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THE ANATOMY OF THE BARBADOS RECESSION: TRENDS, CAUSES AND COMPARISONS

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Abstract

Since the late 1970s, the Barbados economy has experienced four recessionary periods, namely 1981-83, 1990-93, 2001 and 2009. While the combined effect of the most recent episode and the ensuing four years of weak growth were not as severe as previous recessions, the protracted nature of the current economic recovery has generated much debate and concern. This paper examines critically the aforementioned recessionary periods, with particular focus on the proximate causes, comparisons of the performances of the traded and non-traded sectors during the pre- and post-recession phases and the importance of sufficient fiscal space for the prospects for recovery. The lack of sustained traded sector-led growth in the post-recession phase of each recession, and the degree of fiscal space prior to the recession, are critical factors that determine the nature and depth of recessions in Barbados.

Introduction

The global economic and financial crisis that began in 2008 resulted in one of the longest and most protracted international recessions in modern economic history. Given the resultant impact across the international economic landscape, much debate has been generated about the causes, nature and comparability of different periods of economic decline. Small, open economies, including those in the Caribbean region, were impacted severely by the economic challenges of their larger trading partners, as external demand for goods and services from the former declined and foreign investment flows stagnated.

In Barbados, a critical concern regarding the most recent recession in 2009 and the ensuing weak economic performance has been the impact of the economic contraction on the foreign exchange reserves. Given the country's dependence on foreign exchange, both to finance imports and to defend the currency peg, it is critical to understand how the various macroeconomic sub-sectors were affected and, perhaps more importantly, which of them have the capacity to drive the recovery in the short and medium-term.

The analysis that follows aims to answer these questions by examining the output trends in past recessions, comparing the main drivers of pre- and post-recession activity, analysing the impact on the foreign reserves and highlighting the prevailing government fiscal dynamics.

Recessions in Barbados: Some Stylised Facts

A recession is usually defined as two consecutive quarters of declining economic activity, measured by the annualised growth rates of real Gross Domestic Product (GDP) (see HM Treasury, 2014). Using this definition, over the period 1978 to 2013, Barbados has experienced four periods of major economic decline, *viz.*,– 1981-1983, 1990-1993, 2001 and 2009[1]. Given Barbados' small size and high degree of openness[2], not surprisingly, international economic shocks have played a large part in each of the four recessions.

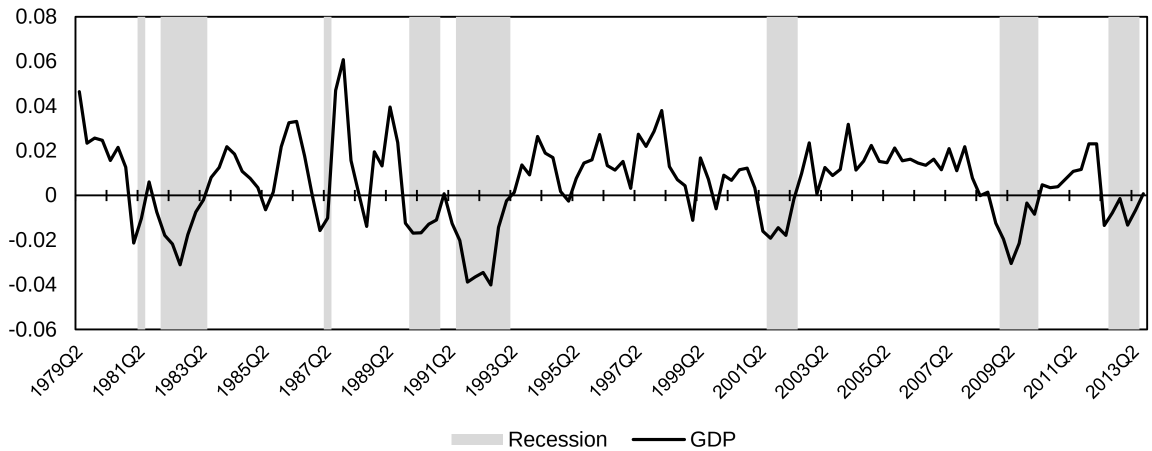
The recession in the early 1980s was triggered by a global oil crisis that forced the United States of America (U.S.) and much of the developed world into recession. Similarly, the 1990s recession has its root cause in a combination of a recessionary global economy and relatively high government expenditure during the late 1980s, which eventually impacted severely on the balance of payments position. The recession that began in late 2001 was by far the mildest, lasting just over a year, chiefly because the fallout was driven temporarily by a fear of travel resulting from the backlash of the September 2001 terrorist attacks. The current economic slowdown, which has been ongoing since 2009, may be cast in a different light. Firstly, it was preceded by a global economic fallout of massive proportions not experienced since the Great Depression in the 1930s. The transmission of the crisis from the U.S. to other developed countries and developing countries was swift and to add to its severity, it was accompanied by a financial crisis that continues to fuel uncertainty about the prospects for sustained economic recovery. Indeed, past financial crises that have been associated with an economic downturn has resulted in a slower recovery in global output (Kannan, Scott, and Terrones 2009).

Figure 1 illustrates the long-term trend in economic activity since 1978. While there have been thirteen instances where economic growth turned negative, only eight (shaded grey in Figure 1) satisfy the above definition of a recession.

[1] The economy contracted by 4.1 percent in 2009 and has recorded average growth of 0.3 percent for the past four years.

[2] Barbados' trade-to-GDP ratio, which measures the importance of trade relative to the size of the domestic economy, was around 40% in 2009, almost double that for the aggregated OECD countries.

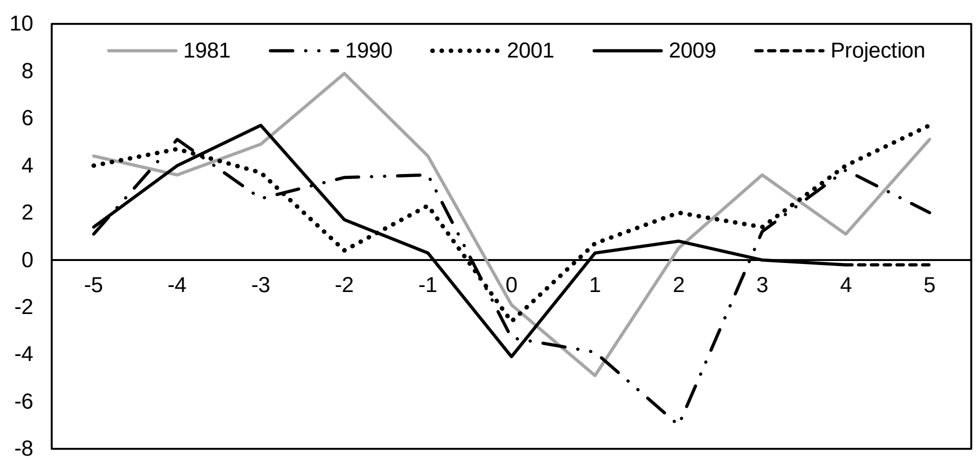
Figure 1: Real GDP Growth Rates and Recessionary Periods (1978-2013)



Source: Central Bank of Barbados and Author's Calculations

To compare the four major recessionary periods equally, most of the figures that follow will be in the same format: the first year of recession is depicted as Year 0 on the x-axis, with the graph portraying the movement in the respective variables plotted five years pre and post-recession.

Figure 2: Real GDP Growth Rates Pre- and Post-Recessionary Periods

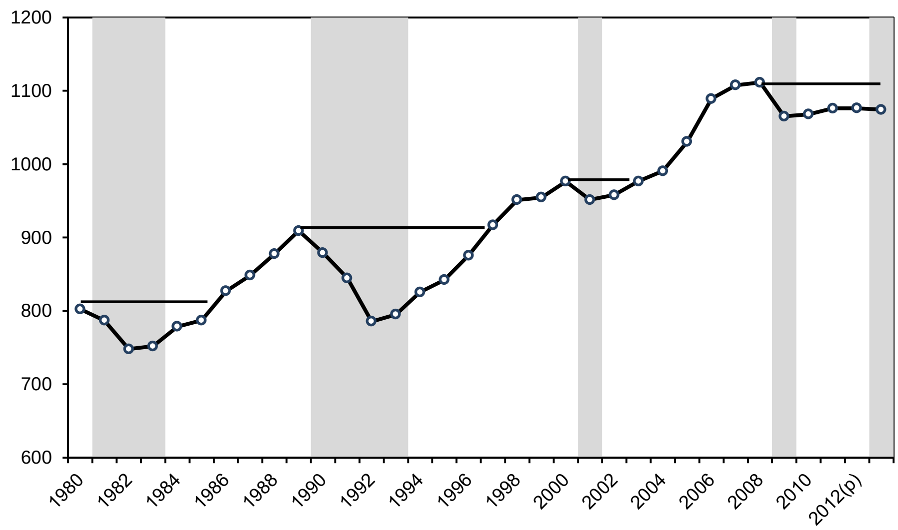


Source: Central Bank of Barbados

As shown in

Figure *2*, the 2009 recession was characterised by the most extreme initial shock in the sample (i.e., Year Zero). Nevertheless, the extent of the decline over the following four years was much less severe than for most of the other periods. In fact, while the cumulative percentage declines in real output for the years of recession, in order of occurrence, were 6.9%, 14.2%, and 2.6%, the total decline between 2009 and 2013 was just 3.3%. The major challenge during the current recession, therefore, has related primarily to the persistence of its effect on economic growth rather than the magnitude of its initial impact.

Figure 3 - Real GDP (BDS$ Millions)



Source: Central Bank of Barbados

Notably, the average length of the recessions in the sample, excluding the 2009 episode, was 2 years, with a range of between a single year of decline (i.e., 2001) to three years of successive contraction (1990-1993). However, in all prior recessions, once even modest growth was restored, it was sustained and the economy continued to grow for at least 7 consecutive years, resulting in the traditional "V-shaped" recovery pattern. As a result, as Figure 3 reveals, in prior recessions it took the economy between three years (2001 recession) and 8 years (1990-1993 recession) from the onset of the recession in each case to fully recover the losses sustained during the periods of contraction.

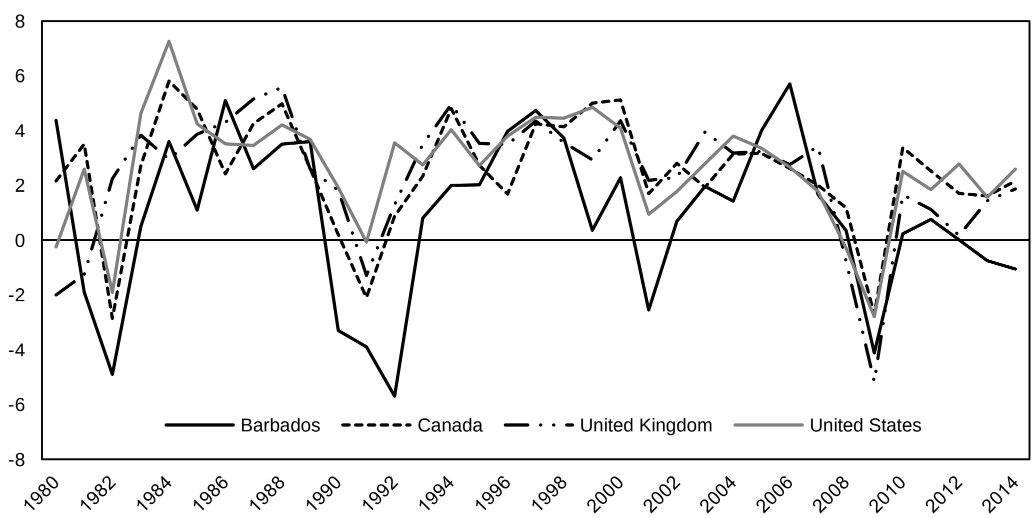
The current recession has been different: at its onset, only one period of decline was recorded, followed by a four-year period of modest output growth, averaging 0.2% per year through 2013. In contrast to prior recessions, however, although the economy quickly stabilised after the 2009 decline, there has been a continued drag on growth such that the economy has recaptured just 20% of the total losses in the five years since the recession began. This average rate of recovery of roughly 4% per year is well below the 18% recorded in previous periods, causing an "L-shaped" pattern. However, it is noteworthy that negative growth did not continue to hamper the economy in the immediate aftermath as occurred in 1982 and 1991-1992, signalling that the Barbadian economy was resilient enough to withstand the world's greatest recession in almost a century.

The main question that emerges from this analysis, therefore, is what has been different about this recession? Given Barbados' aforementioned openness and dependence on foreign capital inflows from exports and for investment, it is important to consider the protracted impact of this recession on growth in the context of the global macro-economic environment. Figure 4, which represents the relationship among the growth cycles of Barbados and its three main trading partners – Canada, the USA and the UK, provides some insight into these periods of negative output growth.

An analysis of Figure 4 suggests that Barbados' economic growth over the sample period is undoubtedly correlated with that of its industrialised trade partners and fluctuations often occur contemporaneously (i.e., within the same year). Therefore, the estimated correlations between Barbados' growth cycle and those of the UK, the US and Canada of between 0.5 and 0.7 are not unexpected, as these economies account for approximately 70% of tourist arrivals and are the principal sources of international business investment (Lorde, Francis, and Drakes 2011) and foreign direct investment, which has been shown to be a significant determinant of domestic GDP growth in Barbados (Brathwaite and Greenidge 2005). Furthermore, expansions in Barbados tend to be of a lower magnitude than those in the three major economies. Previous recessions in these economies were followed by relatively speedy recoveries and persistent levels of post-recession growth in excess of 4%. These improvements were mirrored, albeit to a lesser degree, in Barbados where average growth in the four years immediately following previous recessions was between 2-3%.

In contrast, periods of contraction have been amplified in Barbados such that the decline in output has been more substantial in Barbados, by about 2 percentage points than the worst performing of the three economies. Not surprisingly therefore, the persistently low growth rates in Canada, the UK and US since 2008 have been reflected in anaemic growth in Barbados, following initial steps toward recovery in 2010 and 2011. IMF projections suggest there will be a return to economic growth in these large economies from 2014 onward, raising expectations that Barbados' growth will react to this signal in the manner it has in the past.

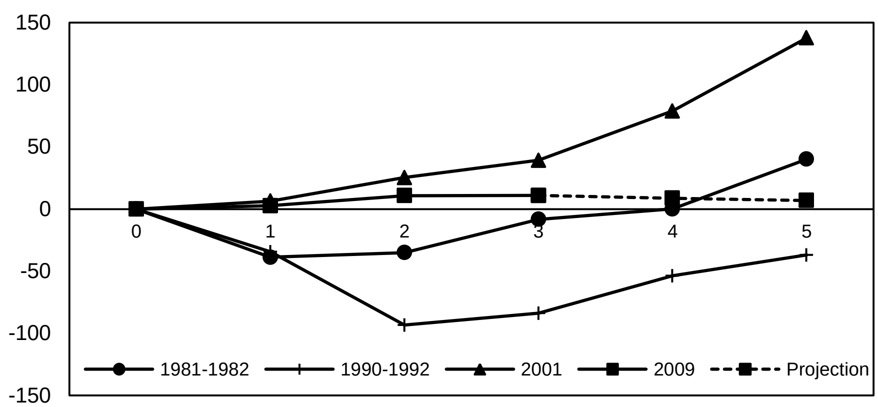
Figure 4: Real GDP Growth Rates for Barbados, Canada, USA and UK (1980-2014)



Source: International Monetary Fund

The period of economic recovery is the most intriguing aspect of analysing these recessions. Indeed, a recession provides policymakers with the opportunity to reset the priorities for reinvigorating and sustaining economic activity. Figure 5is a representation of this idea, where the first year of recession in each instance is set to Year 0 on the x-axis and real output at that time is Level 0 on the y-axis. While the 1981-83 and 1990-93 recessions showed further declines in real output following the first year of recession, economic recovery following the 2001 recession was significantly stronger. In the current circumstances, neither growth nor decline is apparent since 2009, as economic activity thereafter has been almost constant. This may be viewed as either resilience in the face of an uncertain global environment or structural hindrances that are constraining recovery. What must be noted is that despite anaemic growth, the Barbados economy has maintained levels of real output through a prolonged global recession.

Figure 5: Tracking the Path of Post-Recession Economic Recovery



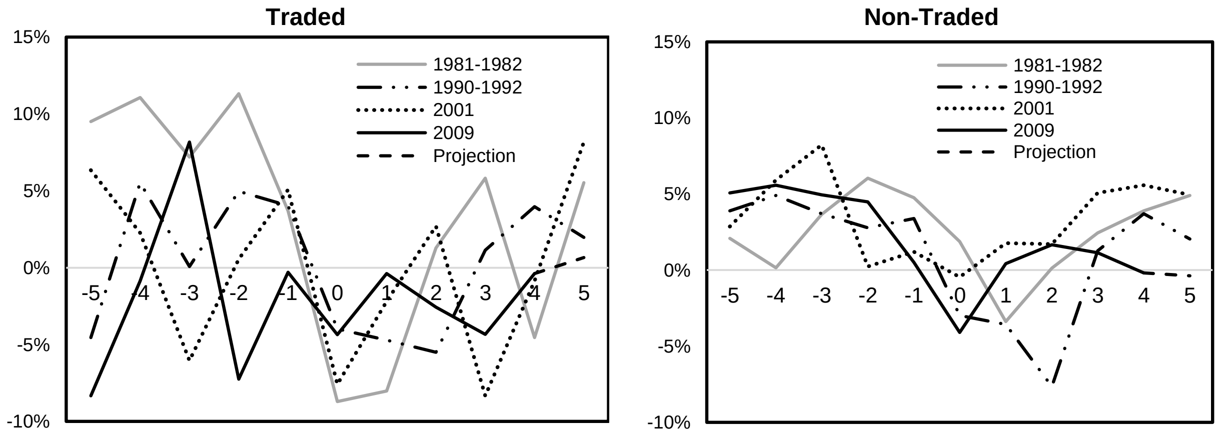
Source: Central Bank of Barbados

Economic Growth and the Importance of Foreign Reserves

While the changes in the global environment provides some insight into the fluctuations in the Barbados economy, more in-depth analysis of Barbados' GDP components is necessary to understand how these international developments have impacted on growth. Recalling Barbados' aforementioned reliance on foreign exchange, it is critical to analyse economic activity in the context of the sectors that are net earners (traded) and net consumers (non-traded) of foreign currency. This decomposition is best illustrated by Table 1 and Figure 6.

The two panels in Figure 6 suggest that the growth in the traded sector is much more volatile than that in the non-traded, both prior to and following the four recessions. Following each of previous three recessions, the two sectors returned to growth after 2 or 3 years. However, while growth in the non-traded sector continued throughout the five post-recession years, there were declines in traded sector activity within 4 years of the end of the recession in 3 of the 4 episodes.

Figure 6: Annual Growth Rates of Traded and Non-Traded Sectors



Source: Central Bank of Barbados

Furthermore, these large oscillations between traded growth and decline have resulted in a weak overall performance of the sector such that the average growth rate in the traded industries since 1980 has been -0.7%, compared with 1.8% for the non-traded sector.

Table 1: Traded GDP as Percentage of Total Real GDP

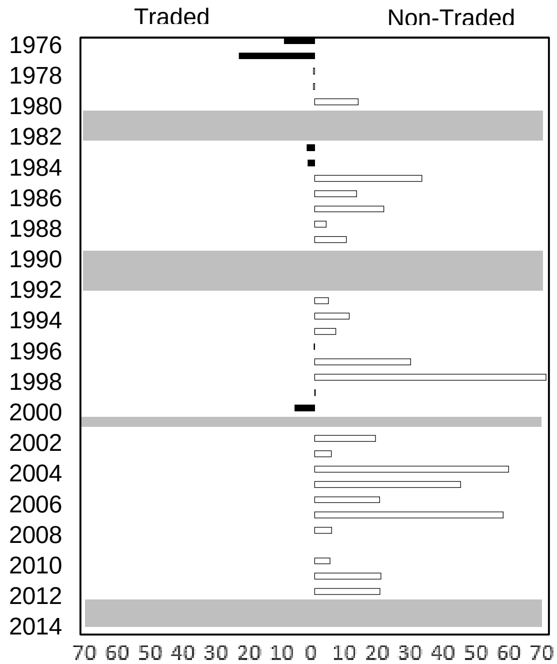
Year	0	+1	+2	+3	+4	+5
1981	33.5%	32.4%	32.6%	33.4%	31.5%	31.6%
1990	31.2%	31.0%	31.5%	31.4%	31.5%	31.5%
2001	27.8%	27.0%	27.2%	24.6%	23.4%	24.0%
2009	21.7%	21.5%	20.8%	19.9%	19.7%	19.9%

Source: Central Bank of Barbados

As a result, the size of the traded sector has contracted in each post recessionary period relative to the non-traded sector, and by 2009 when the impact of the international crisis was strongest the foreign exchange earning sectors' direct contribution to GDP had declined to 22% of GDP (shown in Table 1). In essence, the non-traded sectors such as wholesale and retail trade, construction and government activity that consume foreign exchange now account for around four-fifths of all activity in the economy.

It is important to note here that this analysis refers only to the direct contribution to GDP and purposely does not take account of the multiplicative impacts (i.e., indirect and induced impacts) individual sectors may have on other sectors. For example, activity in the tourism sector is linked to the output within the wholesale and retail trade and construction, but all output in these sectors are treated as non-traded, since activity principally involves the sale of imported goods.

Figure 7: A Comparison of Traded and Non-Traded Led Growth



Source: Author's calculations

The value shown on the right side of Figure 6 represents the direct contribution of non-traded sector activity to total economic growth, while a left-side value describes the direct contribution of traded activity. A value of zero represents no increase in economic activity.

Figure 7 makes the point more forcibly. It displays the extent to which the traded and non-traded sectors contribute directly to an *increase* in economic activity by identifying which sector grew by a greater real absolute dollar value. The excess of traded over non-traded (or vice versa) is shown as a value on the chart going either left (for traded) or right (for non-traded). For instance, a value of 20 on the non-traded side, therefore, indicates a year in which the growth in non-traded activity was 20 million Barbados dollars higher than that in the traded sectors (at 1974 prices). Given the relative sizes of the two sectors it is not surprising that, in absolute terms, the non-traded sector has been the primary driver of post-recessionary economic output growth, save the period following the 1981-83 recession. In fact, the non-traded sector has effectively led growth since 1976, with growth in that sector exceeding traded output gains persistently by well over $15-$20 million.

This is a critical observation as it raises the question of sustainability since, over the long-term the non-traded sector requires foreign exchange to expand, particularly in the areas of construction and wholesale and retail trade. Indeed, the viability of the non-traded sectors is dependent on the country's ability to earn foreign exchange.

This conclusion is reinforced by the behaviour of the external current and capital accounts of the balance of payments, summarised in Panel A of

Figure *8*. The balance on the external current account, which represents the difference between earnings of foreign exchange from the sale of goods and services overseas and the cost of purchasing foreign goods and services, has been persistently in deficit, of the order of 4% of total GDP on average. Not surprisingly, the brief periods of surplus on the external current account have been associated with recessionary periods during which the decline in output constrained domestic demand and lowered imports relative to exports.

The major differences between the external current account dynamics in previous recessions and the current one relate to the duration and size of the deficits relative to the size of the economy. In the previous three recessions, the current account deficit prior to the recession was, on average, equivalent to 3.7% of total GDP and, in both the 1980s and 1990s recessions, the external account was in surplus within three years of the onset of the recession. In contrast, the current account balance in 2007 was -5.4%, worsened to -10.7% the following year and averaged 9.1% between 2009 and 2012 – even worse than the average of 8.4% in the corresponding period after the 2001 recession.

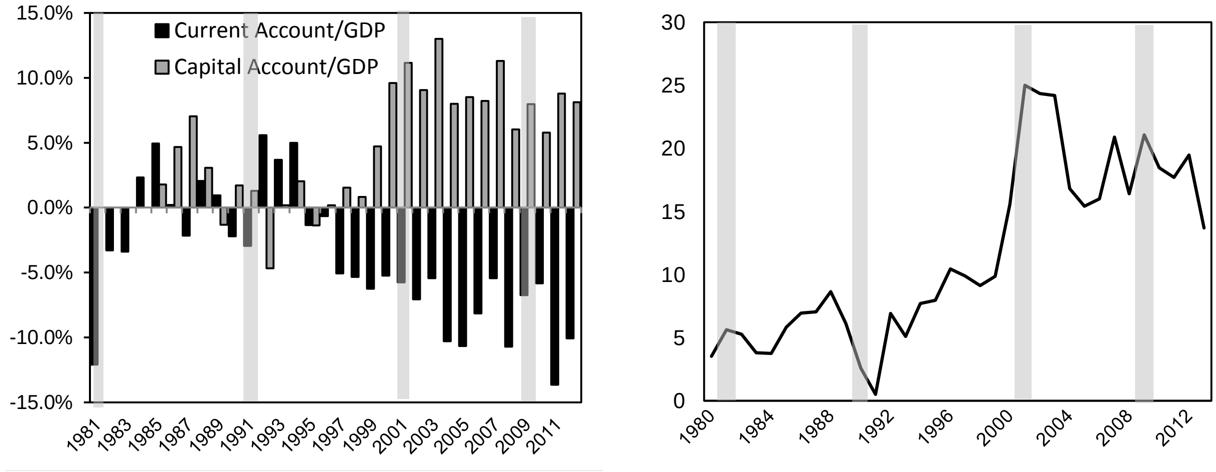
These worsening external deficits reflected the weak performance of the traded sectors relative to the non-traded during the period. Specifically, the deterioration was predicated on a 36% decline in earnings from tourism and other service exports that was compounded by an 11% increase in imports between 2007 and 2011.

Nevertheless, as shown in Panels A and B of

Figure *8*, even as the current account deficit deteriorated, the declines were counterbalanced by large capital inflows, ensuring that the international reserves remained well above the levels in the 1980s and 1990s. Arguably, therefore, as the pace of import growth persistently exceeded the foreign exchange earning capacity of the traded sectors, capital inflows made it possible for the import-intensive, non-traded sub-sectors to drive the economy while maintaining an adequate level of reserves.

These observations have major implications for growth in post-recessionary periods. The first is that while the non-traded sectors are the primary drivers of domestic economic activity, growth in the traded sector is critical for medium-term recovery. A recovery led by the non-traded sector can be stimulated initially by foreign inflows which will facilitate the necessary imports for construction and business activity, but can only be sustained if these flows continue or the traded sector is positioned to generate future foreign exchange. This conclusion supports the findings of Campbell (2003) which suggests that in the absence of additional traded sector activity, FDI inflows lead to further deterioration of the external current account. This would apply similarly to public inflows, particularly those used to finance capital works and other infrastructural developmental projects. Unless the non-traded sector can attract sustained capital inflows to preserve its growth rate, then the country is faced with a growth dilemma.

Figure 8: Capital and Current Account Balances (Panel A) and Import Reserve Cover (weeks of imports) (Panel B)



Source: Central Bank of Barbados

Source: Author's Calculations

Fiscal Policy and the Prospects for Recovery

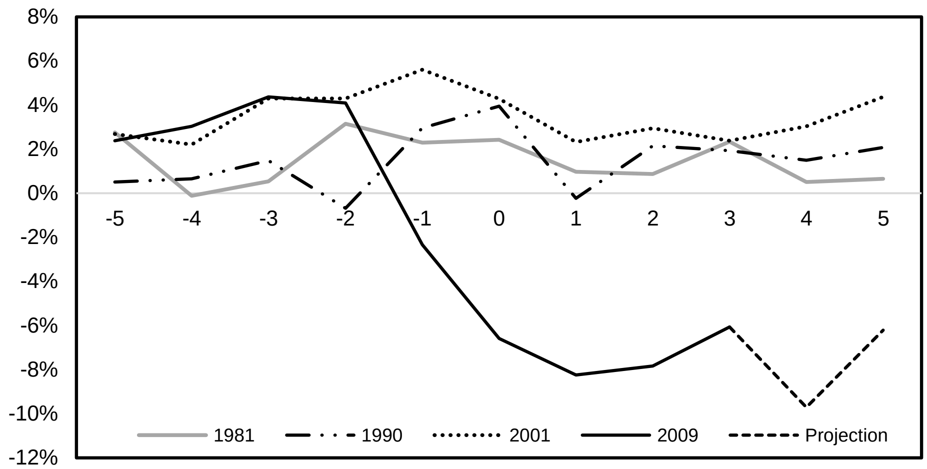
The literature on the use of fiscal policy as a countercyclical tool is extensive (see Hemming, Kell, and Mahfouz (2002) for a full review of the literature). Indeed, the global economic and financial recession has reignited the debate about the efficacy of fiscal policy, particularly as it relates to the choice of fiscal policy tools and their various effects on the economic recovery process (Tcherneva 2011; Alesina, Carloni, and Lecce 2012). In the case of Barbados, fiscal policy is the only viable policy tool to adjust aggregate demand and stabilise the balance of payments accounts. However, the available fiscal space over the past five years has been limited.

Fiscal space may be defined as the availability of budgetary room that allows a government to provide resources for a specifically desired purpose without any prejudice to the sustainability of its own financial position (Heller 2005). In practical terms, this definition relates to the Government's ability to engage in discretionary spending. Typically, this type spending is intended to, given the prevailing circumstances, stabilise, promote and sustain medium-term economic growth, particularly during periods of economic downturns. This definition also suggests two implied elements of fiscal space: the ability to finance current expenditures by current revenue and the ability to attract sustainable debt financing.

The principle current expenditures of any Government are wages and salaries, interest payments, and transfers and subsidies – i.e., expenses that are recurrent or fixed in the short term to a large extent. As depicted in Figure 9, current revenue consistently exceeded current expenditures for each of the previous recessions. However, the present recession diverged from this pattern significantly.

In 2008 (the year prior to the recession or Year -1 as depicted in Figure 9), current expenditure was significantly higher than current revenues, resulting in fiscal current account deficits for each year thereafter. This implies, *prima facie*, there was virtually no fiscal space available to government in the lead-up to the recession in 2009 to engage in any impactful stimulus spending. Therefore, when recession took root in 2009, two main effects of the tightened fiscal space became apparent.

Figure 9: Government Current Account Balance (% of GDP)

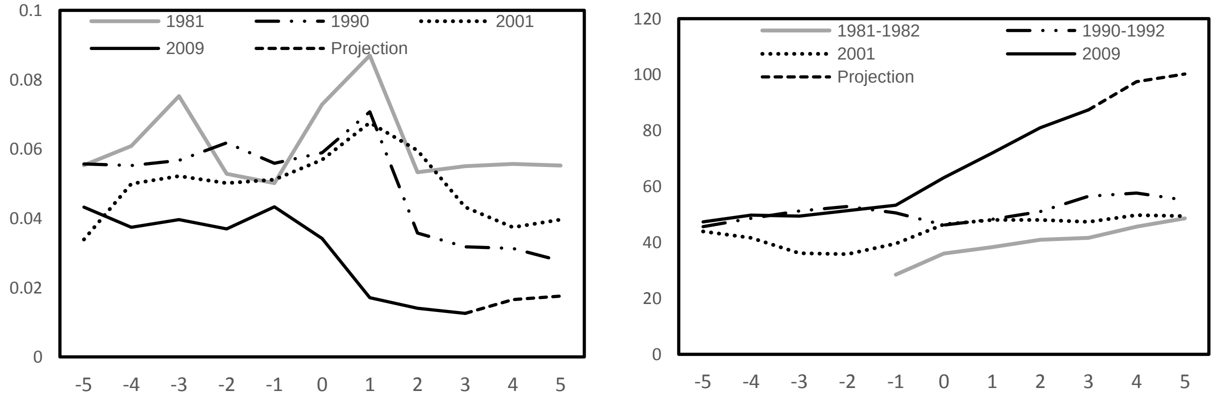


Source: Author's Calculations

Firstly, the devotion of total current revenue to current expenditure left no room for capital expenditure (Figure 10: Panel A). A clear pattern had emerged over the three previous recessions that capital expenditure (as a % of GDP) was decisively increased immediately following the outbreak of recession (Year 1). This current recessionary period was preceded by comparatively low capital expenditure to GDP ratios, and once the fiscal space had contracted significantly, worsening levels of capital outlays. While this article does not propose that capital expenditure has significant positive effects on GDP growth during previous periods of recovery, it is noticeable that each of the three previous recessions was punctuated by increases in capital expenditure.

The second effect is the growth in the fiscal current account deficit to the extent that debt had to be incurred to finance current expenditures (Figure 10: Panel B). While in 2008, government debt to GDP ratios remained at historical levels, the constrained fiscal space demanded that debt levels would have to grow to exceed comparative periods. This divergence from the trend further tightens the fiscal space as it reduces the level of debt the government will wish to incur for its discretionary spending.

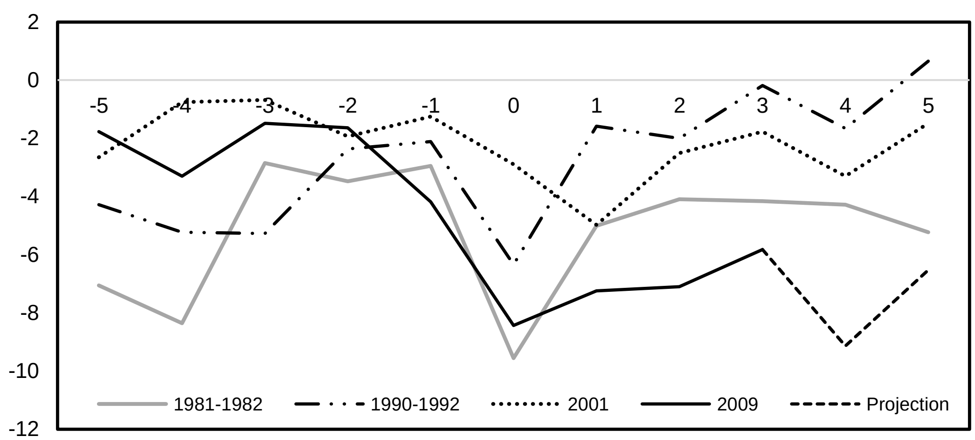
Figure 10: Panel A - Capital Expenditure (% of GDP); Panel B - Government Debt to GDP



Source: Author's Calculations

The result of this structural change in Barbados' fiscal position was that the fiscal balance, a primary indicator of the health of the Government, failed to recover from a recessionary low (Year 0) as it did in the past (Figure 11). The trough in Year 0 or Year 1 is an expected feature of recession, while a reduction in the fiscal deficit is a desired outcome of recovery. In 2010, 2011 and 2012, the fiscal balance did improve, but below previous rates. It is expected that the protracted global recovery will force the government to fight to maintain the path towards closing the fiscal deficit.

Figure 11: Central Government Fiscal Balance (% of GDP)

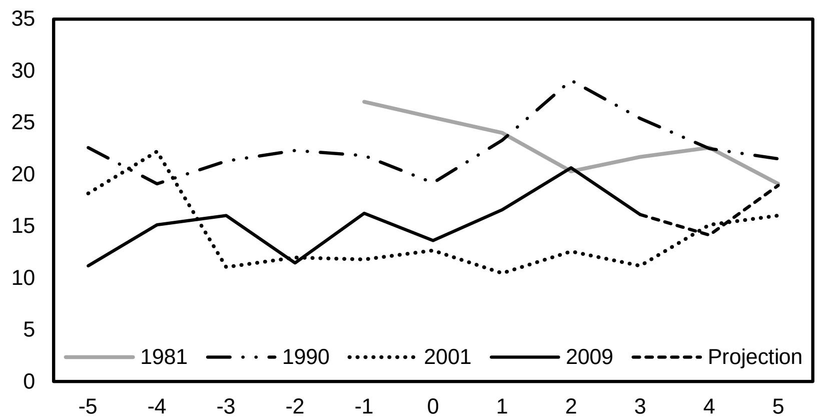


Source: Author's Calculations

It is clear then, that the lack of fiscal space in 2008 onward constrained the flexibility and discretion of the government in engaging in countercyclical spending aimed at stimulating economic growth. However, much of current expenditure was aimed at cushioning the effect of the harsh global environment. Indeed, employment levels were maintained and inflation was not a significant issue.

Arthur Okun developed the 'Economic Discomfort Index' in the 1970s to create a compact measure that captures the health of an economy. It identifies two important questions for residents: 'what are job prospects like?' and 'if I am employed, how much purchasing power will I have?' The appeal of this measure lies in its ease of production – simply add the unemployment rate to the inflation rate. The index, commonly referred to as Okun's Misery Index, can be taken to represent a disutility function in the economy where a higher value represents greater economic misery or discontent (Lovell and Tien 2000). In effect, it is illustrative of absolute economic misery.

Figure 12: Okun's Misery Index (Inflation + Unemployment)



Source: Author's Calculations

This measure is described in Figure 12, showing that 'misery' during the 2009 recessionary period has remained below that of the 1981 and 1990 periods. The lowest level of misery during a recessionary period came following 2001, noted before to have been the mildest of the four recessions. That the world has not experienced a downturn of this magnitude since the Great Depression in the 1930s suggests that misery should be significantly higher. That misery has been contained below previous recessionary levels highlights the success of the government in cushioning the impact of the global economic and financial crisis on the general economy.

Conclusion

The relative scale of the global economic and financial crisis that began in 2008 suggested that the resultant decline in Barbados' economic output would have been substantially greater than in other contemporary recessions. However, this article illustrates that the magnitude of the impact was much less than expected and, indeed, much less severe than two of the three downturns within the last four decades.

Notably, however, the slow pace of recovery during the current recession has resulted in an "L-shaped" output dynamic, indicating an uncharacteristic drag on economic recovery. Given the strong correlation among the business cycles, the protracted recovery periods in three of Barbados' main trading partners have exacerbated the situation. However, IMF projections suggest that a return to sustained economic growth in Canada, USA and UK will follow shortly, increasing growth prospects for Barbados.

Growth in Barbados is heavily dependent on the economic fortunes of these larger economies both directly, through the impact on the foreign exchange earning sectors, and indirectly, through the earnings of foreign exchange needed to fuel non-traded activity. While the traded sectors have experienced volatility in growth during recovery, the non-traded sectors have traditionally led returns to overall growth in absolute terms. Yet, growth in the non-traded sectors does not create a sustainable recovery platform since these sectors depend heavily on foreign exchange for their productive activities. This need to stimulate trade-related foreign exchange earnings is amplified during global economic slowdowns, as these periods are usually characterised by sudden stops in capital flows, accompanied by widening emerging market spreads. Thus, economic recovery, even when driven by the non-traded sectors, is dependent on the performance of the traded activities in the economy.

The unavailability of fiscal space immediately prior to the 2009 recession has impacted the government's ability to engage in traditional countercyclical expenditure on capital projects. A fiscal current account deficit from 2008 onwards meant that much of government's expenditure has been focused on non-discretionary activities such as wages, salaries and interest payments. This has aggravated the contraction of the fiscal space even further by forcing government to borrow to finance its activities. The reduction in capital expenditures has been distinct, contradicting the pattern of previous recessions, which were each followed by an immediate increase in capital spending in an attempt to boost growth. While fiscal policy remains an important tool for medium term growth, the contraction of the government's fiscal space means that prospects for strong growth will be heavily dependent on the non-public sector of the economy. A beneficial outcome of the government's fiscal strategy has been the insulation it has provided the Barbadian public against the harsh external environment. Employment levels have generally been maintained while inflation has not been severe.

From the 2009 recession onwards, the Barbadian economic environment has been characterised by slow economic growth, low external demand and a constrained fiscal space. The importance of foreign exchange to economy-wide productive activity demands that growth cannot be solely led by non-traded activity. Future prospects for growth are heavily dependent on the fortunes of

Barbados' main international trading partners and the traded sectors' ability to capitalise on an improvement in the external environment. Further, growth will also be aided by a reopening of the fiscal space so that government can redouble its efforts to stimulate economic activity through increases in capital expenditure. Each recession is a unique phenomenon, but the 2009 recession has proven to be quite different from the others based on pre-existing domestic conditions, the state of the external environment and the protracted nature of the crisis. This suggests that a return to growth will require an innovative and thoughtful medium term growth strategy.

References

Alesina, Alberto, Dorian Carloni, and Giampaolo Lecce. 2012. "The Electoral Consequences of Large Fiscal Adjustments." In *Fiscal Policy after the Financial Crisis*. University of Chicago Press.

Brathwaite, Kaye-Anne, and Kevin Greenidge. 2005. "Foreign Direct Investment and Growth in Barbados." In *26th Annual Review Seminar, Central Bank of Barbados*, 173–190.

Campbell, Trevor. 2003. "Foreign Direct Investment Inflows and Their Impact on Barbados' Current Account: Implications for Policy." In *Facing Globalization: Impact and Challenges for Barbados and the Caribbean*, edited by Harold Codrington, Roland Craigwell, and Darrin Downes, 5–24. Bridgetown: Central Bank of Barbados.

Heller, Peter S. 2005. *Understanding Fiscal Space*. International Monetary Fund.

Hemming, Richard, Michael Kell, and Selma Mahfouz. 2002. *The Effectiveness of Fiscal Policy in Stimulating Economic Activity--A Review of the Literature*. Vol. 2. International Monetary Fund.

HM Treasury, e-Comms Team, public.enquiries@hm-treasury.gsi.gov.uk. 2014. "Glossary of Treasury Terms." Accessed January 7. http://webarchive.nationalarchives.gov.uk/20130129110402/http://www.hm-treasury.gov.uk/junebudget_glossary.htm.

Kannan, Prakash, Alasdair Scott, and Marco E Terrones. 2009. "From Recession to Recovery: How Soon and How Strong." In *World Economic Outlook*, edited by IMF, 103–138. International Monetary Fund.

Lorde, Troy, Brian Francis, and Lisa Drakes. 2011. "Tourism Services Exports and Economic Growth in Barbados." *The International Trade Journal* 25 (2): 205–232.

Lovell, Michael C, and Pao-Lin Tien. 2000. "Economic Discomfort and Consumer Sentiment." *Eastern Economic Journal* 26 (1): 1–8.

Mundell, Robert A. 1962. "The Appropriate Use of Monetary and Fiscal Policy for Internal and External Stability." *Staff Papers-International Monetary Fund*: 70–79.

Tcherneva, Pavlina. 2011. "Fiscal Policy Effectiveness: Lessons from the Great Recession."