FISCAL DEFICITS AND CURRENT ACCOUNT IMBALANCES
OF THE SOUTH PACIFIC COUNTRIES:
A CASE STUDY OF VANUATU

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SATISH C. JHA
Chief Economist
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Abstract

Fiscal deficits experienced by the Bank’s South Pacific Developing Member Countries (SPDMCs) are due to mounting recurring expenditures and stagnant or slowly growing current revenues. Generous external aid flows in the past in the forms of grants for development expenditures and technical assistance for staff support from bilateral donors have enabled SPDMCs to meet overall fiscal deficits and, as a result, have reduced current account imbalances and contributed to exchange rate stability. The paper seeks to find out the underlying causes and forces behind the fiscal deficits and domestic resource gaps for determining the resultant current account balances in the external accounts. The conclusions arising out of a case study of Vanuatu are generally applicable to all countries in the region. Specifically in the case of Vanuatu, mobilization of domestic resources based upon a more income-elastic revenue base, by shifting away from import taxes, is called for, together with greater expenditure control and long-run fiscal reforms.
I. Introduction

The South Pacific Developing Member Countries (SPDMCs)\(^1\) of the Bank have relatively high levels of basic subsistence income, with little or no absolute poverty. Their economies are open to international trade and capital movements, with the degree of control ranging from a virtual absence in the case of Vanuatu to some control in the case of Fiji. Although land resource endowments vary from the more fortunate Fiji and Solomon Islands to the least land resource-endowed Kiribati, all SPDMCs have benefitted from concessional aid flows, which have contributed to general well-being of their citizens.

The macroeconomic stability of any country depends on the maintenance of both fiscal and external balances. The economy of a small island country in the South Pacific is no exception. However, a host of factors determining the current account of balance of payments, including the prices of traditional primary commodity exports, are beyond the control of SPDMCs. As regards domestic fiscal balance, which is largely a product of a country’s own economic policies, the public sectors of SPDMCs are relatively large compared with the private sector. Central government\(^2\) budgetary policies and spending patterns, which are largely determined by official external aid flows, are influencing the trends in aggregate demand.

Although conscious efforts, with some degree of success, seemed to have been made in the past to achieve annually balanced recurrent budgets, capital expenditures of governments have generally exceeded government savings, defined as excess of current revenues over recurrent expenditures. As domestic private saving has also been much less than private investment, SPDMCs generally have been experiencing resource gaps each year. Adverse effects of excess aggregate demand over aggregate domestic resources have been mitigated on a continuous basis by a large amount of aid transfers.\(^3\) Consequently, some SPDMCs’ current accounts of balances of payments have been showing surpluses, giving rise to small surpluses in the overall fiscal budgetary position. These surpluses have contributed in no small measure to relative exchange rate stability and control over inflation.

Although there are no indications of any declines in aid flows in the immediate future, it would be appropriate in the medium term to plan a strategy for mobilizing greater domestic resources so that any such eventuality could be met successfully. Such a strategy would require an assessment of past fiscal behavior. The objective of this paper is to undertake a case study of Vanuatu, an archipelago of 80 islands in the South Pacific, through empirical analysis of budgetary trends and their impact on current accounts in the balance of payments. The remainder of this paper is organized into four sections. Chapter II presents a brief background of the country’s economy; Chapter III presents the trends in public finance; Chapter IV outlines a simple model employed for investigation; and Chapter V reports the results of the empirical analysis and offers some conclusions and recommendations for consideration in regard to future areas of Bank assistance in public finance.

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1. These are Cook Islands, Fiji, Kiribati, Solomon Islands, Tonga, Tuvalu, Vanuatu and Western Samoa.

2. Since the data on the local governments and public enterprises are generally scarce and incomplete, in this paper the term “budget” refers only to that of the central government.

3. In the case of Polynesian countries such as Tonga and Western Samoa, remittances from overseas residents have supplemented the official aid flows to far greater extent than in the case of the Melanesian countries such as Solomon Islands and Vanuatu.
II. Economic Background of Vanuatu

A. Dualistic Structure

The economy of Vanuatu (land area of 12,000 square kilometers) is dualistic, with most of the gross domestic output (GDP) coming from the services sector, and 80 per cent of the population (150,000) being supported by agriculture. More than half of the country’s population is concentrated in three islands: Efate, where the capital Port Vila, with a population of 20,000, is situated; Espiritu Santo, in which the second of the two urban centers, Luganville, with a population of 7,000, is situated; and Malekula. The rest of the population is scattered in remote settlements in the outer islands with limited communications with urban centers.

The highly dualistic structure of the economy is reflected in the high incomes earned by expatriate residents, known as non-ni-Vanuatu people. Most ni-Vanuatu incomes originate from marketing of copra, which consistently faces low export prices. Most expatriates are involved in tourism, manufacturing and business.

B. Domestic Production

The traditional sector comprises subsistence farming, which contributes about 20 per cent of GDP. This sector is dominated by root crops, tropical vegetables and fruits, coastal fishing and livestock (Table 1). The newly emerging cash crops are cocoa and coffee and beef production. The traditional export crop of copra continues to dominate agricultural production in the country, despite its declining profitability due to continuous fall in its international price. There is growing participation of subsistence farmers in the market economy, with production of copra, fruits and vegetables for urban consumption. The beef export industry has been well established and the role of smallholder production is substantial. Exports of logs and processed forestry products are increasing. Fishery resources are not considered sufficient for extensive development. No significant mining takes place but gold exploration exercises are currently being undertaken.

The manufacturing sector consists of limited activities, including beverages, building materials, furniture and fabricated aluminum products and printed materials. This sector contributes about 10 per cent of GDP. The services sector’s contribution is about 70 per cent. Tourism is an important industry with considerable potential. Vanuatu’s tax haven status has encouraged the development of an offshore financial services center providing 7 per cent of GDP. Government services contribute 12 per cent of GDP.

C. Foreign Trade

Vanuatu is highly dependent on foreign trade (75 per cent of GDP) and regularly records trade deficits of 35 to 40 per cent of GDP. However, tourism, investment income and large foreign aid transfers have provided substantial help to finance trade deficit, resulting in overall balance of payments surplus for all the past years. Merchandise imports averaged 50 per cent of GDP during 1986-1991. Food and beverages and tobacco in 1991 accounted for 20 per cent of total imports whereas petroleum products and intermediate goods accounted for 40 per cent; machinery and transport equipment 25 per cent and miscel-
TABLE 1
Vanuatu: GDP Growth Rate, Per Capita GDP and Sectoral Composition

<table>
<thead>
<tr>
<th>Year</th>
<th>Real GDP Growth Rate (Per Cent)</th>
<th>Real GDP Per Capita Growth Rate (Per Cent)</th>
<th>Share of Agriculture in GDP (Per Cent)</th>
<th>Share of Industry in GDP (Per Cent)</th>
<th>Share of Services in GDP (Per Cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1983</td>
<td>1.6</td>
<td>-1.5</td>
<td>26.1</td>
<td>7.6</td>
<td>66.3</td>
</tr>
<tr>
<td>1984</td>
<td>6.5</td>
<td>3.9</td>
<td>26.1</td>
<td>8.3</td>
<td>65.6</td>
</tr>
<tr>
<td>1985</td>
<td>1.7</td>
<td>-0.4</td>
<td>25.3</td>
<td>8.6</td>
<td>66.2</td>
</tr>
<tr>
<td>1986</td>
<td>-2.2</td>
<td>-4.5</td>
<td>23.6</td>
<td>9.5</td>
<td>66.8</td>
</tr>
<tr>
<td>1987</td>
<td>0.4</td>
<td>-2.5</td>
<td>22.1</td>
<td>11.9</td>
<td>66.0</td>
</tr>
<tr>
<td>1988</td>
<td>0.7</td>
<td>-1.4</td>
<td>19.8</td>
<td>13.6</td>
<td>66.6</td>
</tr>
<tr>
<td>1989</td>
<td>4.0</td>
<td>2.0</td>
<td>20.7</td>
<td>14.3</td>
<td>65.0</td>
</tr>
<tr>
<td>1990</td>
<td>4.8</td>
<td>0.2</td>
<td>23.0</td>
<td>14.7</td>
<td>63.0</td>
</tr>
<tr>
<td>1991*</td>
<td>4.4</td>
<td>...</td>
<td>23.5</td>
<td>14.0</td>
<td>62.5</td>
</tr>
<tr>
<td>1992*</td>
<td>0.0</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>

... not available.

* Provisional estimates.


laneous manufactured goods 15 per cent. Merchandise exports as a percentage of GDP fell from 25 per cent in 1983 to 16 per cent in 1991. In 1991 copra accounted for 32 per cent of total exports, whereas beef exports were 22 per cent, cocoa 16 per cent and timber 4 per cent.

D. Economic Performance

The economic performance of Vanuatu since its 1980 independence from its former British and French colonial rulers has been modest. Real GDP,\(^4\) which grew during 1983-1990 at an average annual rate of 2.3 per cent, has been erratic during this period, mainly due to factors beyond control. These factors include a fall in international prices of country’s two major exports of copra and cocoa, and cyclones of severe intensity during 1986-1988.

Although 1989 and the two subsequent years witnessed economic recovery in terms of growth in agricultural output as well as diversification of economic activities with increases in arrival of tourists, the country was devastated by a series of cyclones in the first quarter of 1992. Consequently, the real growth rate for 1992 has been estimated at less than 1 per cent. The cyclones did not spare Vanuatu in 1993 either, with the country being hit hard by another in the first quarter of 1993. While the population has been estimated to have increased at an annual rate of 2.8 per cent over the past ten years, real per capita GDP has remained more or less stagnant at about Vt 81,000 (US$ 740).

\(^4\) The national income data have been compiled only since 1983.
E. Savings, Investment and Resource Gap

Domestic savings has been at a modest level, with wide fluctuations in the ratio of gross domestic savings (GDS) to GDP (Table 2). During 1983-1986, domestic savings ranged from a positive ratio of 4.0 per cent in 1983 to a negative ratio of -2.7 per cent in 1986. Recoveries were realized in a steady manner from 1986, to 8.4 per cent in 1989, and reached the highest proportion (22.1 per cent) in 1991. Gross domestic investment throughout 1983-1991 has been at a fairly high level except for a temporary decline in 1984 and 1988, steadily increasing from 21.1 per cent of GDP in 1983 to 32.9 per cent in 1987. With a slight decrease once again in 1988, investment surged to form 40.8 per cent of GDP in 1990 and 39.1 per cent in 1991.

<table>
<thead>
<tr>
<th>Year</th>
<th>GDI as Per Cent of GDP</th>
<th>GDS as Per Cent of GDP</th>
<th>Resource Gap as Per Cent of GDP</th>
<th>Government Savings (Per Cent of GDP)</th>
<th>Private Savings (Per Cent of GDP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1983</td>
<td>21.1</td>
<td>4.0</td>
<td>-17.1</td>
<td>-5.4</td>
<td>9.4</td>
</tr>
<tr>
<td>1984</td>
<td>20.2</td>
<td>12.4</td>
<td>-7.8</td>
<td>-3.6</td>
<td>16.0</td>
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<tr>
<td>1985</td>
<td>22.7</td>
<td>-1.9</td>
<td>-24.6</td>
<td>-1.8</td>
<td>-0.1</td>
</tr>
<tr>
<td>1986</td>
<td>29.4</td>
<td>-2.7</td>
<td>-32.1</td>
<td>-5.5</td>
<td>2.8</td>
</tr>
<tr>
<td>1987</td>
<td>32.9</td>
<td>3.5</td>
<td>-29.4</td>
<td>-1.0</td>
<td>4.5</td>
</tr>
<tr>
<td>1988</td>
<td>27.8</td>
<td>3.7</td>
<td>-24.1</td>
<td>-0.3</td>
<td>4.0</td>
</tr>
<tr>
<td>1989</td>
<td>33.4</td>
<td>8.4</td>
<td>-25.1</td>
<td>0.9</td>
<td>7.5</td>
</tr>
<tr>
<td>1990</td>
<td>40.8</td>
<td>13.6</td>
<td>-27.2</td>
<td>2.4</td>
<td>11.2</td>
</tr>
<tr>
<td>1991</td>
<td>39.1</td>
<td>22.2</td>
<td>-16.9</td>
<td>0.1</td>
<td>22.1</td>
</tr>
</tbody>
</table>


The domestic resource gap, defined as difference between domestic investment and domestic savings, was at a very high level in 1986 (32.1 per cent of GDP), having risen from 17.1 per cent in 1983. However, with greater efforts towards mobilization of domestic resources, the resource gap has been narrowed gradually over the last five years and stood at 16.9 per cent of GDP in 1991. The resource gaps each year have been largely met with by foreign savings, which are reflected in the current account deficits, excluding the net official transfers in the balance of payments.

F. Balance of Payments

The current account of balance of payments, as reported by the country’s monetary authority, the Reserve Bank of Vanuatu, includes official transfers. Accordingly, the country’s current accounts each year during 1983-1991 have been experiencing surpluses
except for two years, namely, 1986 and 1991 (Table 3). Trade deficits ranging from 15.2 per cent of GDP in 1984 to 42.8 per cent in 1990 have been met with increasing net receipts on services account and net inflows in both unrequired transfers. The net receipts in services are dominated by growing tourism earnings (25.1 per cent of GDP in 1990, which was the highest proportion registered since independence in 1980) whereas net transfers are dominated by official transfers. There is a clear downward trend in official transfers, from 35.5 per cent of GDP in 1983 to 19.5 per cent in 1990, with a noticeable high ratio in 1987 (35.9 per cent of GDP). The latter was only a temporary phenomenon, as substantial external assistance was received in that year to meet rehabilitation expenditure due to cyclone Uma in 1986.

The current account balance, excluding net official transfers, reveals during the ten year period 1982-1991 a striking picture of deficits, which were otherwise hidden by generous aid inflows. The ratio of current account deficit excluding net official transfers to GDP was the highest in 1987, being 29.5 per cent of GDP. However, in subsequent years, the ratio decreased, mainly due to better performance on the services account, which is reflected in the net tourism earnings. In 1990, the current account deficit was 15.7 per cent of GDP, having declined steadily from 1988 (19.6 per cent) and 1989 (17.9 per cent). In 1991, the ratio rose to (27.8 per cent) mainly due to a net outflow of private transfers because of the uncertain investment climate.

III. Public Sector in Vanuatu

A. Role of Public Sector

The lead role of the public sector in Vanuatu is understandable, since the private sector has been constrained by a historical lack of adequate entrepreneurial skills on the part of the indigenous citizens. Current private sector activities are dominated by expatriate efforts. Further, these activities are largely confined to production of goods for domestic consumption. The reasons are obvious: there is a lack of sufficient infrastructure in terms of power, roads and interisland marine transport facilities, constraining profitable opportunities for private sector investment and preventing diversification and structural changes. Investing in these infrastructures and provision of annual operational and maintenance expenditures have been the major responsibility of the Government.

The public enterprise sector consists of the following wholly owned bodies: Reserve Bank of Vanuatu, the country’s monetary authority; National Bank of Vanuatu, a commercial Bank; Development Bank of Vanuatu, a development financing institution; Vanuatu Commodities Marketing Board; and two fisheries companies, one livestock company and Air Vanuatu, the national airline. In addition, the Government is a joint venture partner in telecommunications, a cattle company, an abattoir, and a coffee and a cocoa plantation. There is a great deal of variation in their financial status of these enterprises. Although some

5 During these two years, there were net outflows of private transfers due to political uncertainty that eroded private sector confidence.
TABLE 3
Current Accounts of Balance of Payments
(Per Cent of GDP)

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Exports</td>
<td>10.9</td>
<td>17.5</td>
<td>26.1</td>
<td>15.7</td>
<td>7.9</td>
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<td>10.4</td>
<td>9.9</td>
<td>9.0</td>
<td>8.4</td>
</tr>
<tr>
<td>Imports</td>
<td>44.1</td>
<td>45.0</td>
<td>41.4</td>
<td>44.2</td>
<td>40.8</td>
<td>46.8</td>
<td>40.3</td>
<td>41.3</td>
<td>51.8</td>
<td>41.9</td>
</tr>
<tr>
<td>Trade Balance</td>
<td>-33.2</td>
<td>-27.4</td>
<td>-15.2</td>
<td>-28.5</td>
<td>-32.8</td>
<td>-35.6</td>
<td>-29.9</td>
<td>-31.4</td>
<td>-42.8</td>
<td>-33.5</td>
</tr>
<tr>
<td>Net Services</td>
<td>4.4</td>
<td>5.4</td>
<td>4.2</td>
<td>7.1</td>
<td>4.9</td>
<td>-0.3</td>
<td>2.9</td>
<td>9.7</td>
<td>23.0</td>
<td>16.5</td>
</tr>
<tr>
<td>Tourism Earnings</td>
<td>21.7</td>
<td>21.7</td>
<td>19.1</td>
<td>16.0</td>
<td>12.5</td>
<td>11.5</td>
<td>12.3</td>
<td>16.3</td>
<td>25.1</td>
<td>19.7</td>
</tr>
<tr>
<td>Net Private and Official Transfers</td>
<td>44.1</td>
<td>31.5</td>
<td>31.5</td>
<td>27.4</td>
<td>25.6</td>
<td>42.3</td>
<td>32.0</td>
<td>25.7</td>
<td>23.7</td>
<td>9.3</td>
</tr>
<tr>
<td>Current Account Balance (including net official transfers)</td>
<td>15.2</td>
<td>9.5</td>
<td>20.5</td>
<td>5.9</td>
<td>-2.3</td>
<td>6.4</td>
<td>5.1</td>
<td>4.1</td>
<td>3.8</td>
<td>-7.6</td>
</tr>
<tr>
<td>Current Account Balance (excluding net official transfers)</td>
<td>-20.2</td>
<td>-16.1</td>
<td>-5.2</td>
<td>-15.3</td>
<td>-21.5</td>
<td>-29.5</td>
<td>-19.6</td>
<td>-17.9</td>
<td>-15.7</td>
<td>-27.8</td>
</tr>
<tr>
<td>Net Official Transfers</td>
<td>35.5</td>
<td>25.6</td>
<td>25.7</td>
<td>21.3</td>
<td>19.2</td>
<td>35.9</td>
<td>24.7</td>
<td>22.0</td>
<td>19.5</td>
<td>19.0</td>
</tr>
</tbody>
</table>
were profitable, some operations were close to insolvency, notables being the fisheries companies. Some reforms are underway, including the closing down of a fishing company and the selling of shares in the coffee and cocoa plantations.

B. An Overview of Budgetary Process

The central Government budget coinciding with the calendar year, consists of the current budget, comprising recurrent revenue and recurrent expenditure, and the development budget. The Ministry of Finance, through its Budget Office, is responsible for formulating the budget and is assisted by a Budget Committee, comprising the representatives from the Reserve Bank, National Planning and Statistics Office and the Public Service Commission, which is in charge of civil service recruitment. The draft budget is submitted, usually in October each year, to the Parliament for discussion and approval, with appropriate amendments, in December.

C. Current Revenues

Current revenues consist of tax and non-tax revenue. Since the country does not have any direct taxation in terms of personal and company income taxes, capital gains taxes or estate and gift duties, tax revenue is dominated by foreign trade taxes. While export duties are modest, averaging at 4-6 per cent ad valorem and levied on select exports including copra, coffee, cocoa and beef, import duties are substantial and cover a wide range of commodities. Import tariffs are generally high for food and beverage items, with 75 per cent for fruit juice, a high specific duty for beer, and duty rates exceeding 40 per cent for meat, chicken, milk, prepared and preserved fish, bread, biscuits, and ice cream. It has been noted by a recent study that Vanuatu tops all the SPDMCs with regard to retail prices of consumer goods.

In the mid-1980s, taxes on trade accounted for nearly 75 per cent of tax revenue. Attempts to broaden the tax base were made in the late 1980s by enlarging the coverage of hotel and restaurant taxes at an uniform rate of 10 per cent of their charges, and business license fees levied on the basis of their businesses' turnover. Further, levies under the gaming legislation were changed from a flat fee to a percentage of gross winnings.

Total current revenue, which was about 18.6 per cent of GDP in 1982, has increased over the ten-year period, in both absolute and percentage terms. Total current revenue was about 27.6 per cent of GDP in 1990 and declined slightly to about 23.9 per cent in 1991. In 1990, import duties contributed 66 per cent of total tax, which was not by itself any major departure from the previous experience, as import duties contributed 67 per cent of tax revenues in 1986 as well. Thus, there has been no major change in tax structure during 1983-1991. However, tax revenue by itself registered an increase from 14.5 per cent of GDP in 1983 to about 22.3 per cent in 1990, with a slight decrease to 18.1 percent in 1991 (Table 4 and Figure 1). Among the non-foreign trade taxes, the notable tax, which increased its share

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6 The current revenue and recurrent expenditures include technical assistance grants and expenditures. However, for the purpose of this paper they are treated as capital expenditure, contributing to skills formation and transfer of technology. Hence, they are excluded from the current budget but are included in the development budget.

### TABLE 4
Central Government Budget: 1983-1992
(Per Cent of GDP)

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Current Revenue</td>
<td>18.6</td>
<td>20.2</td>
<td>23.7</td>
<td>24.4</td>
<td>26.1</td>
<td>26.0</td>
<td>25.6</td>
<td>27.6</td>
<td>23.9</td>
<td>23.5</td>
</tr>
<tr>
<td>Tax Revenue</td>
<td>34.5</td>
<td>16.5</td>
<td>18.3</td>
<td>19.0</td>
<td>21.4</td>
<td>21.0</td>
<td>20.7</td>
<td>22.3</td>
<td>18.1</td>
<td>18.3</td>
</tr>
<tr>
<td>Nontax Revenue</td>
<td>4.1</td>
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<td>5.5</td>
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<td>5.3</td>
<td>5.8</td>
<td>5.3</td>
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<tr>
<td>Current Expenditure</td>
<td>24.0</td>
<td>23.9</td>
<td>25.5</td>
<td>30.0</td>
<td>27.1</td>
<td>26.4</td>
<td>24.8</td>
<td>25.3</td>
<td>23.8</td>
<td>21.8</td>
</tr>
<tr>
<td>Government Savings</td>
<td>-5.4</td>
<td>-3.6</td>
<td>-1.8</td>
<td>-5.5</td>
<td>-1.0</td>
<td>-0.3</td>
<td>0.9</td>
<td>2.3</td>
<td>0.1</td>
<td>1.7</td>
</tr>
<tr>
<td>Development Expenditure</td>
<td>10.7</td>
<td>7.7</td>
<td>10.1</td>
<td>10.3</td>
<td>19.2</td>
<td>20.6</td>
<td>27.0</td>
<td>19.0</td>
<td>21.6</td>
<td>18.2</td>
</tr>
</tbody>
</table>

* Budget estimates.

Source: Government of Vanuatu, Budget Documents 1983 and South Pacific Economic and Social Data Base, National Center of Development Studies, Australian National University, Canberra, 1992.
significantly in recent years, was video rent tax, now generating as much as hotel and restaurant tax. The decrease in the proportion of both total revenue to GDP and the proportion of tax revenue to GDP in 1991 is due to lower prices of imports, due to recession in Australia, one of the major sources of imported consumer goods. This contributed to lower total value of imports, which was responsible for lower realization of tax revenue.

D. Recurrent Expenditures

Recurrent expenditures for the purpose of this paper include only wages, salaries, subsidies and maintenance expenditures. Recurrent expenditure rose from about 24.0 per cent of GDP in 1983 to about 30.0 per cent in 1986. In the following three years, austerity measures were introduced, including freezing vacant positions and large-scale retrenchment of teachers in those schools where the enrollment of students was low. The proportion of recurrent expenditure to GDP was brought down to 27.1 per cent in 1987 and gradually reduced to 24.8 per cent in 1989. The ratio of recurrent expenditure to GDP was 25.3 per cent in 1990. However, in 1991 the proportion fell to 23.8 per cent.

The functional and economic distribution of government expenditures is shown in Table 5. Wages and salaries have been the predominant items of expenditures, followed by Government purchases of goods and services for operational and maintenance expenditures. The next major item is transfers, which are mainly for supporting copra and cocoa producers. In the context of declining world prices of copra, substantial amounts are being spent on subsidies for supporting producer prices and as a result positive effects of many of the austerity measures are, to some extent, nullified. In terms of economic classification of recurrent expenditures, civil service is the major beneficiary, followed by education, public health, maintenance of infrastructure, and public order and safety.
TABLE 5
Functional and Economic Classification of Expenditures
(Per Cent)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Recurrent Budget</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Functional Distribution</td>
<td>-15.1</td>
<td>100</td>
<td>100.0</td>
</tr>
<tr>
<td>Wages</td>
<td>-30.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goods and Services</td>
<td>-20.6</td>
<td>51.9</td>
<td>45.7</td>
</tr>
<tr>
<td>Debt Services</td>
<td>190.5</td>
<td>9.0</td>
<td>8.1</td>
</tr>
<tr>
<td>Transfers</td>
<td>...</td>
<td>13.3</td>
<td>10.4</td>
</tr>
<tr>
<td>Others</td>
<td>...</td>
<td>25.8</td>
<td>35.8</td>
</tr>
<tr>
<td>Economic Distribution</td>
<td>-15.1</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>General Public Services</td>
<td>-27.9</td>
<td>23.7</td>
<td>20.5</td>
</tr>
<tr>
<td>Public Order</td>
<td>4.2</td>
<td>8.4</td>
<td>8.4</td>
</tr>
<tr>
<td>Education</td>
<td>-35.3</td>
<td>19.6</td>
<td>19.7</td>
</tr>
<tr>
<td>Health</td>
<td>-27.5</td>
<td>10.0</td>
<td>10.1</td>
</tr>
<tr>
<td>Agriculture and Natural Resources</td>
<td>3.5</td>
<td>3.7</td>
<td>4.2</td>
</tr>
<tr>
<td>Mining, Manufacturing and Construction</td>
<td>-28.1</td>
<td>9.0</td>
<td>8.8</td>
</tr>
<tr>
<td>Transport and Communication</td>
<td>-22.9</td>
<td>3.2</td>
<td>6.0</td>
</tr>
<tr>
<td>Other Economic</td>
<td>172.5</td>
<td>2.1</td>
<td>3.5</td>
</tr>
<tr>
<td>Others</td>
<td>65.5</td>
<td>20.1</td>
<td>18.5</td>
</tr>
<tr>
<td><strong>Development Budget</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture and Natural Resources</td>
<td>39.9</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Transport and Communication</td>
<td>318.8</td>
<td>33.2</td>
<td>16.2</td>
</tr>
<tr>
<td>Internal Affairs</td>
<td>-80.2</td>
<td>0.7</td>
<td>1.7</td>
</tr>
<tr>
<td>Health</td>
<td>-59.5</td>
<td>2.0</td>
<td>2.9</td>
</tr>
<tr>
<td>Education</td>
<td>161.8</td>
<td>4.2</td>
<td>37.5</td>
</tr>
<tr>
<td>Finance, Commerce and Industry</td>
<td>100.8</td>
<td>48.9</td>
<td>22.1</td>
</tr>
<tr>
<td>General</td>
<td>-28.4</td>
<td>4.0</td>
<td>6.7</td>
</tr>
</tbody>
</table>

... not available.

E. Recent Trends

After the December 1991 elections, the newly elected Government expressed its commitment to pursue the prudent expenditure policies of the previous Government. On the revenue front, the 1992 budget did not introduce new tax measures. On the other hand, it lowered duty rates on basic food items while raising rates on luxury items, including jewelry, and reduced secondary education fees by half, in line with election campaign promises. Further, it abolished the head tax and health fees. The budget allowed a 5 per cent increase in recurrent expenditures of all departments and anticipated that revenues would proportionately rise to meet the total recurrent expenditures and thus the budget be balanced.
In a similar fashion, the 1993 recurrent budget did not propose any new taxation but it aimed at a balanced budget. The revenue estimates (Vt 5.2 billion) remained virtually at the 1992 level, 67 per cent of which was to be generated from taxes on foreign trade and other indirect taxes, the rest from non-tax avenues, including motor vehicle registration and airport departure fees. About 90 per cent of recurrent expenditure (Vt 5.2 billion) was estimated to be spent on staff salaries and wages, and of the remaining amount about 80 per cent was to be spent on operational and maintenance expenditures. These related to health, education, police and judiciary. The remaining amount was to be kept in reserve. The 1993 development budget is fully funded by external grants and loans.

F. Government Savings

The difference between current revenue and recurrent expenditure budget is government savings, which is treated as contribution to capital budget. The recurrent budget balance, however was in deficit until 1988, signifying negative savings, with no contribution to development budget. Since 1989 onwards, conscious efforts towards austerity and domestic resource mobilization efforts have yielded positive results (Table 4). There has been an annual surplus in the recurrent budget for the last three years. However, lower realization of revenues in 1991 has brought government savings in 1991 close to negligible despite a decrease in the ratio of expenditure to GDP.

G. Development Budget

The development budget is determined primarily by availability of external aid. In relation to GDP, development expenditure rose from a modest level (10 per cent) in the first half of the 1980s to about 20 per cent in 1987 and 1988. It then shot up to 27 per cent in 1989, when the Government purchased a new aircraft for the national airline. In the following two years development expenditure as a proportion of GDP returned to the normal level of 20 per cent (Table 4). The economic classification of development expenditure (Table 5) shows that about one-third of the development budget is devoted to transport and communications, followed by finance, commerce and industry, education and agriculture and natural resources.

Development budget pressures were not felt until 1989. Prior to 1989, overall budget deficits (recurrent and development budgets) were comfortably covered by foreign grants and some external borrowing, and without much recourse to domestic borrowing. However, in 1989, a massive transfer of Vt 1,500 million (US$ 15 million) to Air Vanuatu led to an overall budget deficit (26.1 per cent of GDP). To meet the deficit, about Vt 600 million was borrowed externally and bonds for another Vt 1,000 million were floated in the domestic market. As the domestic capacity to absorb bonds was limited, the Reserve Bank of Vanuatu became the lender of the last resort.8

Although this instance of monetization of fiscal deficit of such a magnitude was the first of its kind since independence in 1980, the inflationary potential of fiscal expansion cannot be overlooked by decision makers. In 1990, the overall fiscal deficit was not sizeable. Hence, with some external borrowing, the need for financing the fiscal deficit was found

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much less and the Government was able to borrow from commercial banks, eliminating the need for any borrowing from the monetary authority. In 1991, another Vt 200 million was injected into Air Vanuatu and the 1992 budget announced it would provide a further Vt 50 million for the company, giving rise to overall deficits of 21.1 per cent and 16.5 per cent respectively.

In retrospect, substantial and regular inflows of external aid have helped the country immensely in meeting its developmental needs without much recourse to inflationary finance. External aid has also minimized the degree of competition of the public sector with the private sector and as a result the crowding out effects of public sector borrowing have not been seriously felt. Part of the latter can as well be attributed to the relative lack of profitable investment opportunities in the private sector. In comparison with the other major South Pacific island countries, Vanuatu's dependency on external grants is the second highest, next only to Tonga (Table 6).

**TABLE 6**
Fiscal and Savings Indicators of Selected SPFDCs 1985-1989
(Per Cent of GDP)

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Expenditure</th>
<th>Domestic Revenue</th>
<th>External Grants</th>
<th>Gross Domestic Savings</th>
<th>Gross Domestic Investment</th>
<th>Resource Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiji</td>
<td>26</td>
<td>25</td>
<td>1</td>
<td>18</td>
<td>20</td>
<td>-2</td>
</tr>
<tr>
<td>Solomon Islands</td>
<td>35</td>
<td>25</td>
<td>8</td>
<td>-1</td>
<td>30</td>
<td>-31</td>
</tr>
<tr>
<td>Tonga</td>
<td>80</td>
<td>52</td>
<td>33</td>
<td>-8</td>
<td>22</td>
<td>-30</td>
</tr>
<tr>
<td>Vanuatu</td>
<td>55</td>
<td>26</td>
<td>21</td>
<td>3</td>
<td>31</td>
<td>-28</td>
</tr>
<tr>
<td>Western Samoa</td>
<td>43</td>
<td>33</td>
<td>12</td>
<td>-9</td>
<td>27</td>
<td>-36</td>
</tr>
</tbody>
</table>


Absence of official transfers would have certainly given rise to deficits in the current accounts of balance of payments (Figures 2 and 3). Although any current account deficit is not necessarily worrisome, the nature of financing such annual deficits would raise the question whether such deficits are ultimately sustainable and financiable. There are three ways of financing current account deficits: external borrowing, running down international reserves, and inflows of portfolio and direct investment. Successful economic policies pursued by developing countries outside the region have shown that financing the current account deficits through inflows of portfolio and direct investment is the most sustainable way. On the other hand, the other two forms of financing, namely, reserve drawdown and external borrowing, do not make the current accounts sustainable, since growing pressures on the exchange rate would have to be felt sooner or later. In the absence of any support to exchange rate in terms of massive aid transfers, the monetary authorities would be forced to resort to devaluation of the national currency.

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FIGURE 2
Current Account Balance including Official Transfers and Overall Budget Balance as Percentage of GDP

FIGURE 3
Current Account Balance excluding Official Transfers and Overall Budget Balance as Percentage of GDP
TABLE 7
Inflation, Real Deposit and Real Lending Rates
(Per Cent)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Inflation (Per Cent)</td>
<td>5.4</td>
<td>12.4</td>
<td>-0.1</td>
<td>-0.7</td>
<td>8.8</td>
<td>10.1</td>
<td>4.5</td>
<td>4.3</td>
<td>5.3</td>
</tr>
<tr>
<td>Real Deposit Rate (Per Cent)</td>
<td>4.6</td>
<td>-6.3</td>
<td>6.1</td>
<td>7.7</td>
<td>-3.9</td>
<td>-3.3</td>
<td>2.3</td>
<td>2.6</td>
<td>2.6</td>
</tr>
<tr>
<td>Real Lending Rate (Per Cent)</td>
<td>14.0</td>
<td>11.0</td>
<td>13.0</td>
<td>8.0</td>
<td>-1.0</td>
<td>10.0</td>
<td>8.0</td>
<td>12.0</td>
<td>11.0</td>
</tr>
</tbody>
</table>

1. Real Deposit Rate = \( \frac{(100 + \text{Nominal Deposit Rate})}{(100 + \text{Rate of Inflation})} \) -1

2. Real Lending rate = \( \frac{(100 + \text{Nominal Lending Rate})}{(100 + \text{Rate of Inflation})} \) -1

Additionally, supporting measures including maintenance of price stability and expenditure reduction need to be implemented for making the devaluation successful. Most of the reduction in aggregate demand has to be borne by the government departments and agencies, in view of their predominance in the economy. Although devaluation would have made the exports of Vanuatu more competitive, inelastic supplies of exports, such as copra, cocoa and traditional crops, in the short run as well as inter-island transport bottlenecks and inadequate wharfage facilities, would not have enabled the economy to take full advantage of the opportunities offered by such devaluation. On the other hand, domestic price stability would have been adversely affected as a large proportion of the basket of goods and services determining the consumer price index is dominated by imported consumer goods.

In the context of clear downward trend in the aid flows, it would be prudent to take stock of the situation by examining the implications of the current account balances in a hypothetical situation of absence of official aid flows. Such an analysis would also enable exploring possibilities of alternatives including mobilizing new avenues of resources to meet the gaps between domestic savings and investment needs. The model employed for undertaking the empirical investigation is outlined in the next section.

IV. Empirical Analysis

A. National Accounts Approach

From the national accounting identities, the current account of balance of payments is equal to the sum of the public and private sectors’ saving/investment balances. Thus, if public sector investment exceeds public sector saving and if private sector investment exceeds private saving, there must be a current account deficit in the balance of payments.
In symbols,

\[ CA = Y - E = Y - (C + I + CE), \]

where

- \( CA \) = net exports (exports minus imports) minus net interest payments plus net remittances plus net private transfers;
- \( Y \) = national income;
- \( E \) = national expenditure;
- \( C \) = household consumption of goods and services purchased at home and from abroad;
- \( I \) = total investment, by firms as well as government; and
- \( CE \) = recurrent expenditures of Government.

Since national income can be saved, taxed or used for consumption, \( CA \) can be expressed as:

\[ CA = (CR - CE) + (PS - I) \]

where, in addition to the symbols explained before,

- \( CR \) = recurrent revenues of government comprising tax and non-tax revenues; and
- \( PS \) = private savings.

Thus, the current account balance can also be interpreted as the sum of net government saving and net private saving. This also indicates that macroeconomic equilibrium is achieved when private and public savings minus total domestic investment equals the current account of balance of payments. Based on the theoretical discussion,\(^{10}\) a simple econometric model is proposed for finding out the determinants of changes in the current account balance of payments of Vanuatu.

B. A Simple Recursive Model

Statistical information pertaining to national income accounts has been compiled only since 1983. As a result, the choice of the variables employed for the analysis is dictated primarily by the availability of consistent time series of data. Further, a limited number of observations, allowing for sufficient degrees of freedom, has also restricted the choice of model to a recursive model. By so doing, some important simultaneous relationships might be left out in the analysis. As in an open economy such as in Vanuatu, variables such as trade and capital movements, government revenues and expenditures, investment and savings affect each other and current account balance in one way or another. Thus, the limitations of a recursive model are obvious. With greater availability of data over a period of time, it is possible to undertake a more sophisticated analysis by constructing a simultaneous equation system. For the present, the choice of a recursive model on simple lines seems to be the best alternative.

The purpose of the model is to investigate: (i) the forces influencing the current account balances; (ii) the role of fiscal policies in determining current account balances; and (iii) applicability of the model for policy formulation. As the data are in current prices,

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\(^{10}\) Gloria Bartoli, "Fiscal Expansion and External Current Account Imbalances" in M. Beleger and C. Chu (eds), Fiscal Policy, Stabilisation and Growth in Developing Countries, Washington D.C. International Monetary Fund, 1989.
following the well-used procedure, they have been scaled either to GDP or population. In symbols, the structural equations of the model are expressed as follows:

\[
\begin{align*}
    cr &= f (cr, m, D, TOT) \quad \text{(1)} \\
    ce &= f (INF, Gr) \quad \text{(2)} \\
    i &= f (g, RLR) \quad \text{(3)} \\
    ps &= f (cr, Gr, RDPR) \quad \text{(4)} \\
    ca &= (cr - ce) + (ps - i) \quad \text{(5)}
\end{align*}
\]

where, in addition to the symbols defined before,

\[
\begin{align*}
    cr &= \frac{CR}{GDP}; \\
    ce &= \frac{CE}{GDP}; \\
    ps &= \frac{PS}{GDP}; \\
    m &= \text{Imports/GDP}; \\
    D &= \text{dummy variable assuming the value of unity for those years when cyclone occurred and zero for other years;} \\
    TOT &= \text{terms of trade;} \\
    INF &= \text{rate of inflation;} \\
    Gr &= \text{rate of growth of GDP;} \\
    RDPR &= \text{real deposit rate;} \\
    g &= \text{Government development expenditure/GDP; and} \\
    RLR &= \text{real lending rate.}
\end{align*}
\]

The model fulfills the definition of a recursive model. The first three equations consist only of exogenous variables. The fourth equation includes one previously estimated endogenous variable, \( cr \). All the previous equations enter into the fifth equation, which is an identity, being the current account balance of payments equation.

C. Current Revenue Equation:

Although there is no direct taxation in Vanuatu, the real GDP growth rate would broadly serve as a representative explanatory variable for taxable capacity. It is postulated that revenue expressed as a percentage of GDP is positively associated with real GDP growth rate, the proxy taxable capacity base, to which tax rates are applied. The major source of revenue has been import duties. For capturing the influence of import taxation on revenues, the ratio of imports to GDP has been included as an independent variable, which is hypothesized to affect the dependent variable directly. In addition, the Government's institutional capacity would also be an important determinant of revenue collection. This will be represented by the one-period lagged dependent variable, which is hypothesized to be positively associated with the dependent variable. Since terms of trade (TOT) and frequent occurrences of cyclones are also considered as important determinants of the

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\[\text{12} \quad \text{D. Gujarati, Basic Econometrics, New York: McGraw Hill, 1988, p. 596.} \]
Government’s revenues, it would be appropriate to include them in the model and test their respective hypothesized relationships, namely, positive association of TOT and negative association of cyclone, with the dependent variable.

D. Recurrent Expenditure Equation

The Government’s recurrent expenditure, expressed as a percentage of GDP, is hypothesized to depend on growth of the economy represented by its growth rate as a countercyclical influence. It is also likely that it would determine the recurrent expenditures needed to maintain the momentum. In the former case, the dependent and explanatory variables are inversely related, but in the latter case, their association is expected to be in the same, positive direction. Hence, the nature of their association is likely to be ambiguous until it is statistically tested. The other independent variable, which is hypothesized to be positively associated with Government current expenditures, is the rate of inflation. The reasoning is that government expenditures tend to keep up with increases in price level.

E. Investment Equation

Investment comprises private investment and government capital expenditures. However, total investment expressed as a proportion of GDP is treated as a dependent variable. It is generally held that government investment has a dampening influence on private investment as it tends to have a crowding-out effect. Hence, it is postulated that the dependent variable, the ratio of total investment to GDP, is negatively associated with the ratio of government investment to GDP. The domestic monetized sector of Vanuatu is small, although there is a sophisticated offshore center of financial institutions. In order to test whether cost of credit has hampered investment, lending rate duly adjusted for inflation is included in this equation. The hypothesized relationship to be tested is that investment is inversely related to real lending rate.

F. Private Saving Equation

Private saving behavior is determined by disposable income, which is normally influenced by direct taxation. In the absence of direct taxation in Vanuatu, the indirect taxes comprising import duties and retail taxes represent tax effort. With a view to testing whether taxes on consumption through import duties has any effect on saving rate, the ratio of current revenue to GDP, representing overall tax effort, is included as an explanatory variable. The ratio of private savings to GDP is hypothesized to be negatively associated with tax effort of the Government. Saving behavior is also postulated to be directly influenced by growth in income and accordingly, rate of growth in real GDP is entered as an explanatory variable. Since real interest rate, duly adjusted for inflation, has a positive influence on savers, real deposit rate offered by the commercial banks on deposits of six months and longer is included in the equation to test its hypothesized positive relationship.
V. Results of Empirical Analysis

The data utilized for empirical analysis, which relate to the nine-year period 1983-1991, are drawn from the official documents of National Planning and Statistics Office. The data collection and processing efforts in the country are of recent origin and much of the data are yet to be refined and cross checked so as to ensure accuracy and reliability. Given these limitations, empirical analysis has been attempted.

The model to be estimated is a recursive one, consisting of four structural equations. As there is no bias of simultaneity involved, the error terms in each of the equations are assumed to be independent. Accordingly, each equation has been estimated by the ordinary least squares procedure. In fitting the equation, a time trend was added to isolate the influence of time on the dependent variable. Results of regression analyses are presented in Table 8. The figures in parentheses denote calculated ‘t’ values.

A. Current Revenue

There were several equations fitted, and results of five of them are given in Table 8. Equations with dummy variables for cyclone and TOT were found not satisfactory, although the signs of these two parametric coefficients were in accordance with theoretical expectations. Similarly, the coefficient of GDP growth rate was found statistically not significant. These three variables were dropped and regressions were re-run. The best among the estimated equations was the following:

\[
cr = -16.139 + 1.225 \cdot cr_{-1} + 0.392 \cdot m - 1.033 \cdot T
\]

\[
(-1.763) (3.481) (3.612) (-2.242)
\]

\[
Adj. R^2 = 0.803 \quad F \text{ ratio} = 10.560 \quad DW = 1.871 \quad d.f. = 4
\]

The role of imports contributing to revenue efforts through tariff rates has been well brought out as an important determinant of revenue ratio, as it turned out with the expected sign and statistical significance. Given the tariff rates, a higher ratio of imports to GDP contributes to current revenue in a positive way. Accordingly, one percentage point increase in the ratio of imports to GDP would give rise to an increase by 0.392 of a percentage point in the ratio of current revenue to GDP. The administrative capacity of the system, as represented by the lagged dependent variable, also proved significant and its sign was also in accordance with theoretical expectations. The time trend is found to be negative, indicating that the revenue ratio was declining during the study period.

B. Recurrent Expenditure Equation

All the three fitted equations, which are reported in Table 8, clearly establish the statistical significance of a countercyclical influence behind the recurrent expenditure ratio. A decline in the rate of growth in income, mainly due to cyclones or terms of trade effects, resulted in an immediate and unanticipated increase in recurrent expenditure, such as maintenance of roads, water supply and other essential requirements, pending major rehabilitation works, which are funded under capital budget. The coefficient of Gr is found
### TABLE 8
Results of Regression Analyses


<table>
<thead>
<tr>
<th>Equation</th>
<th>Constant</th>
<th>cr</th>
<th>m</th>
<th>D</th>
<th>T</th>
<th>TOT</th>
<th>Gr</th>
<th>Adj R Sq</th>
<th>F ratio</th>
<th>DW</th>
<th>Degrees of Freedom</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-13.191</td>
<td>1.126*</td>
<td>0.371*</td>
<td>-0.444</td>
<td>-0.924**</td>
<td>-</td>
<td>-</td>
<td>0.757</td>
<td>6.461</td>
<td>1.931</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>(-1.111)</td>
<td>(2.550)</td>
<td>(2.905)</td>
<td>(-0.483)</td>
<td>(-1.651)</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3.954</td>
<td>0.434*</td>
<td>0.252**</td>
<td>-1.055</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.652</td>
<td>5.384</td>
<td>1.561</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>(0.575)</td>
<td>(2.605)</td>
<td>(1.998)</td>
<td>(-1.047)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>-16.139</td>
<td>1.225*</td>
<td>0.392*</td>
<td>-1.033*</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.803</td>
<td>10.560</td>
<td>1.871</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>(-1.763)</td>
<td>(3.481)</td>
<td>(3.612)</td>
<td>(-2.242)</td>
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<td>0.387**</td>
<td>-0.492</td>
<td>-0.982</td>
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<td>0.407*</td>
<td>-1.262**</td>
<td>-0.105</td>
<td>0.760</td>
<td>6.554</td>
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<td>(-1.592)</td>
<td>(2.708)</td>
<td>(3.301)</td>
<td>(-1.382)</td>
<td>(0.552)</td>
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<table>
<thead>
<tr>
<th>Equation</th>
<th>Constant</th>
<th>INF</th>
<th>Gr</th>
<th>T</th>
<th>Adj R Sq</th>
<th>F ratio</th>
<th>DW</th>
<th>Degrees of Freedom</th>
</tr>
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<td>-0.623*</td>
<td>0.071</td>
<td>0.579</td>
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<td>2.422</td>
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<td>(0.383)</td>
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<td>(-3.808)</td>
<td>-</td>
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<tr>
<td>3</td>
<td>29.650*</td>
<td>-</td>
<td>-0.614*</td>
<td>0.111</td>
<td>0.629</td>
<td>7.796</td>
<td>2.416</td>
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<td></td>
<td>(29.451)</td>
<td>-</td>
<td>(-3.913)</td>
<td>(0.694)</td>
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#### III. Dependent Variable: i (1983–1991)

<table>
<thead>
<tr>
<th>Equation</th>
<th>Constant</th>
<th>g</th>
<th>RLR</th>
<th>T</th>
<th>Adj R Sq</th>
<th>F ratio</th>
<th>DW</th>
<th>Degrees of Freedom</th>
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<tbody>
<tr>
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<td>3.005*</td>
<td>0.836</td>
<td>14.578</td>
<td>2.226</td>
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<tr>
<td></td>
<td>(4.757)</td>
<td>(-0.827)</td>
<td>(-1.083)</td>
<td>(4.142)</td>
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</tbody>
</table>


<table>
<thead>
<tr>
<th>Equation</th>
<th>Constant</th>
<th>Gr</th>
<th>cr</th>
<th>INF</th>
<th>RDRR</th>
<th>Adj R Sq</th>
<th>F ratio</th>
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<th>Degrees of Freedom</th>
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<tbody>
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<td>1.847*</td>
<td>-0.578*</td>
<td>0.281</td>
<td>-</td>
<td>0.312</td>
<td>2.208</td>
<td>1.726</td>
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<td></td>
<td>(0.863)</td>
<td>(2.382)</td>
<td>(1.657)</td>
<td>(0.974)</td>
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<tr>
<td>2</td>
<td>13.316</td>
<td>1.844*</td>
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<td>-</td>
<td>0.038</td>
<td>0.285</td>
<td>2.067</td>
<td>1.851</td>
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<td></td>
<td>(0.725)</td>
<td>(2.141)</td>
<td>(-1.523)</td>
<td>(0.039)</td>
<td>-</td>
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<tr>
<td>3</td>
<td>13.44</td>
<td>1.831*</td>
<td>-0.386**</td>
<td>-</td>
<td>-</td>
<td>0.405</td>
<td>3.720</td>
<td>1.913</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>(0.814)</td>
<td>(2.542)</td>
<td>(-1.721)</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
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</tr>
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</table>

* Significant at 0.05 level by one tailed test.
** Significant at 0.10 level by one tailed test.

Note: Figures in parentheses denote calculated "T" values.
statistically significant by a two-tailed test at the 5 per cent level, thus clearing the ambiguity about its sign and its role. The inference is that the recurrent expenditures are influenced by the growing requirements of operational and maintenance expenditures associated with the economic decline caused by unanticipated adverse factors such as cyclones. Decline in the economic growth rate by one percentage point would increase the recurrent expenditure ratio by 0.644 of a percentage point. In the estimated equation, the dummy variable for cyclone was not added due to the possible multicollinearity problem. The equation chosen is the following:

\[
\begin{align*}
\text{ce} &= 29.650 - 0.644 \text{Gr} + 0.111 T \\
& (29.454) \quad (-3.943) \quad (0.694)
\end{align*}
\]

\[
\begin{align*}
\text{Adj R Sq} &= 0.629 \quad F \text{ ratio} = 7.796 \quad DW = 2.446 \quad d.f. = 6
\end{align*}
\]

C. Investment Equation

Although several regressions were attempted, only one emerged as satisfactory. The sign of the coefficient of ratio of government investment to GDP was negative, indicating the crowding effect on private investment and hence total investment. The sign of the coefficient of real lending rate was negative, confirming the theoretical expectations. However, the parametric coefficients of both government investment and real lending rate were found statistically not significant. The only explanatory variable which emerged significant was time trend. In the absence of any other satisfactorily fitted equation, reliance was placed on the following:

\[
\begin{align*}
i &= 21.389 - 0.256g - 0.285RLR + 3.005T \\
& (4.757) \quad (-0.820) \quad (-1.083) \quad (4.142)
\end{align*}
\]

\[
\begin{align*}
\text{Adj R Sq} &= 0.836 \quad F \text{ ratio} = 14.578 \quad DW = 2.226 \quad d.f. = 5
\end{align*}
\]

D. Saving Equation

Among several regressions attempted, while real deposit rate turned out to be directly related to dependent variable, it was found statistically not significant. Several combinations were tried. However, the equations with real GDP growth rate (Gr) emerged as better fits. It was found that revenue mobilization effort, which comprises mainly indirect taxes with a high degree of regressivity, had a discouraging influence on saving rate. Since inflation was also found statistically not significant, both RDPR and INF were dropped and the following equation was selected:

\[
\begin{align*}
ps &= 13.440 + 1.831 \text{Gr} - 0.386 cri \\
& (0.814) \quad (2.542) \quad (-1.721)
\end{align*}
\]

\[
\begin{align*}
\text{Adj R Sq} &= 0.405 \quad F \text{ ratio} = 3.72 \quad DW = 1.91 \quad d.f. = 6
\end{align*}
\]
The results are in accordance with theoretical expectations. Private saving rate is positively associated with income growth. A rise in the economic growth rate by one percentage point would result in the increase in private savings ratio by 1.831 of a percentage point. As regards the impact of tax effort on savings, the inverse relationship is clearly established with a high degree of statistical significance. The interpretation of the result is that an increase in the current revenue ratio by one percentage point would decrease private savings ratio by 0.386 of a percentage point.

E. Current Account Balance of Payments Equation

Substituting the estimated values of the parametric coefficients of the four equations of the system in the current account balance of payments equation, which is an identity, we obtain the following:

\[ ca = -47.708 + 2.475Cr + 0.256g + 0.725cr + 0.241m + 0.285RIR - 3.751T \]

In the above reduced form of equation, ca denotes ratio of current account balance to GDP, excluding official aid transfers. Accordingly, the important determinants of current account balance influencing the outcome in a positive way are: (i) growth in real GDP, which contributes to increase in savings ratio; (ii) government expenditure; (iii) institutional capacity of the government’s tax machinery, represented by lagged revenue ratio; (iv) ratio of imports to GDP signifying the role of customs duties in revenue efforts; and (v) real lending rate, which has acted, in the context of lead role by the public sector, as a dampening effect on total investment.

At the outset it might seem strange that import ratio, GDP growth rate and government expenditure ratio may have positive effects on current account balance. However, in the special context of Vanuatu, which has no direct taxation, customs duties have been the chief contributor to current revenue. Thus, given the tariff rates and holding other things constant, a higher ratio of imports to GDP leads to favorable fiscal and current account balances. Similarly, a rise in growth rate leads to higher private savings; on the expenditure side, again in the special context of Vanuatu, decline in growth rate caused by cyclones alone leads to rise in recurrent expenditures. The net result of an increase in growth rate is an overall improvement in current account balance. As regards government development expenditure, its coefficient emerged with a negative sign in the investment equation, indicating the crowding out effect on private investment. In the context of absence of profitable private investment opportunities, the net effect of development expenditure on current account balance seems positive, as it leads to increases in productive capacities growth and savings.

F. Simulation Exercise

Utilizing the estimated current account balance equation above and the actual values of the explanatory variables included in the equation, the ratios of current balance of payments, excluding official transfers, to GDP of the nine-year period 1983-1991 were simulated. A comparison of the simulated and actual values are presented in Table 9 and illustrated in Figure 4. The simulation exercise turns out to be more pessimistic than the actual experience. Given the data limitations, the model, which is not to be treated as a
TABLE 9
Actual and Simulated Ratios of Current Account Balance Excluding Official Transfers to GDP

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual (Per Cent)</th>
<th>Simulated (Per Cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1984</td>
<td>-5.2</td>
<td>-10.1</td>
</tr>
<tr>
<td>1985</td>
<td>-15.3</td>
<td>-22.6</td>
</tr>
<tr>
<td>1986</td>
<td>-21.5</td>
<td>-35.5</td>
</tr>
<tr>
<td>1987</td>
<td>-29.5</td>
<td>-31.2</td>
</tr>
<tr>
<td>1988</td>
<td>-19.6</td>
<td>-31.0</td>
</tr>
<tr>
<td>1989</td>
<td>-27.9</td>
<td>-25.3</td>
</tr>
<tr>
<td>1990</td>
<td>-15.7</td>
<td>-25.9</td>
</tr>
<tr>
<td>1991</td>
<td>-27.8</td>
<td>-31.1</td>
</tr>
</tbody>
</table>

A forecasting tool, does bring out the message that unless deliberate measures are undertaken to contain the growing pressures on fiscal and current account balances, things might get out of control. In the absence of generous external grants, these pressures may lead to exchange rate instability and authorities may have to consider appropriate corrective measures, including devaluation of the vatu.

FIGURE 4
Actual and Simulated Ratios of Current Account Balances excluding Official Transfers to GDP
G. Conclusions

The general conclusion arising out of the foregoing analysis, which is applicable to all SPDMCs, is that the current account balance of payments is the product of fiscal choice between current expenditures and development expenditures. While current expenditures are imperative requirements of an ongoing economy to maintain the momentum, development expenditures are fundamental towards promoting structural transformation and improving growth potential. The inevitability of bearing the sacrifices involved in balancing the current needs and future requirements can be minimized by greater efforts towards mobilization of domestic savings and control on recurrent expenditures.

Specifically with reference to Vanuatu, the conclusion is that high dependence on import and export duties in the absence of direct taxation has resulted in a very narrow tax base with a lesser degree of maneuverability. Growing recurring expenditures as well as less inelastic revenue base have given rise to fiscal deficits leading to current account imbalances. The Government has been under pressure to broaden its tax base by increasing rates of business license taxes and company registration fees and levying gambling taxes, all falling short of introducing personal income and company profit taxes. The fear of alienating business sections of the community, especially institutions of the off-shore finance center is not well-founded, since in similarly placed tax haven countries, private income and company profit taxes have been in coexistence with full exemption status conferred on offshore finance center institutions. The Government’s readiness to examine introduction of direct taxation in the long run and payroll taxes in the short run, however, augurs well.

H. Areas of Bank Assistance

The Bank has provided technical assistance to Vanuatu for institution building and upgrading staff capabilities in key agencies in public finance. These include the ongoing advisory technical assistance to Ministry of Finance for domestic revenue management for streamlining the present procedures and computerization of customs revenues and the recently approved technical assistance for improving aid administration and coordination in the National Planning Office.

In the light of the conclusions reached by the study, the following areas can be considered for technical assistance: (i) mobilization of domestic resources; (ii) tax reforms; and (iii) improvements to expenditure control. The modalities would be mainly in the form of provision of advisory services. Resource mobilization in the short run would include appropriate provision of user fees for hospital services, primary and secondary education facilities and urban infrastructure services.

In the long run, tax reforms should focus on broadening the tax base, which is elastic with income growth, without being regressive as at present. Tax reforms would include possibilities of introduction of direct taxation, keeping in view the larger objectives of developing Vanuatu as an offshore finance center by providing appropriate exemptions for the offshore institutions, as prevalent in other similar countries. Towards improving expenditure control, training programs for civil servants in charge of accounts and auditing in line ministries as well as in Ministry of Finance for improved monitoring and auditing should be conducted. Technical assistance in these critical areas would contribute to reduction in fiscal deficits both in the medium and long terms so that external imbalances can be well controlled.