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MACROECONOMIC VULNERABILITY OF SMALL DEVELOPING STATES: WILL IT SQUEEZE INTO A SINGLE INDEX?

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Abstract. There have been various attempts to derive a single index of countries' macroeconomic vulnerability to exogenous shocks. It is now generally accepted that small developing states on average are particularly vulnerable, as evidenced by their historical volatility of aggregate output. Openness to trade is a key source of this volatility, but it has also contributed to these states' comparatively strong average economic growth. Exposure to natural disasters and external financial flows are other significant potential sources of macroeconomic vulnerability. There are a number of difficulties associated with drawing these variables into a single index, and there seems to be limited scope for employing such an overall index beyond proving that small developing states are generally more vulnerable. Instead, the focus should be on individual characteristics that define a country's vulnerability to particular types of shock. Such an approach will provide information for policy makers and may indicate where small developing states—or regional and international bodies that represent them—could beneficially engage in the international agenda. This may be in initiatives aimed at reducing shocks—predominantly focused on the poverty reduction agenda—or reducing global processes that threaten to exacerbate the already high levels of vulnerability.

1. Introduction

Vulnerability of economies to exogenous shocks is a recurring theme for those living in, studying, and formulating policies for, small developing states (SDS). It is invariably referred to whenever small

¹ The views expressed in this chapter those of the author and do not necessarily represent those of the Department for International Development, UK.

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states are represented at international fora. It is now a reasonably accepted fact that SDS are particularly vulnerable to external shocks largely beyond their control.

It was not always so, and nor is it universally accepted that vulnerability of small states is an important issue. A particularly sceptical paper from the World Bank in 1986 suggested that “small economies are not inherently more vulnerable than large ones to external shocks” (Srinivasan, 1986: 215). Another more recent paper from the World Bank argues that “small states have perhaps received excessive attention from the literature ... as special cases calling for special policy measures” (Easterly and Kraay, 1999: 12).² Useful background on the decades of intermittent debate surrounding the special problems of small states is provided in these two papers.

In addition to the concept of vulnerability, the idea of what constitutes a small state has also evolved over time. As reported in Crowards (2002), the size associated with small states has generally declined over time, roughly along the lines of a population of 10 million to 15 million in the 1950s and 1960s, to five million in the 1970s and 1980s, and to around 1 million or 1.5 million in the 1990s. A common definition in current use is that of a population of less than 1.5 million.³ If small states are going to be considered as a group, we need to determine which states are small.

A range of studies during the 1990s considering the special nature of small developing states culminated in a “Joint Task Force on Small States” Report by the Commonwealth Secretariat and the World Bank (Commonwealth Secretariat/World Bank, 2000). This acknowledged the general acceptance by the international community that SDS are particularly vulnerable to exogenous shocks. It also noted the comparatively strong average economic performance of these states over the last four decades, as demonstrated by Easterly and Kraay (1999).

It is important to recognise the distinction between sources of vulnerability and drawbacks to economic performance. Vulnerability

² Easterly and Kraay (1999) also suggest in their abstract that “small states are no different from large states”, despite finding that small states on average are more open to trade, have greater volatility of annual growth rates, and tend to be less open to international financial flows.

³ For example, a population cut-off of 1.5 million is used in the Joint Task Force Report (Commonwealth Secretariat/World Bank, 2000), although it is acknowledged that this is an essentially arbitrary boundary across a broad continuum of country size.

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relates to possible future adverse impacts, while drawbacks inhibit growth opportunities.⁴ This chapter focuses on the former.

The next section of this chapter reviews progress that has been made on formulating a single index of macroeconomic vulnerability and then discusses the key components of vulnerability that have been incorporated within these indices. The sections that follow consider vulnerability of SDS in relation to volatility of output, and within the context of the international focus on poverty reduction. The paper then considers the implications for producing a single index of macroeconomic vulnerability. It is suggested that it may be pragmatic to analyse separately the constituent variables that contribute to overall vulnerability. Policy implications of these arguments are then discussed. Throughout the chapter, reference is made to the standpoint of the International Monetary Fund (IMF), given the Fund's integral role in the macroeconomics of many developing countries.

2. Seeking a Single Index of Macroeconomic Vulnerability

Individual Features Contributing to Vulnerability

There are many features of SDS that are thought to contribute to their macroeconomic vulnerability. The most commonly referred to are:

- trade openness;
- export concentration;
- reliance on imports of strategic products;
- remoteness and peripherality;
- reliance on foreign resource flows;
- susceptibility to natural disasters.

The Joint Task Force Report (Commonwealth Secretariat/World Bank, 2000) drew upon an index of economic vulnerability—the Commonwealth Vulnerability Index (CVI)—to support the argument that SDS are particularly vulnerable.

⁴ Some of the characteristics of SDS that have been suggested as potential economic drawbacks are: (a) inability to exploit economies of scale in the production of goods and services; (b) remoteness from markets of a reasonable size and insularity from global processes; (c) limited institutional capacity (with an over-stretched public sector and inhibited private sector development); and (d) higher unit costs of providing basic infrastructure and transport links. On the other hand, it is suggested that social and political cohesion and homogenous populations, leading to greater social and economic stability and similar preferences for public goods, might be strong positive influences on economic growth. On these issues see Streeten (1993).

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The CVI represented one strand of the work on vulnerability indices going on in the latter half of the 1990s that stemmed from original work by Briguglio (1995). Other economic vulnerability indices have been proposed by Wells (1997), Guillaumont (1999), Crowards (2000c), Gonzales (2000) and the United Nations (2000).

A common conclusion of all these indices is that SDS are inherently more vulnerable to exogenous shocks. This is despite variation in the parameters and methodologies employed. In this sense, the various indices of economic vulnerability have helped to prove a point, based on quantified measures of vulnerability presented in a relatively accessible form (a single list of vulnerability “scores”).

However, within this broad consensus, there are considerable variations. As Gonzales (2000: 15) notes, “A comparison of the various vulnerability classifications reveals a large amount of inconsistency”. While SDS on average emerge as being comparatively vulnerable, rankings of individual countries can differ substantially between alternative indices.

There is no single index of economic vulnerability that is generally agreed upon. This is partly due to the fact that there is a high degree of subjectivity involved in seeking to measure such an esoteric concept as the vulnerability of an economy to possible future shocks. The absence of a commonly accepted index reduces the potential to influence the international community or the policies of individual countries.⁵

Perhaps the best opportunity to agree upon a single index was during the consultative process leading up to the Joint Task Force Report, which ended up referring in detail only to the CVI. Unfortunately, however, the CVI is considered seriously flawed by a number of practitioners (Briguglio, 2000; Crowards, 2000b; Gonzales, 2000).

The Components of the Vulnerability Index

There are a number of issues concerning the appropriateness of using the components listed above in assessing economic vulnerability. This section considers each of these components in turn.

⁵ In addition, the vulnerability indices have to deal with a number of issues, including inadequate data for some of the possible variables such as susceptibility to natural disasters and peripherality (Crowards, 2000a; 2000b), and devising appropriate weights to sum up the separate variables.

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Trade Openness

Trade openness is key to the vulnerability of SDS. This proposition is accepted across the spectrum from the holistic assessment of the Commonwealth Secretariat (1997), through the computation of an index of economic vulnerability (such as Briguglio, 1995; and Crowards, 2000c), to the cross-country technical analyses by the staff of the World Bank (Easterly and Kraay, 1999) and the IMF (Prasad et al., 2003).⁶ In fact, Khatkhate and Short defined a small state based on “exposure to foreign trade such that the economic targets of its economy are largely beyond its control” (Khatkhate and Short, 1980:1018).

There is general agreement that SDS tend to be more open to trade and so more exposed to terms of trade shocks in particular. Kose and Prasad (2002) estimate that terms of trade volatility is 30 percent higher on average for small states than for other developing countries. Trade-related shocks are therefore a fundamental source of the high average levels of output volatility experienced by SDS.

However, trade openness is also at the root of scepticism as to the importance of vulnerability for SDS. As the Commonwealth Secretariat (1997) notes, “trade openness can be a source of strength as well as weakness: a source of vitality as well as vulnerability.” Easterly and Kraay (1999: 7) focus more specifically on the relationship between trade and growth, and conclude that “microstates tend to have much higher trade shares (which is good for growth), offset by much higher volatility of growth rates (which is bad for growth)”.⁷ Prasad et al. (2003) directly attribute the higher average growth rates of SDS to trade openness despite noting the variety of inherent disadvantages that these states experience.

The UN Committee for Development Policy, that uses an economic vulnerability index in the criteria for eligibility for Least Developed Country status and for graduation out of this status, do not include an openness component in their vulnerability index. This issue evoked divergent views during the UN Expert meeting on Vulnerability held in December 1997 (United Nations, 1997).

⁶ Prasad et al. (2003) is a paper by IMF staff on the effects of globalisation on developing countries with a 2-page annex on “Small States and Financial Globalization”.

⁷ Easterly and Kraay also suggest that small states’ high growth volatility and volatility of terms-of-trade, “is due *entirely* to their greater trade openness” (p.12, italics added), despite noting that observed volatility may be due to several other factors including natural disasters.

The contribution of greater trade openness to higher economic growth is the key argument for global moves to liberalise trade. Standard trade theory suggests that all countries can gain from exploiting their comparative advantage. In addition, increased trade can facilitate the transfer of technology—including business practices, production techniques, and equipment—and promote transparency and good governance, all of which can enhance productivity.

There is, of course, considerable debate about the benefits of trade liberalisation, especially with regard to which nations and sectors of society are the winners and which are the losers. The IMF (2003a) suggests that low-income countries (LICs), for instance, are particularly vulnerable to commodity price shocks, with evidence that exogenous shocks have significant adverse effects on growth (drawn from both country-specific studies and cross-country comparative analyses). However, recent work by Dollar and Kraay (2004) on developing countries as a whole finds that increasing trade openness in the 1980s and 1990s led to higher GDP growth rates and that this was not associated with increased income inequality within countries or a disproportionate impact on the poor. However, Winters (2004) reviews the recent literature and finds that trade liberalisation is not necessarily associated with higher economic growth. It depends on other attributes such as good governance and good macroeconomic policies—attributes for which LICs have not been renowned.

The argument over trade openness in SDS comes back to that made by Briguglio (1995), that a high degree of vulnerability puts developmental gains at risk. It is likely that SDS have on average benefited from trade openness, assisted by comparatively good governance and macroeconomic policies. These attributes might even reduce the impacts of future “plausible shocks”. But these small, outward oriented economies remain vulnerable to trade-related shocks beyond their control that can have dramatic negative macroeconomic impacts.

Export Concentration

An important contributor to economic vulnerability can be reliance upon a limited number of exports. This is a manifestation of a lack of economic diversification, which can make an economy susceptible to changing patterns of trade in one of these exports (which may relate equally to services as to traded goods). This is especially so for economies that are very open and therefore heavily dependent upon export-oriented industries to fuel economic growth and for the foreign exchange required to purchase imports.

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In addition, exports might be concentrated on a small number of destinations (or sources, in the case of invisible exports such as tourism) making the economy reliant on demand originating from a limited number of other countries. Risks for the exporter might stem from changing economic fortunes of these countries, political shifts that may influence ties between countries, trading restrictions or cost impositions, and the creation of regional trading blocks or alliances.

A high degree of specialisation has often been a critical strategy for economic success, but there is little dispute that heavy reliance on one or two export industries increases vulnerability to external shocks. The degree of vulnerability is clearly linked to the reliance of an economy on exports, or its trade openness. As discussed above, there has been some debate as to whether trade openness equates to vulnerability since openness is also associated with economic growth.

Dependence on Strategic Imports

Economies that are heavily reliant on imports may be vulnerable to external shocks. While this is less likely to be the case for the majority of consumer items, for which there are substitutes or which can be foregone, more essential imports such as foodstuffs, capital goods and machinery, intermediate inputs, and energy could be a source of vulnerability. Of these, perhaps the most critical is energy, which is an input into every production process, and for which the world market is distorted and prone to considerable fluctuations. The powerful effect that these fluctuations can have on economies has been vividly displayed in the past.

Peripherality

Peripherality might manifest itself in a variety of ways. There may be limited access to trading partners if a country is isolated, for instance as a poorly accessible island or as a result of being landlocked. Countries may find themselves marginalised by sheer distance to trading partners or by distance from major transport routes, making transportation not just more expensive but also less reliable. Where quantities are small and traffic density is low, countries may become reliant upon a small number of transport service suppliers with the potential to threaten important trade links. Particular states may also be on the fringes of regional or international decision-making, and have little economic influence.

Measuring such an esoteric concept is not straightforward. Vulnerability index studies have tended to use "freight and insurance

costs of imports as a percentage of total import costs” as a proxy. But this measure will not reflect all aspects of peripherality. Moreover, there is a fundamental concern with the quality of the data (Crowards, 2000c). Measures of peripherality that are more country-specific, and probably more qualitative, could provide a more accurate picture of vulnerability arising from peripherality.

External Finance

It is an open question as to whether reliance on external sources of finance is a general source of vulnerability for SDS. Previous vulnerability indices have employed a wide range of measures of dependence on foreign finance, or none at all. Being characterised by small and unsophisticated financial markets, SDS (and LICs) tend to attract relatively little international private finance. Some SDS, and LICs in particular, are heavily dependent on foreign aid inflows or remittances from overseas workers. Foreign direct investment can also be an important source of external investment financing, although Collier and Dollar (1999) suggest that there is a perceived riskiness for private sector direct investment in SDS. External aid, remittances and foreign direct investment can support economic growth, but they can be unreliable and pro-cyclical sources of finance. According to Kose and Prasad (2002), “foreign aid flows to many small states are highly volatile and tend to be positively correlated with domestic GDP, partly because both aid flows and business cycle conditions in small states are affected by cyclical conditions in donor countries.”

The World Bank and IMF have argued that SDS could cushion the effects of exogenous shocks through greater integration with international financial markets, and that SDS are not fully exploiting opportunities for international risk diversification (Easterly and Kraay, 1999; Kose and Prasad, 2002). A low level of financial openness could be restricting SDS resilience to exogenous shocks. Financial openness may also contribute to growth, in a similar fashion to trade openness, through diversifying into new sectors, increasing investment, enhancing technology transfer, and encouraging the adoption of international standards of governance and institutional structures (Prasad et al., 2003). But “there is no clear and robust empirical proof that the [positive effect of financial integration on growth] is quantitatively significant” (Prasad et al., 2003: 5).

Openness to international financial markets can clearly make an economy vulnerable to external shocks, as the Asian financial crisis showed (see, for example, Hernandez and Landerretche, 2002). There is an expansive literature on this topic, with significant contributions

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from critics of the IMF as well as from the IMF itself. Whether reliance on external sources of finance is a source of vulnerability for SDS is less clear. So, increasing financial openness could increase the resilience of SDS to external shocks but could simultaneously increase the probability of such shocks occurring.

Natural Disasters

Frequency and impact of natural disasters are commonly acknowledged to be particularly high for SDS. Once again, this is also a characteristic of LICs. It may be less of an “inherent” feature of many LICs than it is for SDS, and perhaps more the result of poor policies and development performance, but it is nevertheless a current characteristic of these countries. The IMF (2003a) states that LICs on average experience an exceptionally high frequency of natural disasters, while both SDS and LICs suffer much larger annual damage (relative to GDP) from natural disasters than do other developing countries. However, they suggest that lower recorded damages to SDS over time may reflect more effective action to mitigate disasters, successfully overcoming some degree of their vulnerability.

Assessment of past impact of natural disasters, however, is fraught with difficulties. For instance, the data are unreliable, not easily comparable across countries, and are only available for a limited period of time. Using such assessment to predict future disasters is potentially misleading, and the value of any resulting cross-country quantitative assessment of comparative vulnerability to potential future shocks is dubious (Crowards, 2000a). Therefore, while it seems reasonably clear that LICs and SDS are particularly prone to natural disasters, determining comparative country vulnerability is extremely difficult.

Moreover, there is some question as to whether natural disasters are really significant at the macroeconomic scale. In particular, Albaladejo (1993) argues explicitly that economies will not be heavily affected by disasters. Of course, any given event is more likely to have a macro-level impact on a smaller state. The doubt cast on the impact of natural disasters on economic growth highlights the complexity of combining different components of vulnerability into a single index, and of determining the appropriate weights to apply to each component.

3. Vulnerability, Shocks and Poverty

The issue of vulnerability to external shocks is being increasingly addressed by the international development community. As an

example, “helping countries deal better with exogenous shocks” is a key part of the IMF’s work programme outlined by its Managing Director at the Annual Meetings of the IMF and the World Bank (IMF, 2003b). Other than the issue of emerging-market vulnerability to financial market shocks, the primary focus of attention in this area is LICs. This is indicative of the international development community’s preoccupation with poverty, poverty reduction strategies, and achieving the Millennium Development Goals (MDGs).⁸ Indeed, in terms of special treatment specifically for small developing countries, the IMF was noticeably thin on proposals in its “Framework” annexed to the Joint Task Force Report in 2000. On the other hand, the Executive Board of the IMF recently “expressed concern about the impact of exogenous shocks on low-income countries’ efforts to strengthen growth and reduce poverty” (IMF, 2003c). And it is putting considerable effort into addressing exogenous shocks for LICs and for emerging market economies.⁹

In the context of a focus on poverty reduction, the importance of shocks stems both from the impact on macroeconomic performance and from the direct impact on the poor. As the IMF (2003a: 16) notes, “research shows that fluctuations in income growth can have an asymmetric impact on poverty”—with poverty increasing after a negative shock more than it declines following a positive upturn in growth. So, macroeconomic vulnerability clearly has considerable implications for poverty reduction.

In this recent board paper on shocks (IMF, 2003a), the IMF makes reference to the vulnerability indices developed by the Caribbean Development Bank (Crowards, 2000c), the Commonwealth

⁸ The emphasis on shocks affecting poverty reduction efforts is illustrated in a recent paper in the IMF’s Finance and Development magazine (Happe, Hussain and Redifer, 2003): “the IMF, along with the rest of the international community, is stepping up efforts to help low-income countries mitigate the effects of shocks” (p.24); and “it is increasingly recognised that exogenous shocks can derail countries’ efforts to achieve [the MDGs]” (p.27). Specifically with regard to Poverty Reduction Strategies, vulnerability to exogenous shocks, and the impact on sustained growth, feature in a recent review of progress in implementation (IMF/IDA, 2003).

⁹ The IMF’s outline strategy for addressing shocks (IMF, 2003a) essentially involves:

- a more systematic focus in its policy advice on helping countries prepare for, and respond to, exogenous shocks;
- more consistency in the provision of balance of payments assistance in response to temporary shocks, and to ease adjustment to permanent shocks;
- helping to catalyse donor financing for shocks, in particular those shocks that are less “visible”; and
- reviewing the instruments that are available to countries in the event of shocks.

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Secretariat (Atkins et al., 2000) and the United Nations (2000).¹⁰ However, the paper re-orientates the results of these indices to show that poorer countries tend to be more vulnerable to exogenous shocks, by plotting vulnerability against GDP per capita. The majority of other international initiatives relating to vulnerability and shocks are also largely driven by the poverty reduction agenda.

A key question, then, is how SDS and vulnerability arguments fit into this arena. For instance, the IMF Board Paper on shocks makes passing reference to the fact that the indices show both LICs and SDS to be particularly vulnerable, but then proceeds to focus exclusively on LICs. This is, perhaps, indicative of the low importance attributed to small states arguments within the global agenda.

4. Vulnerability, Volatility and Growth

The limited attention paid by the international development community to the vulnerability of SDS must stem, in part, from scepticism that a comparatively successful group of countries (on average) is in need of special attention or treatment, particularly with the growing awareness of, and focus on, the extreme poverty afflicting large parts of some countries and continents.

The comparative success of SDS suggests that drawbacks to growth have not been significant, as a general rule. But volatility *has* been significant for SDS. So our focus should be on the vulnerability that contributes to this volatility, not on direct drawbacks to growth. As Briguglio (1995) points out, high vulnerability renders past development achievements fragile (whether these are high or low achievements). So, using an income measure such as GDP to assess development ignores the potential vulnerability of this development to shocks beyond the control of the country.

On the other hand, there is increasing acceptance that “poverty means vulnerability” (Happe et al., 2003). The equivalent argument that “small size means vulnerability” is evidenced by past volatility. A seemingly universally accepted fact, even by sceptics such as Easterly

¹⁰ The IMF wrongly states that all three vulnerability indices include population size as a factor for lower vulnerability (the Caribbean Development Index does not), and that this influences the results for larger countries (as it would). This is an example of controversial techniques applied in one index being perceived as applying to all such indices. Hence the concern with the Commonwealth Vulnerability Index: in applying questionable technical rigour, it stands to damage the reputation of all such attempts to generate an economic vulnerability index.

and Kraay, is that SDS experience greater volatility of output. And this higher volatility is even more pronounced for aggregate consumption (Kose and Prasad, 2002). Prasad et al. (2003: 70) reflect a common view that high volatility of output (and consumption) is the key issue for SDS: “While there is a long list of special challenges associated with being a small state, most of these challenges are ultimately related to the fact that small states have relatively high output volatility, even after controlling for income level and degree of openness.”

There is an increasing awareness that vulnerability can arise from various sources. In addition to any inherent vulnerabilities of SDS, vulnerability can stem from a build-up of macroeconomic imbalances, widespread poverty, and openness to international financial markets. As Guillaumont (1999) notes, the Asian financial crisis in the late 1990s made it clear that a wide range of countries were potentially vulnerable to major external shocks.¹¹

A country’s vulnerability can therefore stem from a range of sources, whether “inherent”, the result of recent developments beyond a country’s control, or due to domestic policy. Factors determining vulnerability may be truly inherent (such as a country being landlocked), exogenous (such as commodity prices determined by world markets), endogenous (such as policies affecting resources available as a buffer against shocks), historical (perhaps determining institutional structures), or social (such as ethnic cohesion).¹²

A simple economic vulnerability index is unlikely to be able to reflect this full range of factors. The attraction of analysing historical volatility to estimate future vulnerability has obvious appeal, since it incorporates all of these factors within a measurable outcome indicator, but it is based on the unlikely assumption that history will repeat itself. Moreover, since historical volatility captures all types of shocks, purely exogenous shocks cannot be isolated from endogenous ones.

The IMF is proposing to assess the historical volatility of the economies of LICs in determining sustainable levels of external debt.¹³

¹¹ A fundamental response in all of these cases is good domestic policies, particularly macroeconomic policies. This is a key conclusion of the IMF’s “Framework” in the Joint Task Force Report.

¹² Environmental vulnerability can also impact upon the economy. However, there is a strong argument that environmental vulnerability should be measured within a distinct, single index. This can highlight the threats to resources that are often truly unique to small (island) states and are at risk of irreversible loss, even though the scale of loss will inevitably be less than that which threatens many larger nations.

¹³ The approach is an adaptation of the analysis of debt sustainability that is already applied by the IMF to middle-income countries.

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Historical trends of key macroeconomic parameters relating to external debt would be extrapolated into the future, including real GDP growth and inflation. “Bound tests” would apply shocks equivalent to one or two standard deviations from the mean as a direct reflection of historical volatility. The rationale is that previous volatility can provide a reality check for predicting macroeconomic performance by incorporating a country’s vulnerability to “plausible” future exogenous shocks. Of course, there will inevitably be occurrences of more extreme shocks that are beyond the bounds of one or two standard deviations, which will need exceptional policy responses.

There is some dispute as to whether the high volatility experienced by SDS has hindered long-run growth,¹⁴ and hence whether this is indeed a major problem at the macro-level.¹⁵

In part, this boils down to the argument about whether the overall benefits of trade openness (higher growth) outweigh the costs (exposure to external shocks). There seems little question, however, that reducing volatility without compromising underlying drivers of growth would be beneficial.

5. A Single Index of Macroeconomic Vulnerability?

While there is scepticism about the special problems facing SDS, their historically high volatility is not in dispute. With the vulnerability of SDS to external shocks now widely acknowledged, should analysis shift more towards the individual parameters that go to make up the various vulnerability indices? And could income volatility be used to generate an aggregate measure of economic vulnerability?

Even if a single, universally acceptable and robust vulnerability index can be achieved, there remains a strong case for considering separately each of the parameters that contribute to vulnerability. This will enable each country’s particular vulnerabilities to be

¹⁴ A recent paper by Hnatkovska and Loayza (2003) uses cross-country analysis to show that macroeconomic volatility *does* have a harmful effect on long-run economic growth. This would suggest that the growth performance of SDS could well have been better if vulnerability and hence volatility could have been reduced.

¹⁵ Volatility of income will certainly be a major problem for some sectors, districts and households at the micro-level. We cannot assume that since aggregate growth has been relatively high for SDS, on average shocks have not been devastating for individual countries, communities or people. These are not trivial concerns and need to be integrated into the discussion of macro-level incomes and volatility.

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identified, and possible solutions and policy actions determined. After all, countries that are unusually vulnerable overall will be vulnerable in different ways. And a country might be exceptionally vulnerable to a particular type of shock (such as natural disasters) but may not appear vulnerable across a range of parameters (perhaps being comparatively closed to external trade and finance). Moreover, different types of shock are likely to have different impact characteristics, such as their intensity, scale, timeframe and the groups affected. These differences are lost in combining variables into a single index.

Analysing each feature separately would also mean that all characteristics of an economy that contribute to shocks, whether exogenous or endogenous (i.e., policy-dependent), could be considered together. After all, the impact of any shock cannot be entirely divorced from the domestic institutional and policy environment. Moreover, concentrating on specific characteristics may indicate where countries can draw upon international initiatives to reduce their vulnerability.

Therefore, rather than applying a single index of vulnerability across countries, more may now be achieved by extracting key information on the individual variables that make each country vulnerable to external shocks, and then seeking solutions. In addition, there may be merit in a comprehensive analysis of historical volatility of macroeconomic variables, combined with assessment of future vulnerability to exogenous shocks.

6. Policy Implications

Given that countries have key characteristics of their economies that make them vulnerable, they can devise domestic policy solutions to counteract or cope with such vulnerability.

In this regard, countries may seek to:

- a. reduce the risk of a shock occurring;
- b. mitigate the extent of impact caused by a shock through forward planning; and
- c. increase their ability to bounce back after a shock (resilience) by building up reserves, capacity and flexibility.

Countries might also be able to tap into international initiatives that aim to tackle vulnerability to external shocks. These initiatives are increasingly aimed at, or justified, on the basis of tackling poverty.

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They therefore tend to focus on LICs, but there may be no reason for individual SDS not to benefit from these initiatives.¹⁶

There will be some areas where SDS can have very little impact when acting individually in influencing international bodies such as the WTO, the World Bank, the European Commission and the IMF, or in shaping more broadly global developments in trade and finance.¹⁷ In such instances there is a very strong argument for collective action. This could be through regional bodies such as CARICOM, the Caribbean Regional Negotiating Machinery or the Pacific Forum. Alternatively, representation could be through international bodies, such as the Commonwealth Secretariat or various parts of the UN, which play such an advocacy role on behalf of SDS. On generic areas affecting the vulnerability of SDS, a collaborative effort can and should be made to input into the design of regional and international regimes or programmes.¹⁸

Countries can seek to address their individual characteristics of vulnerability through appropriate domestic policies. A fundamental means of coping with vulnerability is to implement good policies, as highlighted in the Joint Task Force Report and emphasised in particular by all relevant IMF literature. The high degree of openness of SDS can amplify the negative consequences of domestic policy mistakes, making good policies even more important (van Beek, 2000). Macroeconomic and structural frameworks need to be able to respond to shocks, and flexible fiscal frameworks designed to cope with volatile aid flows. Regional cooperation is also important to combat vulnerability. This may be in the form of risk sharing or negotiating

¹⁶ International initiatives to combat shocks include: the International Task Force on Commodity Risk Management in Developing Countries; the World Bank's work on natural disaster insurance and facility for contingency loans in the case of catastrophe; and the European Commission's FLEX. Work is ongoing at the European Commission in the area of the agricultural commodity trade (European Commission, 2003). The IMF is considering a revision of its lending instruments to better support LICs suffering from shocks (IMF, 2003a). The UNDP has an active Disaster Reduction Unit, the Caribbean Development Bank administers the Disaster Mitigation Facility for the Caribbean, and the Organisation of American States has its Natural Hazards Project. The World Bank, the Commonwealth Secretariat and UN-DESA each has a unit dedicated to small states' issues, while FTAA and WTO negotiations have institutional provisions for small economies. Within the UN, the Group of 77 contains the Alliance for Small Island States (AOSIS) which has been instrumental in giving a voice to small island developing states in international fora.

¹⁷ Gonzales (2000) points out that the growth versus vulnerability trade-off is exacerbated in the speed of trade integration. More rapid integration promises increased economic growth, but threatens significant adjustment costs and potential shocks, illustrating the importance of a strong SDS negotiating position in this area.

¹⁸ Collaborative efforts to influence through regional negotiating processes are not, however, without their own difficulties (Lewis, 2002).

internationally to improve the external environment, although the sharing of risk will have limited benefit where external shocks are likely to affect much of a region concurrently.

A policy that staff at the World Bank and the IMF, in particular, have advocated for SDS, is increased international financial integration. At the same time, they acknowledge that the verdict is still out on whether increased financial openness can deliver increased growth or reduced volatility. The suggestion is that “financial integration should be approached cautiously,” and (perhaps inevitably) should be supported by “good institutions and macroeconomic frameworks” (Prasad et al., 2003: 5).

These are fairly generic policy recommendations for tackling vulnerability. But the vulnerability of individual countries will be determined by a range of different factors, in a combination that is peculiar to each. By looking at the individual components of a country’s vulnerability, a more specific set of issues requiring a policy response can be identified. The appropriate set of policy responses can then be determined for each country.

7. Conclusion

There is wide acceptance that SDS are particularly vulnerable to external shocks, as evidenced by their high average historical volatility of output. A primary cause of this volatility is terms of trade shocks resulting from their high degree of trade openness. But there are a number of other key contributors to economic vulnerability. Assessing countries’ exposure to these individual sources of vulnerability can provide important information for policy makers. This approach may well be preferable to condensing the information within a single index that ranks overall vulnerability, and may avoid a number of the pitfalls that beset the construction of such an index.

The special concerns of SDS and, in particular, their high degree of macroeconomic vulnerability to exogenous shocks, need to be considered in the context of an international focus on poverty reduction and achieving the MDGs. The fact that SDS have, on average, performed relatively well in terms of growth and development will inevitably provoke scepticism as to their inherent problems within this context. SDS share characteristics with LICs, such as vulnerability to external shocks, terms of trade volatility and exposure to natural disasters. However, many SDS appear to have overcome these and other disadvantages to some degree through, for

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example, good governance, appropriate institutions, international links and macroeconomic management.

SDS need to build on these positive traits while seeking to overcome their natural disadvantages and reducing their vulnerability. Identifying key contributors to their vulnerability will help countries to design appropriate policies and to tap into international initiatives that seek to address various aspects of shocks and vulnerability.

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