# L-Università ta' Malta
## Islands & Small States Institute

# Webinar: Development and Stabilization in Small Open Economies: Theories and Evidence from Caribbean Experience

📅 **9th March 2023 | 4pm to 5.30pm (CET) | 11am to 12.30pm (AST)**

✔ **Further information and registration: shorturl.at/BHILU (Zoom)**

Dr Worrell, renowned economist based in the Caribbean region, will be presenting pertinent aspects of his recent book "Development and Stabilization in Small Open Economies", published by Routledge in January 2023, which analyses and explains the nature of the economies of small countries and territories.

**Speakers:**
Dr DeLisle Worrell, Governor of the Central Bank of Barbados (retired)
Prof. Lino Briguglio, Professor of Economics, University of Malta
*Moderated by Dr Stefano Moncada, Director, ISSI*

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# Development and Stabilization in Small Open Economies

Presentation based on the book[1]

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Webinar hosted by the Islands and Small States Institute, University of Malta[2]

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Abstract

*Policy makers in small open economies continue to manage exchange rates as though there is a relationship between the US dollar value of the domestic currency (if they have one) and the performance of the economy. This paper, which presents some essential messages of my recent book Development and Stabilization in Small Open Economies, explains why that is not the case. We show how the conventional ways of structuring economic relationships should be modified to faithfully reflect the realities of the small economy, and we explain some implications for the design of policies for development, as well as the assessment of economic performance.*

Keywords: small open economy, economic development, exchange rates, interest rate policy, competitiveness, productivity, savings and investment, balance of payments, debt management.
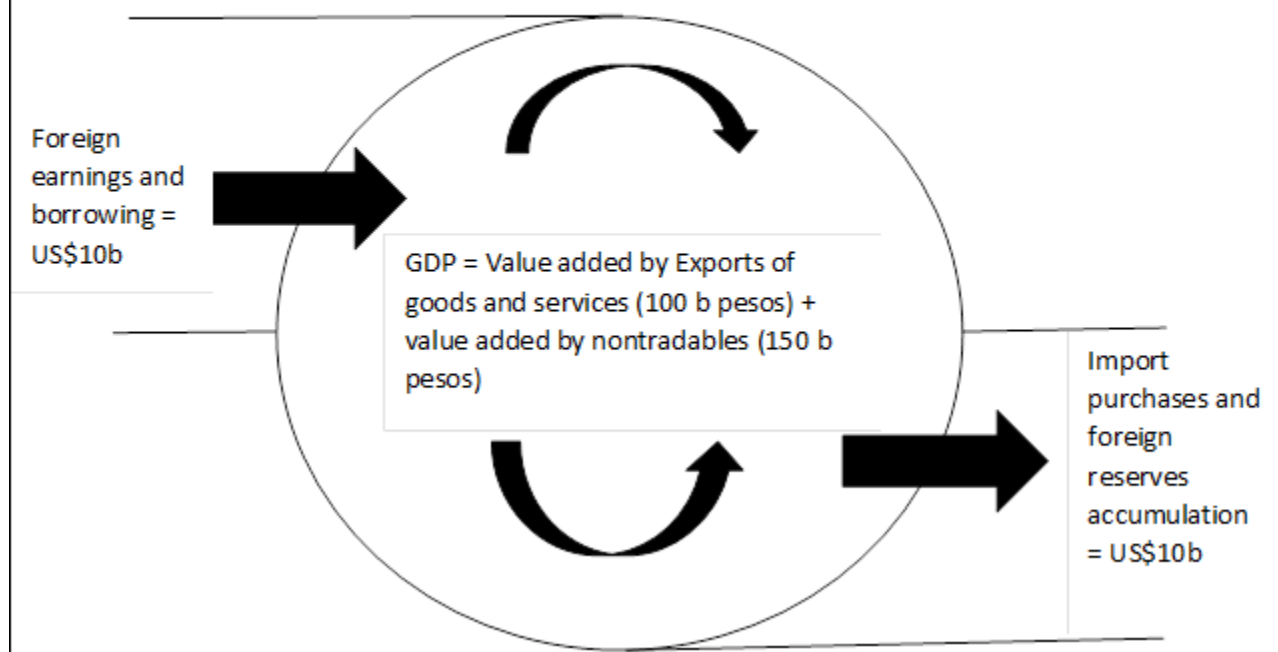
JEL categories: E1, E4, E5, E6.

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[1] Worrell, DeLisle, 2023, Development and Stabilization in Small Open Economies (routledge.com).
[2] Video available at (20+) Facebook Live | Facebook.

My book opens with a discussion of exchange rate policy, perhaps the most contentious issue in policy debates on the management of small economies. At the root of the contention is a misperception about the source of national income in a small country like Malta. Like every other small modern economy, Malta earns its domestic income - all of it - from tourist services, other traded services and goods that the country exports around the Mediterranean and to the wider world, as well as from incoming investment and borrowing. It is true that the national income is much larger than the total of foreign earnings and foreign investment. Those inflows are multiplied through domestic purchases and sales within Malta; the total of the resulting domestic activity generates a demand for imports of everything required for domestic consumption and investment. Should anything remain of the earnings or investment from abroad after import needs are fully satisfied, you will find the surplus foreign currency recorded in the balance of payments as financing placed abroad by the banking sector. In a country like Mauritius which has a domestic currency, some of the excess may be placed by the Central Bank with the Federal Reserve Bank of New York or be invested in US Treasury bonds, as backing for the domestic currency. Both in Malta and Mauritius, these balances will be drawn upon in years when import demand exceeds inflows from abroad. The total of incoming earnings and investment goes back out, hopefully with a small reserve of precautionary savings invested abroad, just as for the household, wages earned are spent for sustenance and enjoyment, with some savings set aside for a rainy day.

Let us consider the implications for exchange rate policy of this picture, shown as Figure 1.1 (reproduced below) and discussed on pages 5 - 7 of my book. The conventional macroeconomic approach views national income from the perspective of total spending on goods and services for domestic consumption and investment. Total spending is thought to be influenced by the prices of domestically produced goods relative to comparable imports. If the economy stagnates or declines, it must be because domestic prices are too high, and the exchange rate should be allowed to depreciate, to allow the domestic price level to adjust to match the level of domestic productivity.

**Figure 1.1 The Small Open Economy**

Foreign earnings and borrowing = US$10b

GDP = Value added by Exports of goods and services (100 b pesos) + value added by nontradables (150 b pesos)

Import purchases and foreign reserves accumulation = US$10b

In small economies it has long been obvious to policy makers, businesspersons, investors and the general public that this is a misrepresentation of their economies, for a variety of reasons. Among them, the fact that they cannot produce domestically the immense variety of their imports, however expensive these items might become; also, the fact that they sell abroad at the ruling world prices, no matter what their domestic costs might be. In reality, enterprises in the small economy must be sufficiently productive to be competitive at the world prices they face, in order to secure customers from abroad.

Hoteliers and exporters in small economies are atomistic suppliers in a vast international market; they may sell everything they can produce profitably at the ruling world price for the quality of good or service they provide. What limits output and earnings in the small economy is the capacity to produce profitably at ruling international prices. The way to increase output is to design and implement policies to increase productivity and raise quality so that existing capacity is fully utilised. That will be a signal to interested financiers that opportunities exist to invest in additional productive capacity.

My book provides a model for use by policy makers in small open economies in which economic growth is energised by a country's international competitiveness, defined as a perception in international markets that the country's tourism, exports and other traded activities offer good value for money, as good as, or better than, competitors which have a similar product or service on offer. Chapter 8 of my book provides an exhaustive discussion of this concept of competitiveness, including measures that capture its essence.

Important among the elements of competitiveness discussed in Chapter 8 is the credibility of macroeconomic policy in the eyes of potential investors. The stability and predictability of the US dollar value of the national currency plays a large part in establishing the credibility of macroeconomic policy in the eyes of credit rating agencies and financial markets. Chapter 7 of my book explains why it is unwise to leave the exchange rate of a small economy to the vagaries of the foreign currency market, and how the rate can be effectively managed, using aggregate demand management.

My book is about policies to promote development, a more inclusive concept than is the growth in national income. Since 1990 we have had a useful measure of development in the form of the Human Development Index (HDI), published annually for all nations by the United Nations Development Programme, UNDP. The HDI, which combines an index of per capita income, adjusted according to purchasing power parities, with indices of health and education, is described in Chapter 17 of my book. The HDI comes much closer to the reality of human well-being than does any other measure of development that is universally available; it is the measure I use to evaluate the development success of 41 small economies in the years since the HDI first became available.

*The mechanism of a small economy*

Chapter 6 provides a high level overview of the transactions which constitute a small modern economy. We begin with investment; what motivates an investor to build a hotel, invest in equipment to make kitchen appliances or prepare land for the production and export of coffee? Most often it is because they see untapped potential in a country with a stable economy and society, and they have the knowledge of production processes to enable them to produce profitably for export markets with which they are familiar.

Once the hotels are built, the factories are fully operational and the coffee is ready to be harvested, we can calculate the amount of expected foreign earnings from these activities. The suppliers of electricity and other public utilities, supermarkets and retailers, companies and individuals providing financial, personal and other services will all have expectations for their output, depending on how the expected foreign earnings compare with the most recent performance and the impact that foreign earnings usually have on the demand for their products. They will use what intelligence they have about possible increases in their costs, decide the amount they will produce in the coming year, and whether they will need to raise prices. If the producers of these non-tradable goods and services succeed in selling everything they plan to produce at the offering price, the total of the national output – that is, the sum of exports, tourist earnings and non-tradable production – will live up to expectations.

We now turn our attention to the consuming public. From the incomes earned from producing the domestic output, they buy the items and services on offer at retailers, suppliers and service providers. If they can afford to buy everything at the listed prices, then we would expect at the end of the year to fully realise the anticipated national income. However, should prices rise too steeply, consumers may be obliged to cut back, in which case actual production of non-tradables and overall national income in real terms will fall short of expectations.

These relationships are summarized algebraically in Chapter 6, as follows.

The investment equation:

6.1.　　$i = f_1(-xcap_t(-1), a^*, p_t, ulc, r_f, emp, GCI)$, where

$i$: investment;

$-xcap_t(-1)$: full capacity variable for tradables, the negative of excess capacity;

$a^*$: aggregate expenditure, expected;

$p_t$: price of imported inputs, which are tradable by definition;

$ulc$: unit labour costs;

$r_f$: the foreign interest rate, the opportunity cost of investment;

$emp$: exchange market pressure variable, a weighted average of foreign reserve losses, domestic interest rate premium increases and exchange rate deterioration;

$GCI$ : the Global Competitiveness Index, or similar indicator of (non-price) competition.

The foreign earnings equation:

6.2.　$q_t = f_2(p_t, ulc, r)$

$q_t$: the output of tradable goods and services;

$r$: the domestic interest rate, the cost of working capital.

The non-tradable output plans:

6.3. $q_n = f_3(a^*, q_n(-1))$ where

$q_n$: output of non tradables.

The realized price and non-tradable real output equation:

6.4.　$p_n = f_4(q_n, p_t, ulc, r)$ where

$p_n$: the price of nontradables.

These four relationships explain the factors that determine the level and growth of the national income of the small economy. In Chapter six we also include relationships for the balance of external payments and receipts, government expenditure, revenue and borrowing, and the supply of domestic money, factors which policy makers need to take into account in designing and executing measures to stimulate growth, promote development and keep the economy stable.

*The implications of our model*

In our book the model set out in Chapter 6 is used to demonstrate some characteristics of the small open economy.

Let us begin with the exchange rate. We have established that the small economy cannot alter the prices at which it trades; it buys and sells at world market prices. It follows that government gains credibility from a predictable exchange rate, which ensures that domestic inflation is not driven above the international rate. In practice exchange rate targeting has been a challenge; small countries have found it difficult to manage the exchange rate through market intervention, even when they hold very large foreign reserve balances. However, should they stop intervening, there is a risk of unexpected and often capricious devaluation, with the attendant high inflation. Using the model of Chapter 6, we show how the exchange rate may be targetted by managing aggregate demand, using fiscal adjustment and debt management. The recommended policy, whenever there is persistent scarcity of foreign currency in the market, is to support intervention and interest rate hikes with contractionary fiscal actions, sufficient to restore balance to the external accounts. Prompt fiscal action, in association with intervention and monetary tightening, will restore confidence in macroeconomic policy, providing the necessary breathing space for the fiscal measures to take full effect.

This is bitter medicine for economic managers to contemplate. There is always a preference for counter-cyclical fiscal policy, to soften the impact of the loss of foreign income or investment that might have provoked the foreign currency shortage in the first place. However, additional domestic spending will simply generate a demand for imports, aggravating the foreign currency shortage and pressure on the exchange rate. Government's counter-cyclical expenditures have to be limited to the finance that can be secured from abroad. Such borrowing might be inadvisable, except in the short term, so as to avoid creating future foreign liabilities unmatched by any increase in the capacity to earn foreign currency.

The scope for monetary policy in the small economy is limited to stabilising the credit market for short periods, in support of fiscal adjustment and to relieve pressure on the exchange rate. Prices and interest rates in small economies are fully determined by the international market. The way in which a small market targets inflation is by targetting the exchange rate. Domestic inflation is the sum of international inflation and the change in the exchange rate. If the central bank lends to government to finance new spending, that generates a demand for imports, but it will affect prices only if the exchange rate depreciates. The domestic interest rate is equal to the foreign rate plus the country premium and exchange costs. Attempts to lower the rate will provide incentives for capital outflow, and increases in the rate, if not in the context of support for fiscal adjustment, will undermine the credibility of macroeconomic policy, also resulting in outflows. The corollary of these circumstances is that fiscal dominance is a fact of life for the small economy, and notions of central bank policy independence fly in the face of reality.

We may also use our model to demonstrate other important characteristics of the small economy. The domestic savings rate is a residual, determined by the import propensity of investment projects. Let us suppose that I am investing in a home office to offer economic consultancy services, using my own savings. I will need a laptop, a printer, a cell phone, and some furniture, at a minimum. These items are imported, or, if locally made, produced using imported components and materials. The shop from which I purchase my supplies will need foreign currency to restock their shelves, and the local producers will also need foreign currency to fulfill

future orders from myself and others. Ultimately, all that portion of my investment which is sourced abroad must be funded with foreign currency. Of the finance I put into my investment, only the value added in Barbados is realized as economic savings; most of what I spend is used to obtain foreign currency to buy the imports and materials that went into my purchases. In the small open economy, the realized domestic saving is the proportion of domestic investment projects which represents the local value added in those projects. The domestic savings rate is not an indicator of investment potential, and it is not possible to accelerate investment spending by stimulating domestic savings.

A related indicator which should not be misinterpreted is the size of the current account deficit of the balance of external payments. The current account deficit of small economies will always be very large when the economies are experiencing robust investment-led growth, because investment projects are no less import-intensive than is consumption. Every large investment project will generate a surge in imports of construction materials, machinery and equipment, widening the current account deficit. That is not problematic because those imports will be fully funded by capital inflows, whether the investor is local or foreign. The local investor will either have secured foreign funding directly from abroad, or will have bought foreign currency from their financial institution. Very large current account deficits send a positive signal when they reflect investments in projects that will increase foreign earnings, either directly, or by financing power generation, transport systems, education or other spending that increases the country's international competitiveness. On the other hand, a current account deficit financed by borrowing that does not result in additional export capacity or improved international competitiveness impairs the country's productive capacity and prospects for growth.

Our model may also be used for the management of government's external debt. In every economy with an own currency, there is a level of foreign reserves with which the foreign exchange market is comfortable. Government should use the fiscal tools of demand management to avoid circumstances where they are obliged to seek foreign funding to maintain reserves at this level. Should it become necessary to do so, prompt contractionary fiscal action is essential to restore market confidence; failure to act will result in capital flight, as traders and financial institutions take steps to reduce their foreign liability exposure, so as to ensure their survival in case of a depreciation of the exchange rate. For the small open economy, the surplus of foreign reserves, over what the exchange market considers a normal level, is a reliable indicator of the sustainability of the external debt. Borrowing to finance public projects is no cause for alarm, and is sustainable; borrowing to shore up falling reserves is not.

*Policies for development and stabilisation*

The fiscal tools available to governments of small open economies - expenditure allocation and management, tax design and revenue management, and financing choices and debt management - are adequate for securing continuous improvement in people's well-being, and an economy whose inflation rate does not exceed the world rate of inflation. The proximate objectives should be to ensure that tax systems are equitable and not biased against external trading, services and financing; that expenditures are allocated according to developmental priorities; that finances are

managed to achieve small surpluses on the current account; and that borrowing is prudent and directed to fixed capital formation. A brief comment on each item follows.

A more equitable distribution of income will be reflected in a better quality of human development, for any given level of income. In an appendix to the 2020 edition of the Human Development Report, the UNDP calculates that Barbados' index of human development was 17 percent lower than it would have been, had the distribution of income been more equitable. The tax system provides government with an effective tool to improve the overall distribution of income.

It should be obvious that the tax systems of small open economies should not be biased against activities that earn foreign exchange, since foreign income drives their overall economic growth. Yet an increasing number of tourist economies have implemented a value added tax, a measure which is biased against services such as tourism.

With respect to expenditures, governments should equip public services with the expertise needed to introduce modern systems for prioritizing expenditures and increasing public sector productivity, all with a medium term perspective. Small countries and developing nations suffer from a scarcity of skills needed to design and implement the complex and multifaceted systems and changes that are necessary to make progress towards the sustainable development goals to which they are committed. The most effective way to staff the public sector, in these circumstances, might be to seek to recruit the best talent the country can afford, even though that might mean a smaller public service, focused on the country's priorities. It is better to do what can be afforded and to do that well, than to burden the economy with a large underperforming public sector.

Tax revenues should cover operational and interest costs, with about two percent of revenues left over to contribute to depreciation and replacement of capital assets. Borrowing, both domestic and foreign, should be tied to specific capital expenditure, apart from short term funding for cash management purposes. Countries which sit above the median HDI score have no need for concessionary finance; prudent fiscal management secures their international credit-worthiness and assures them of market access at favourable interest.

On Pages 128 and 129 of my book there are some additional suggestions for fiscal policies for development in the small open economy.

*A framework for policy design and implementation*

Chapter 12 of my book presents a suggested model and framework for the design and implementation of economic policy in small open economies. The essential modules within the economic policy framework are:

- Firstly, a model of long term investment, competitiveness and growth which serves to provide a benchmark for the growth of competitive production capacity in the economy;

- Secondly, structural forecasting models of sectoral growth, the balance of payments, public sector revenue, current and capital expenditure and financing, and the monetary

accounts. Two models with similar structure are needed, a quarterly model with a rolling 18 month horizon, and an annual model with a rolling five year horizon;

- Thirdly, quarterly and annual financial control frameworks for the public sector accounts, structured to provide data that is incorporated into the forecasting framework; and

- Fourthly, a weekly forecast for domestic and foreign currency liquidity, which is used to manage the public sector's cash requirements, consistent with the foreign reserve targets.

The process of economic policy design begins with the use of the model to make a forecast of foreign reserves, GDP, the foreign earnings, foreign investment, imports, the principal elements of government revenues, expenditures and finance, employment and other key indicators. This forecast is used as the benchmark against which the performance of the economy will be evaluated, monthly and quarterly, and more frequently in times of economic difficulty. The forecast is also used to set the targets for the budgets of all government departments, agencies and state-owned corporations.

The policy is best implemented by a committee chaired by the Minister of Finance, comprising the top officials of the central bank and the Treasury, meeting monthly to evaluate current performance indicators against expectations. Using the forecast as reference, they can determine whether the economy is on track to meet targets for the fiscal year and over the medium term horizon. The committee should be empowered to take action where necessary to keep the economy on target, especially with respect to foreign currency inflows and the balance of the external accounts, within limits set by the country's legislative framework and parliament.

*A word on small economies*

The 41 countries discussed in my book sit to the far right of a continuum that ranges from large countries where domestic production is of sufficient magnitude and variety to stimulate overall output and growth, to the small countries which are my focus, where the essential fuel of the economy is foreign exchange. There are no closed economies in the modern world; in Figure A.1 of my book (reproduced below) we see that the US and China, the world's largest economies, have ratios of external trade to GDP of 29 percent and 41 percent, respectively. Every modern economy shares some of the characteristics that define the small open economy; the further to the right any country lies on the continuum from the US to the 41 countries in our study, the more that country resembles the small open economy, and the more likely it is that the analyses and conclusions of my study apply.

Figure A.1 Economic Size and Openness