived advantage of smallness that has been brandished about in the literature is the notion that small states are less ethnically homogenous. While large countries generally tend to be ethnically and culturally diverse, it is contended that this is generally less often the case in small countries with some notable exceptions. The perceived advantage of this ethnic homogeneity is "greater social homogeneity and cohesion." It is felt that the less ethnically diverse a country, the lesser the potential for conflagration when decisions of national importance are brought to the fore and pivotal decisions have to be made. If the country is more uniform along ethnic lines then the

<sup>10</sup> Eastern Caribbean Central Bank, 3<sup>rd</sup> Annual Conference On Development: Economic Development in the Emerging International Economic Order.; Caribbean Economic Development in the Emerging International Order.pp.12 By C. Thomas

presumption is that there is increased likelihood that the authorities will quickly obtain a consensus from the populace on the implementation of proposed measures (decision-making efficiency). " Koznets (1960) notes that small states also have advantages primarily that many are lucky to have good natural resources and have a small and more cohesive population which allows them to adapt better to change (greater flexibility)<sup>12</sup>. This implies a "consequent greater flexibility and decision-making efficiency."<sup>13</sup>

An additional benefit of small size falls along the lines of "greater openness to change" in line with the high degree of openness exhibited by small states in relation to their larger counterparts which renders them less defiant to foreign influences and practices. Since small states of necessity must trade in order to develop it is an almost foregone conclusion that a greater tendency to trade implies greater tolerance to foreign influences.

#### Defining a Small State

Before proceeding any further it may be prudent to first define the subject under consideration, in an attempt to establish the context in which the research is being conducted. While admittedly much has been said in the literature on the characteristics that define a state as small there has not been to my knowledge any unanimity on precisely what is the threshold within which countries meeting that specific criteria must fall to be regarded as such, small states. On the contrary what the research in this area has generally produced is a range of broad parameters that loosely attempt, via a process of inclusion, to capture within their definition those countries that meet at least one of a number of requirements. The dilemma is embodied in the introductory remarks of B.Baaro at a Symposium on Small States when he noted:

---

<sup>11</sup> Joint Commonwealth Secretariat/World Bank Task Force; Conference On Small States: Small States, Small Problems? By William Easterly and Aart Kraay.

<sup>12</sup> Joint Commonwealth Secretariat/World Bank Task Force; Conference On Small States: Small States, Small Problems? By William Easterly and Aart Kraay

<sup>13</sup> A comparison of the Economic Performance of Different Micro -States, and Between Micro-states and Larger Countries: pp. 641 By H. Armstrong, R.J. De Kervenoael

"A question arises, how small is small and what should be the criteria to determine if a country is small or not. As yet, there is no generally accepted definition of a small state."<sup>14</sup>

The difficulty stems from the fact that the characteristics for inclusion vary in magnitude and content according to the researcher and the objectives of the academic exercise. The situation is further compounded by the existence of a plethora of characteristics from which the researcher has to choose. To illustrate, in my research alone I have encountered no less than ten different criteria for inclusion. For instance size can be defined by virtue of the size of a country's population, its physical landmass or the size of its economy (Gross Domestic Product/Gross National Product). Still a country may be defined as small by other criteria such as the abundance of natural resources or lack thereof. Smallness can also be seen in light of the infinite elasticity for a country's export products or its inability to in anyway influence the price at which commodities are traded in international markets particularly its own exports. A somewhat closely related definition of size to that of the infinite elasticity of demand for a particular country's exports is that of the issue of trade dependency. In a study conducted by the OAS Trade Unit examining the ratio of exports and imports to GDP of countries of the Western Hemisphere, the data revealed "a nearly perfect correlation between the smallest countries of the hemisphere in the Caribbean (with the exception of Suriname) and the degree of external trade dependency or openness which is far superior for the Caribbean countries than for all other FTAA. Nine of the thirteen countries in the CARICOM grouping have export shares totalling more than 50% of GDP. In the case of two Caribbean countries (Antigua & Barbuda and Guyana) the figure reaches to or above 100 percent."<sup>15</sup> One definition of small size deviating slightly from orthodoxy is that advanced by Robert Keohana where he argues that a small state is in fact one

---

<sup>14</sup> Symposium on Small States "Problems and Opportunities in a World of Rapid Change"; Small States: Problems and Opportunities in a World of Rapid Change - Kiribati by Mr. B Baaro

<sup>15</sup> <sup>15</sup> Organization Of American States, Inter-American Council For Integral development Special Committee On Trade. "Small And Relatively Less Developed Economies And Western Hemisphere Integration." Pp.13 par. 2

whose leaders consider that it can never make a significant impact on the international system.

As far as the bases for classifying countries as small in terms of population go, one report defined as small countries with a population of 1.5 million or less.<sup>16</sup> Another definition goes even further than that. It seeks to classify countries not only as small but also within varying degrees of smallness. For instance it establishes an upper limit, a population of 11 million. Within this upper limit countries are further classified into three main categories by size, namely 1 million or less (extremely small countries), 1 to 5 million (very small countries), and between 5 and 11 million (small countries).<sup>17</sup>

Further complexities that are encountered arise especially when the qualification criteria for the different characteristics of smallness introduce a certain element of ambiguity. A notable example is the case of Canada according to some definitions of a small country based on population size Canada would be considered a small country. The physical landmass criteria, however flies in the face of such an assertion as Canada being the second largest landmass in the world would hardly be considered small. The same reasoning could be used in the case of Chile, by most definitions of small country, Chile would certainly qualify as such, however being the world's largest copper producer it does exert significant influence on the world price of copper. There are probably as many definitions as there are perspectives. In spite of the lack of consensus regarding the exact definition of a small state, in its final report, the Working Group On Smaller Economies<sup>18</sup>, made an observation based on their own empirical analysis. While concluding, "there was no unique concept or definition of size "it was found" that there was an apparent correlation in the countries of the Western Hemisphere between the three most widely-used characterizations of size; the smallest countries in terms of

<sup>16</sup> Joint Commonwealth Secretariat/World Bank Task Force: Conference on Small States. Small States: A Composite Vulnerability Index. Pp.3

<sup>17</sup> Organization Of American States, Inter-American Council For Integral development Special Committee On Trade. "Small And Relatively Less Developed Economies And Western Hemisphere Integration." Pp.13 par. 2

<sup>18</sup> Working Group On Smaller Economies had as its mandate: to examine and identify the best means to facilitate the adjustment of the smaller economies to the hemispheric integration process.

population often also tended to be the smallest in terms of territorial size and levels of GNP".

A similar conclusion was arrived at in a study undertaken by the Organisation of American States; they deduced stating "The extremely close association demonstrated between the four measures of size provides support for classifying small countries in terms of population size alone, a procedure that has often been followed in the economic literature on small economies".<sup>19</sup>

But this paper is not for the purposes of investigating the number of permutations possible in defining a small state. Such an exercise has already been the recipient of extensive research, albeit without conclusive findings, nonetheless it is doubtful that time or space would allow me the opportunity to contribute any meaningful insight to this debate. However, in light of the context of this paper, with its overriding focus on small states especially those of the OECS it is safe to say that irrespective of whatever criteria is used all of these states necessarily fall within the bracket of a "small state". In reality they go beyond the criteria of what is required in qualifying as small, they should be referred to more precisely as they really are: micro states not merely 'small'. The process of defining a micro-state is equally as perplexing as a small state. Safe to say, essentially all of the limitations defining a small state apply with equal compulsion to micro - states. Therefore from here on the two terms "micro - states " and "small states" will be used interchangeably as they describe countries with essentially similar characteristics differentiated merely by differences in the magnitudes of these characteristic features.

The limitations previously outlined as applied to the physical and structural characteristics of small countries impose even more profound restrictions on the manner in which small countries interact with other countries of the world especially in the globalised and liberalised world context. These inherent limitations transmit pulses

<sup>19</sup> Organization Of American States, Inter-American Council For Integral development Special Committee On Trade. "Small And Relatively Less Developed Economies And Western Hemisphere Integration." Pp.13 par. 2

throughout the economies and institutional structures of small states impacting profoundly on the economic and financial systems of these countries as well as defining the very structures themselves that underpin these systems.

In reality though, the constraints of smallness go beyond the obvious, that which is discernible to the literal eye. These constraints brought on by small size do not occur in isolation but their effects are even more far reaching, especially as they relate to the influence that is brought to bear on the operations of the governmental authorities with specific reference to its fiscal operations (the subject of this discussion). An attempt will be made to investigate whether there is a link between the pervading influences on small size and the overall balance generated by these governments. This of course will be attempted in line with comparisons to larger countries to determine whether their "largeness" in some way positively impacts on the size of the balances on their overall account. Apart from the obvious testing for the existence of correlation and possible causality it is hoped that the results from the data will provide the basis for certain inferences with respect to the influences of small size on fiscal policy. Subsequent to that, assertions will then be made regarding actions that governments of small states might well take in an attempt to mitigate against the constraints imposed upon them by their predicament.

### 3. Conceptual Framework

#### Establishing the Link Between Size and Government's Fiscal Operations

Endeavoring to underscore the point that small states are in various ways disadvantaged by their "smallness" quite a few of these constraints as outlined in the literature were cited. An immediate structural feature of most small states is the small physical size of the country and implicit in this observation -in the majority of cases- is an accompanying restriction imposed on the population of that state. This rationale is predicated on the logical assumption that a small landmass can accommodate only so many persons. Such a view is not mere conjecture but is based on empirical evidence.

For example in justifying population rather than territory or GDP as a scaling criterion for classification as a small state this observation was made:

"First, population is highly correlated with a territory's size, so it helps highlight small states' limited resources."<sup>20</sup> There are, of course, notable deviations from this trend such as in the cases of Guyana, Australia and Canada. These countries have comparatively small populations given their extensive landmasses, however generally speaking a large landmass has associated with it a concomitantly large population. This being the case - that small size generally presupposes a small population - the absence of significantly large numbers of persons in small states relates back to the issue of critical mass. The absence of a large labour force has an impact on the production side of the economy in relation to the size, number and scale of firms in the industry resident in that country. Some however, might contend that this limitation can be overcome through the use of technology or through the establishment of service oriented industries which are less dependent on scale factors in general than manufacturing. Though a measure of truth may characterise such rationale, to some extent a limited population especially in labour intensive industries does have a negative impact on the prospects for large -scale production. For instance utilizing technology in manufacturing or even the service industry still requires a minimum number of highly skilled individuals, which is often difficult to find in small states. This particular problem may not be unique to small economies as it is particularly associated with countries characterised by low levels of development. In addition to the physical (tangible) limitations imposed by small size there are also constraints of a structural nature.

#### (i) Openness

Given the limited production possibilities on account of the relatively undiversified economic base coupled with the limited landmass of most "small states," of necessity small states must trade with the outside world. This implies that small populations not

<sup>20</sup> Making Small States less Vulnerable: Supporting Development during Globalisation: A report prepared by the Commonwealth Secretariat - World Bank Joint Task Force on Small States: August 1999.

only impact the productive side of the economy, but the demand side as well. Often the comparatively small size of the domestic market does not enable domestic firms to fully exploit the economies of scale that might otherwise be attainable given a larger market. This fact forces firms to export as the domestic demand is such that often firms would be operating below the minimum efficient scale. This seeming paradox of having to import extensively from abroad to satisfy domestic demand while concurrently needing to export so as to fully exploit the benefits of economies of scale points to a major characteristic of small states namely, their openness.

The openness of an economy can be determined by a number of methods. The one that appears most frequently in the literature however is the summation of the total imports and exports divided by GDP. The ratio derived from this arithmetical calculation is a country's degree of openness. Studies have shown that there is a high correlation between the size of a country, and its degree of openness. "A detailed study of 127 developed and developing countries by the World Trade Organisation (WTO), finds a clear relationship between the size of a country and its openness to trade. Additionally work by the Commonwealth Secretariat on the smallest countries- those with populations of under 1m, which accounts for 22 of the Commonwealth's 54 members- shows that their ratio of imports to GDP, at around 60%, is three times the typical ratio for developing countries"

"This heightened dependence on foreign trade has important implications for macroeconomic policy in small states since it increases vulnerability to unforeseen changes in external supply and demand. As trade constitutes a higher proportion of income, each change concerning it would have a larger impact on a small economy than on a large one."<sup>21</sup> Not only are the economies of small states highly dependent on the export sector but their export base is often undiversified. Exports are generally concentrated around one or two sectors, thus rendering the economy vulnerable to the vagaries in world markets. This narrowness of the production base stems from the fact

<sup>21</sup> Organization Of American States, Inter-American Council For Integral development Special Committee On Trade. "Small And Relatively Less Developed Economies And Western Hemisphere Integration." Pp.5 par. 3

that in order to fully exploit the advantages of export market opportunities for a particular crop, large portions of land have to be committed for these purposes. This leaves little if any arable land available for alternative crops. A similar line of reasoning could be applied to human capital whereby the concentration of skilled labour in a particular sector precludes it from availability to other sectors on account of the small labour force.

#### (ii) Vulnerability

The inherent structure of small states, with their pronounced tendency towards an inordinately high degree of openness as compared to large countries necessarily makes them more vulnerable. In a study done on 157 countries 33 of which were categorised as microstates/small states the observation was made that "microstates typically have much higher trade ratios than larger states." "Small states have a ratio of trade to GDP that is 54 percentage points (1.2 standard deviations) higher than the average economy controlling for continental dummies."<sup>22</sup> Owing to their greater reliance on international trade to foster development and growth this increases the exposure of small states to fluctuations in the demand and prices for their externally traded goods and services.

The same also applies in the case of imports by small states perhaps with even greater significance. Referring to exports, it is true that small open economies (SOE) generally are price takers. This translates to exports that are traded at prices established in international markets. At the same time the portion of the domestically produced goods can be traded at a domestically established price which may be below or above the production cost as well as the internationally traded price. For imported goods however the price at which they are traded domestically is often a function of the internationally traded price (terms of trade volatility). Invariably it would be at or higher than the international price level (through international trade taxes) although at times governments may choose to subsidize the imported good. The point however is that with regards to imports this variable is completely exogenous. Hence changes in the

<sup>22</sup> Joint Commonwealth Secretariat/World Bank Task Force; Conference On Small States: Small States, Small Problems? By William Easterly and Aart Kraay pp. 8.

international environment (i.e. Price level, through fluctuations in production and/or demand) directly impact on a small state's level of exposure. Little can be done to inoculate one from the effects of unfavorable price fluctuations except through exchange rate adjustments or when governments choose to hedge the populace from these adverse movements by providing subsidies.

The situation of vulnerability is exacerbated by the circumstances under which many small states find themselves. In many cases their export concentration has been in agricultural and mineral (primary) products whose world prices have historically been unstable. Not surprisingly given the high exposure of small states to unfavorable movements in international prices, associated with their high degree of openness, there is an observed prevalence of large external deficits.

The prevalence of significant external deficits among small states may also be related to the level of volatility exhibited in their growth rates. Although there is no evidence to suggest that large states grow faster than their "lesser" counterparts the potential exists that they may grow more slowly over time. The reason being is that: "microstates exhibit greater output volatility which has negative effects on growth. (Ramey and Ramey (1996)).<sup>23</sup> This output variability may not manifest itself in lower per capita income levels as " per capita incomes of small states on average tend to be higher than those of many developing countries. However, this occurs in association with a narrow and fragile economic structure which acts as a constraint for achieving self-sustaining economic growth, the major objective of development."<sup>24</sup> In the aforementioned study of 157 countries it was revealed that when special circumstances are not taken into account microstates exhibited the same range of per capita incomes as the rest of the sample. Furthermore if characteristics, such as location by continent of all countries whether they are oil producers and whether they belong to the OECD were controlled,

<sup>23</sup> Joint Commonwealth Secretariat/World Bank Task Force; Conference On Small States: Small States, Small Problems? By William Easterly and Aart Kraay pp. 7.

<sup>24</sup> Symposium on Small States "Problems and Opportunities in a World of Rapid Change"; Small States: Problems and Opportunities in a World of Rapid Change - Commonwealth Secretariat

then microstates are actually significantly richer than other states. Controlling for location, microstates are 50 percent richer than other states.

Studies have revealed significant differences in the volatility of terms of trade shocks experienced by microstates as compared with larger states. Terms of trade shocks was defined as the growth in the local currency price of imports less the share of imports in GDP, which captures the magnitude of price fluctuations (changes in export and import prices) and their importance for the domestic economy (weighted by the shares of exports and imports in GDP). When the standard deviation of this measure of terms of trade shocks was regressed on a set of regional dummy variables (to capture oil exporters and commodity exporters who are more likely to suffer fluctuations in their terms of trade) the results yielded highly significant microstate effects. The standard deviation of terms of trade shocks for microstates was larger by 0.013 (or about one - third of one standard deviation of the dependent variable) over larger states. (W. Easterly & A. Kraay 1999).

The reason for the terms of trade volatility they attributed to primarily two factors. Firstly, the share of trade in GDP being especially large in microstates may have contributed to the magnitude of the observed terms of trade shocks (since it weights changes in import and export prices by the shares of imports and exports in GDP). Secondly microstates' exports display a greater likelihood to being more specialized than those of larger states, both in terms of products and in terms of export markets (Kuznets (1960), Knox (1967), Armstrong and Read (1998)). So although smallness has not tended to negatively impact per capita income as well as the GDP growth rates of small states, it has however contributed to greater volatility of, or variability in the latter variable.

Small states are plagued by income volatility not only on account of price shocks precipitated by output fluctuations in international markets but also by economic disruptions on account of natural disasters. In large countries these disasters are usually confined to local areas. This being the case, the potentially debilitating effects

of such natural disasters are mitigated somewhat by resources quickly being transferred from unaffected areas to the affected areas. The process is not nearly as efficient in the case of small states as natural disasters often impinge upon the entire economic base of the country owing to their small physical size. In the article entitled "On the Number and Size of Nations" (A. Alesina & E. Spolaore) it was noted "A region of a large country hit by a idiosyncratic, region-specific, negative shock is compensated with redistributions from the rest of the country. However, if the same region were an independent country, it would receive no transfers." Industries and firms adversely impacted by the disaster can more easily transfer (if only temporarily) to unaffected areas in large countries. Replicating such relocations is a lot more difficult in small states as often domestically speaking there is "nowhere else" to go.

In order to assess the relative vulnerability of countries a ranking of countries through the creation of a vulnerability index was undertaken by the Commonwealth Secretariat. The ranking was done according to their exposure to exogenous shocks over which the affected country has little or no control, and to their resilience in withstanding and recovering from these shocks (Easter 1999). It first identified the main sources of income volatility that are mainly on account of three highly significant factors namely:

- (i) Lack of diversification (as measured by the UNCTAD diversification index)<sup>25</sup>
- (ii) Extent of export dependence (as indicated by the share of exports in GDP)
- (iii) Impact of natural disasters

This ranking was based on a sample of 111 developing countries - 35 were identified as small and 76 were deemed large for which the relevant data were available.<sup>26</sup> The results thrown up from an analysis of the data supported the assumptions about vulnerability, which were made based on the theoretical perspective. For instance, of the 25 most vulnerable countries in the ranking, all 25 were small states. When the 50

<sup>25</sup> The United Nations Conference on Trade and Development's (UNCTAD) index measures the diversification of merchandise exports and takes a higher value if these are less diversified.

<sup>26</sup> Making Small States less Vulnerable: Supporting Development during Globalisation: A report prepared by the Commonwealth Secretariat - World Bank Joint Task Force on Small States: August 1999. Pp.11.

most vulnerable countries were considered 31 of them were categorised as small. At the other end of the spectrum it was revealed that all the 25 least vulnerable states were large, of which 2 were least developed countries. When this scope was expanded to the 50 least vulnerable states only 2 were small. This ranking revealed emphatically that small states are systematically more vulnerable than large countries, irrespective of their income levels. Such an assertion is exemplified in the findings of a Composite Vulnerability Index developed by a Joint Commonwealth Secretariat/World Bank Task Force. An analysis of their data revealed that Antigua and Barbuda, a small country on the threshold of graduation from the IBRD (hence fairly high income), was ranked as the second most vulnerable state.

This empirical result may itself provide a case for not graduating seemingly affluent small states from Least Developed Status, on account of concerns as to "whether a small vulnerable state has the resilience to cope with the factors which create its output growth volatility, in terms of its own resources, capacity and capabilities."<sup>27</sup>

### (iii) Government's Role in Reducing Vulnerability

Given the empirical evidence that small states display a greater pre-disposition to vulnerability resulting from a number of factors earlier enunciated, preventive actions therefore need to be taken so as to hedge small states as much as possible, against their susceptibility to fluctuations in the international arena.

In some quarters the view is widely held that "there exists a positive correlation between an economy's exposure to international trade and the size of its government".<sup>28</sup> This oft-used term 'exposure to international trade' we defined as alluding to an economy's degree of openness. Given the established relationship between country size and openness - that they are inversely correlated - it can be deduced that the smaller the

<sup>27</sup> Joint Commonwealth Secretariat/World Bank Task Force: Conference on Small States. *Small States: A Composite Vulnerability Index*. Pp11.

<sup>28</sup> *Why Do More Open Economies Have Bigger Governments?* D. Rodrik

state, then the larger will be its government in proportion to its size. An attempt will be made to justify this conclusion from two vantage points.

Firstly, in many small countries the private sector is not very well developed owing to the limited potential for entrepreneurial initiative consequent on the shortage of human resources in general, and appropriately skilled labour in particular. In the case of many small countries the absence of substantial tracts of exploitable land is again a disincentive to entrepreneurial development. Additionally the limited size of the domestic market, limits the ability of these countries to take advantage of economies of scale or of increasing returns to scale in the industry to which this may apply. For example "as a result of the level of domestic demand lying below the minimum efficient scale (MES) of output, micro-states are usually at a disadvantage as a location for large-scale industries, particularly those associated with high growth effects." (Kuznets, 1960; Thomas, 1982). "The diseconomies of scale argument also applies to research and development (R&D), technical progress and technology acquisition since small size inhibits the development of indigenous technology." (Briguglio, 1995). Moreover, a small domestic market prevents the emergence of a competitive milieu within the micro-state because of the very small number of participants involved in all economic activity, including distribution (Armstrong et al., 1993). Micro-states can, therefore be expected to experience generally higher prices of intermediate inputs and finished goods than larger states

In light of the limitations imposed on private sector development, given such issues as: labour shortage, critical mass, the range of economic activities available etc, a void is created regarding the development of the various productive sectors of the economy. Although it may not be the perception of the private sector that economic development is their primary responsibility, it would be safe to say that it occurs faster and at a more balanced rate if the process is fostered by the private sector through facilitation by the public sector. This dual development strategy is contingent on the non occurrence of one sector (public) of the economy engaging in development through investment at the

expense of efforts by the other sector (private) via the "crowding out" effect.<sup>29</sup> Obviously, the limitations imposed by the size of small states to some extent present hurdles to potential entrepreneurs and their initiatives. While these may not totally stifle their efforts, they may stymie somewhat the pace at which private sector development takes place.

Given these inherent constraints, the enabling environment often does not exist that would allow for the development of a sophisticated and expansive private sector that can chart a sustainable development pathway. Facing such a predicament might suggest for small states that the smaller the country the less influential will be the role assumed by the private sector, hence government will necessarily assume the dominant role in an attempt to foster development. What this implies is that increasingly the load of development and employment generation falls squarely on the shoulders of government. It is for these reasons that governments of small countries have correspondingly adjusted by attempting to alleviate the employment slack through the creation of employment possibilities. The result is that generally it can be observed that in the case of small countries the contribution of government to GDP is proportionately higher than that observed in larger countries.

Secondly and closely related to the first approach is the risk-reducing role assumed by the governments of countries exposed to significant amounts of external risk. Based on an empirical study (D. Rodrik) attempting to address the issue concerning why more open economies have bigger governments, it was established that "there is a positive and robust partial correlation between openness, as measured by the share of trade in GDP, and the scope of government, as measured by the share of government expenditure in GDP."<sup>30</sup>

<sup>29</sup> Crowding Out Effect: A MONETARIST view which holds that FISCAL POLICY loses some of its effect because, while government expenditures stimulate an economy, such expenditures must be financed and at least in the long-run, that financing reduces the ability of the private SECTOR to spend.

<sup>30</sup> Journal Of Political Economy; *Why Do More Open Economies Have Bigger Governments?* D. Rodrik pp.998

If this were really the case - and the evidence seems to suggest so - what is a plausible explanation that best fits the evidence? Rodrik sought to explain this by intimating that "societies seem to demand (and receive) an expanded government role as the price for accepting larger doses of external risk. In other words, government spending appears to provide insurance in economies subject to external shocks".<sup>31</sup> So governments apparently assume the role of leveraging the risk to which more open countries are exposed to by spending proportionately more on social programs than those in less exposed states.

Some of Rodrik's work is influenced by the work of David Cameron on 18 OECD countries entitled 'The Expansion of the Public Economy'. In his work he contended that more open economies possess higher rates of industrial concentration. This he felt fostered higher unionization, greater scope for collective bargaining, and stronger confederations. We will elaborate on the implications of this canvassing of labor on public spending shortly, but suffice it to say for now he like Roderik saw public spending as a risk-reducing instrument on which there is greater reliance in more open economies.

To establish that a positive association exists between openness and size of government Rodrik utilized a sample of 23 OECD countries. On the vertical axis he plotted government spending as a share of GDP<sup>32</sup>, excluding interest payments, averaged over the 1990-92 period. Along the horizontal axis was plotted the share of exports plus imports in GDP, averaged over the decade 1980-89.<sup>33</sup> The resultant semilogarithmic regression provided a good fit for the data revealing "an unmistakable positive association between openness and size of government.

When further tests were performed on the relationship between openness and disaggregated categories of government spending the evidence revealed that "openness has a statistically significant association with most types of government

spending, including general public services, education, health, housing and community amenities and economic affairs and services.

#### (iv) The Consequences on Public Finances of Government's Risk-Reducing Role

This expanded role of government in the risk-reducing and developmental function of more open economies (particularly in the context of small states) necessarily incurs an accompanying risk premium embodied in the form of higher operational and service costs. This would of course have repercussions on the level and nature of government's fiscal accounts.

David Cameron's study revealed that more open economies have in general higher rates of industrial concentration, hence unionization, the result being larger demands for government transfers- social security, pensions, unemployment insurance, job training etc.- which mitigate external risk.

Owing to the openness of small states as a consequence of the high dependence on foreign trade Roderik noted that this factor (trade) could in itself be used conveniently as a "tax handle" for governments in poor countries that have difficulty raising taxes from other sources. Openness may allow such governments to incur higher levels of expenditure by allowing higher - than would normally be feasible - tax revenue.

In investigating the reasons as to why the statistical association between openness and government spending appears to be as robust as it is one plausible explanation was advanced. "More open economies have greater exposure to the risks emanating from turbulence in world markets. One can view larger government spending in such economies as performing an insulation function, insofar as the government sector is the "safe" sector (in terms of employment and purchases from the rest of the economy) relative to other activities, especially compared to tradables. Hence in countries significantly affected by external shocks, the government can mitigate risk by taking command of a larger share of the economy's resources." (D. Rodrik 1998 p. 1011)

<sup>31</sup> Journal Of Political Economy; Why Do More Open Economies Have Bigger Governments? D. Rodrik pp.998

<sup>32</sup> Penn World Tables 5.6

<sup>33</sup> World Bank; World Data 1995

Ideally, in the case of small countries it is felt that external risk should be diversified through participation in international capital markets. However studies reveal that in practice this is not the case. Lewis (1995, p.1914) in summarizing the literature on international portfolio diversification commented "recent evidence shows that domestic investors continue to hold almost all of their wealth in domestic assets". The role of government as risk reducer is also played out differently in the case of advanced countries and developing countries. In advanced countries risk reduction is approached through the establishment of safety nets - government spending on social security and welfare services - owing to their greater administrative capacity. On the other hand for developing countries (including a fair number of small states) risk reduction is addressed through government consumption and "a broader set of instrumentalities - including, notably, public employment"<sup>34</sup> This approach seems to be favored by developing countries as they often lack the administrative capacity to effectively manage social security and welfare programmes.

This all points to an assumed role by the governments of small states to attempt to reduce the variability of householders' incomes through increases in public expenditure. This takes the form of various transfers and benefits including the provision of employment. A picture immediately begins to formulate suggesting, that if in practice governments in small states assume the role of risk reducer by implementing welfare programs to hedge against international exposure, then the level of their spending should be comparatively higher than that of less open states (including larger states). This should translate into fiscal balances that as a proportion to GDP should be marginally if not significantly lower in small states than those of larger (generally less open) states.

Given the limited population size normally characteristic of small states, pressure is also exerted on government finances as a result of the narrowness of their tax bases. The

---

<sup>34</sup> Journal Of Political Economy; Why Do More Open Economies Have Bigger Governments? D. Rodrik pp.998

narrow tax base of small states translates into fewer areas from which to derive revenue from domestic sources especially as far as personal income tax and other direct taxes on domestic goods and services are concerned. This situation coupled with the previously suggested tendency of more open economies (including small states) to incur greater expenditure on account of the false sense of security afforded by opportunities to tax international trade transactions, adversely impacts their net fiscal position as well.

However in reality does empirical data suggest that there is a strong positive correlation between the size of a country and the level of its government's overall surplus as a percentage of GDP? The robust positive association between openness and the size of government as indicated by Rodrik, ceteris paribus, might suggest so, unless there are certain mitigating factors, say with respect to revenue generation (capital and current) that might pose an advantage to small states in revenue generation over larger states.

#### 4. Methodology & Procedures of Investigation

## BIBLIOGRAPHY

- Alesina, A. and Spolaore, E. On the Number and Size of Nation
- Armstrong, H. and De Kervenoael, R.J A Comparison of the Economic Performance of Different Micro – States, Between Micro - states and Larger Countries. Pp.641.
- Baar, B. Symposium on Small States Problems and Opportunities in a World of Rapid Change, Small States: Problems and Opportunities in a World of Rapid Change –Kiribati pp.7.
- Baaro, B. Symposium on Small States, Problems and Opportunities in a World of Rapid Change
- Easterly, W. and Kraay, A. (St. Lucia, February 17 – 19, 1999) Joint Commonwealth Secretariat/ World Bank Task Force; Conference On The Small States: Small States: A Composite Index. Pp.3
- Easterly, W. and Kraay, A. (St. Lucia, February 17 – 19, 1999) Joint Commonwealth Secretariat/ World Bank Task Force; Conference On The Small States: Small States, Small Problems? Pp.8.
- Making Small States Less Vulnerable: Supporting Development during Globalization. Commonwealth Secretariat-World Bank; Joint Task on Small States; August 1999.
- Making Small States Less Vulnerable: Supporting Development during Globalization: A report prepared by the Commonwealth Secretariat – World Bank Joint Task Force on Small States: August 1999. pp.11.
- Moffat, D. (19 )Economics Dictionary pp.72. The Bishop's School, San Diego and Mira Costa College, Oceanside, California.
- Nicholson, W. (1990) Intermediate Microeconomics and its Application 5<sup>th</sup> edition. The Dryden Press, Orlando, Fl 32887.
- Organization of American States, Inter-American Council For Integral development Special Committee On Trade. Small and Relatively Less Developed Economies And Western Hemisphere Integration. Advisory Group Seventh Meeting September 23-24, 1996 Washington D.C. pp.5 par. 3. pp.13 par. 2.
- Rodrik, D. Journal Of Political Economy, Why Do More Open Economies Have Bigger Governments? Pp.998
- Symposium on Small States Problems and Opportunities in a World of Rapid Change
- Taylor, P. A.S. (1966) A New Dictionary of Economics. Routledge and Kegan Paul Ltd Broadway House, 68-74 Carter Lane London, EC4. Printed in Great Britain by Butler and Tanner Ltd Frome and London.
- Thomas, C (1998), Eastern Caribbean Central Bank, 3<sup>rd</sup> Annual Conference On Development in the Emerging International Economic Order. Caribbean Economic Development In The Emerging International Order pp.12
- Working Group On Smaller Economies had as its mandate: to examine and identify the best means to facilitate the adjustment of the smaller economies to the hemispheric integration process.

