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Trade, Growth and Capital: A Case Study of Jamaica

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TRADE, GROWTH AND CAPITAL: A CASE STUDY OF JAMAICA

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ABSTRACT

This is the first of two articles on the dynamics of the Jamaican economy over the last two and a half decades. It compares the overall macroeconomy of Jamaica in the areas of output, fiscal and monetary policy, capital formation and trade to that of Singapore and South Korea. The conclusion from the aggregate data is that government spending in the second half of the 1970's and the first half of the 1980's may have had a significant role in the inflationary episodes and reduced capital formation during this period. The second article will delve deeper into the details of the fiscal and monetary policies, domestic industrial and social policies and international relationships in place during this period in order to focus more precisely on the "micro" causes of or obstacles to growth.

KEYWORDS: Growth & Development, Fiscal Policy

JEL CLASSIFICATION: F43, O54

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Trade, Growth and Capital: A Case Study of Jamaica

I. An Overview

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Introduction

The post-Arab oil embargo period has been one of precipitous decline in living standards for Jamaica. In the last two decades, Jamaica has moved from the forefront of developing countries in most measures of living standards to join the laggards of the less developed countries. A once enviable middle class has declined considerably. Nations like Korea and Singapore, which were behind Jamaica in per capita income in the late 1960's, have exploded in growth to become symbols of industrialization during the same period. In the early 1990's, Jamaica has returned to a positive growth path and hopefully will recover from the period decline.

What were the root causes of the decline in Jamaica's economy? Can these causes be identified and avoided in the future? The finger of blame can be pointed in many directions - the political regimes are easy targets, impoverishment by oil prices, debt agony, capital flight, immigration/brain drain are all potential factors. What is certain is that the process is dynamic and has memory. The consequences of decisions made in the past are still being felt today; decisions made today will have long lasting impact. An analysis of the

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dynamics of the macroeconomy is a vital start to determine how to reverse the trend and innoculate the country against future reversals through appropriate policies and institutions.

This is the first of two articles assessing the dynamic path of growth in Jamaica over the last two and a half decades. This article compares the performance of the economy of Jamaica to those of the Asian countries of South Korea and Singapore to gain insights into correlations between each country's performance in fundamental areas. It restricts the analysis to differences in macroeconomic variables among Jamaica and the Newly Industrialized Economies (NIEs) of Singapore and Korea and infers from these differences potential causes of the economic decline. The second article will delve into the underlying policy regimes and microeconomic distortions which may have influenced these outcomes.

The next section discusses general issues in growth and development. The following sections compare the performance of Jamaica, Singapore, and Korea in areas of fiscal responsibility, investment, financial market stability, and trade. Finally we provide some comments on key areas for maintaining competitiveness in the global economy.

Growth and Development

The key to sustainable growth is elusive. Consistent themes in the literature on growth theory are sound fiscal policy, stable financial markets with efficient intermediation between savers and borrowers, growth in physical and human capital stock, relative control over trade balances, and microeconomic government policies geared toward industrial development. These fundamentals are both intuitive and compatible with economic theory.

Increased productivity appears to be causally linked to capital investment in plant and equipment. Improvements in capital plant and equipment increases labor productivity and stimulates per capita output improvement. Although there may be some controversy about how well these factors stand up to empirical scrutiny, there are probably few economists who would consider these elements detrimental to development.

For small trade-dependent economies, balance of trade accounts also have significant impact on growth. As a result, these economies tend to focus investment and growth prospects in the area of trade. The debate on whether investments should center around import substitution or increases in export is continuing. Many Pacific Rim, newly industrialized nations have been able to expand both exports and imports and demonstrate immense output and income growth.[1] Investments in these economies have come both domestically (with some government subsidies) and from foreign direct investment by multi-national corporations. The viability of these investments are enhanced by a stable financial sector, including stable exchange rates.

In the quest for sustainable economic growth, economies that are unable to attract private investment have been forced to international financial institutions, primarily the Bretton-Woods organizations, the International Monetary Fund (IMF) and the World Bank (International Bank for Reconstruction and Development). The IMF's financial assistance consists primarily of short-horizon loans to governments that are ostensibly in need of structural adjustment of temporary macroeconomic imbalances. These loans come with conditionalities to reassure the IMF that steps are being taken by the recipients to ensure that

[1] The extent to which favorable bilateral trade agreements contributed to this growth through increased markets is not being addressed here.

the imbalance is being corrected. A typical and often enforced reform is a currency devaluation for those countries under a fixed exchange rate regime when their currency appeared to be overvalued against major trading partners. In theory, the lower value of the domestic currency should boost the exports of the debtor nation and, in conjunction with other austerity measures, return the country to a sustainable growth path. There is a paucity of empirical verification of this theory. Whether or not the so-called structural adjustments have resulted in stimulating real growth is still unanswered. In some instances devaluations implemented together with trade liberalization resulted in net increases in imports that exacerbated weakness in the currency.

While long term exchange rates are still governed by the fundamentals of purchasing power parity, tariffs and quotas, productivity, and preferences for foreign versus domestic goods, the short term movements are affected by perceived changes in the relative rates of return on asset portfolios denominated in the particular currency. As financial markets become more globalized, small open economies become more sensitive to international financial events. When monetary policy uses interest rate targets and credit restrictions, international portfolios respond by flowing to or from temporary deposits. Small perturbations in the policies of industrialized nations have unsettling impacts on international financial markets. As Mexico found out, very liquid portfolios will take flight rapidly at the first sign of instability or reduction in the rate of return relative to some perceived risk premium. When Mexico was forced to devalue in late 1994, the rate of return on assets denominated in pesos (relative to dollars) fell and a flight to quality ensued, further reducing the exchange rate and the expected rate of return.

Monetary policy becomes vital in attracting both long-term and short-term investment. Most central bankers who are motivated to maintain financial market stability pay close attention to the long-term bond market because they reflect the source of fixed investment financing. If there is uncertainty in the rate of return on long term investment, both the suppliers of credit and potential investors will be deterred. A high risk premium is demanded for long-term investment in a climate of political or monetary instability. This risk premium is reflected in the long-term bond yield. In economies heavily dependent on trade and foreign investment, exchange rate instability can have a chilling effect. Fiscal and trade imbalances put pressure on the value of the currency and are not compatible with long-term growth. Prudent monetary policy is required to maintain the integrity of the currency.

What has been Jamaica's record on fiscal austerity, financial market/exchange rate stability, and trade management? Or more specifically, how does Jamaica's record in these areas compare to two of the so-called tigers of Asia -South Korea and Singapore?

Sound Fiscal Policy

Sound government fiscal policy is best measured by government budget surplus. Temporary deficits can be good for the economy if they reflect investment in physical capital or infrastructure rather than consumption. Recurring deficits accumulate into a debt burden which makes interest payments a large part of the government's budget and restricts the ability to return to fiscal prudence. Total debt or debt service ratio gives a better indication of the fiscal health of the government, reflecting the cumulative deficits incurred in the past. The proportion of foreign debt gives evidence of the exposure of the fiscal budget to external

pressures on the currency. Debt denominated in foreign currency escalates as local currency is devalued. Sources of revenue that expose inefficient tax collection, and/or excess dependence on foreign financial markets also can reveal fiscal instability.

For the purposes of this article, the line item of government consumption expressed as a percent of GDP is used as a measure of fiscal austerity for comparison with Singapore and South Korea. Figure 1 shows the real GDP per capita in Jamaica from 1968 to 1993 compared to the government consumption and capital formation during these years. Figures 2 and 3 show the equivalent data for Singapore and South Korea, respectively. Per capita GDP in Jamaica declined from 1973 until 1985 by approximately 30%. During the same period, government consumption increased from about 10% of GDP in 1969 to a peak of about 20% in 1982. As government consumption declined as a percentage of GDP, real per capita income began to increase again beginning in 1985. Singapore and South Korea, by comparison, maintain government consumption at about 10% of GDP.

Increased government consumption in Jamaica between 1974 an 1979 reflect the brief flirtation with democratic socialism as a response to increasing income disparity. The increased government consumption in the early 1980's reflect an increase in debt, particularly external debt denominated in foreign currency. Details on these specific causes will be discussed in the next article. Figure 4 shows the total external debt and actual annual repayments in U.S. dollars for the period 1979 to 1993. The debt is converted to Jamaican dollars to show the effect of devaluations. The external debt doubled between 1979 and 1981, after the change in political administration, from 1.1 billion U.S. dollars in 1979 to 2.3 billion U.S. dollars and peaked at 4.7 billion U.S. by 1987. Annual repayments jumped

from 200 million U.S. dollars per year to a peak of almost 750 million U.S. dollars, putting an equivalent strain on foreign reserves. Ensuing weakness in the curency contributed to devaluations which increased the debt in terms of local currency, from about $2 billion Jamaican dollars in 1979 when the exchange rate was 1.78 per US dollar, to $142 billion Jamaican in 1993 at an exchange rate of 32.48 per US dollar.

Economic theory maintains that excess government spending will result in crowding out of private investment. The presence of the government in credit markets raises the cost of capital and deters private investment. Lower private investment reduces the growth of the capital stock of the country, lowering the growth of capital to labor ratio and, therefore, labor productivity. Could this have occurred in Jamaica? The data suggest that government consumption as a percent of GDP in Jamaica is excessive compared to Singapore and South Korea. The next section looks at the movement of capital formation over the period without inferring causality.

Capital Formation

Both intuitively and theoretically we can make the connection between increased physical capital, improved productivity, and increased standard of living. Has private investment been less than ideal in Jamaica over the last two decades? There are no easy measures of capital flight (human or physical), but we can measure actual growth in the capital stock through measures of capital formation. From figure 1 we also see the Gross Fixed Capital Formation (GFCF) as a percent of GDP compared to per capita real GDP. As

a measure of private sector investment, GFCF fell from approximately 30% of GDP in 1969 to low of about 12% in 1977. With an incipient lag of about three years, we see per capita GDP tracking the reduction in GFCF; declining beginning in 1974 and leveling off by 1980. As GFCF recovered to over 25% of GDP by 1990 per capita GDP appears to be headed back to steady growth. The implication is that the reduction in investment in new capital leads to reduced growth as the physical plant depreciates and the economy loses the efficiency gains from new technology. By comparison Singapore and South Korea's experience shown in Figures 2 and 3 reflect a trend rise in GFCF from a low of about 20% of GDP in 1972 to over 35% of GDP in 1992. If Jamaica can strive for and maintain capital additions at this 30% to 35% of GDP, and maintain government consumption at the 10% level, the return to growth may be sustainable.

Part of the explanation of the GFCF movement in Jamaica lies in the pattern of investment in the bauxite industry, which was very heavy in the late sixties and early seventies but dried up after that. The sources of the increased GFCF during the 1980's need to be identified. The next article will explore the sectoral investment patterns during the period in more detail. The next section looks at indicators of the level of financial market stability over the time period.

Stable Financial Markets

If fixed investment is the engine of growth, then savings is the fuel and a stable financial sector is the lubricant of the engine.

Keynes suggests that "animal spirits" move investors, while classical theory maintains that investment reflects the equilibrium of savings and investment at the marginal productivity of capital. If marginal productivity of capital drives investment, then it is paradoxical that, given the expected greater marginal productivity of capital in developing countries like Jamaica, and the international mobility of capital, investment flows from developed countries to lesser developed countries is so limited (Lucas, AER May 1990). The reasons for reduced capital flows are probably many, but one easy explanation of this paradox is stability in financial markets.

A major motivation for investors is expectation of profits. Unstable financial markets (as well as political instability) threatens the realization of profits. A natural asymmetry of information exists between providers of capital and entrepreneurs. Anything which reduces the impact of this asymmetry is good, anything which adds to the uncertainty is bad. Uncertainty in the financial markets, whether due to inflation, foreign exchange instability, or general political instability, is reflected in higher cost of capital and lower investment levels.

Two highly correlated indicators of financial market instability are domestic inflation and exchange rate instability. As Mexico found out, fixed exchange rates have proven futile in the presence of persistent fiscal and trade imbalance, high foreign-denominated debt servicing and liberalized capital markets. Rampant inflation is sometimes

a manifestation of government deficits financed by increasing money supply. Currency devaluations also can be precipitated by government debt servicing pressures combined with increasing domestic demand for imports. For this article, the exchange rate and consumer price index will be used to compare the financial market stability of the three countries but the causes of inflationary spirals or devaluations are not being inferred.

Figure 5 shows the domestic currency per US$ for Jamaica and Figures 6 and 7 for Singapore and South Korea over the 1968-1994 period. Singapore data reflect a steady appreciation of the Singapore dollar to the US$, whereas South Korea shows fluctuations which may be more tied to fundamentals such as trade flow.

Figure 8 shows the consumer price index (CPI) compared to the money stock in Jamaica. There has been an over 400% increase in the price level since the base year of 1990. The strong correlation between the money stock and the CPI is obvious. An investor in nominal securities would have to be guaranteed in excess of 100% per year return before considering long term investment denominated in Jamaican currency. By contrast, figure 8 shows a much more stable price level for Singapore and Korea.

Milton Friedman asserts that inflation is always and everywhere a monetary phenomenon, meaning that inflation is fueled primarily by growth in the money supply. Even those economists who disagree with him on issues of policy are apt to agree with the quantity theory of money and that, over the long run, a monetary authority that allows the money supply to grow faster than the growth of goods and services contributes to increases in prices. In some instances, this growth in the money supply can be a deliberate (or at least tacit) use of the central bank to monetize government deficit expenditure. Most industrial

countries, -- and especially Germany which has had two periods of hyperinflation in their memory --, establish a central bank that is independent of the government, to remove the temptation to use inflationary policies as an alternative to direct tax revenues. This is not the case in Jamaica and many less developed countries. An independent monetary authority is one method of ensuring that the integrity of the currency is maintained. The central bank is also a primary watch dog institution for financial entities, ensuring that banks maintain appropriate asset/liability ratios to cover the risk of insolvency and liquidity crises. Other deposit insurance institutions and regulatory bodies outside the central bank can also be established to maintain financial market integrity.

Trade Balance

At the base of many of the NIE's growth has been a trade-focussed development program of industrialization, a so-called outward looking economy. The limited ability for isolated growth suggests that countries with limited resources look to the increasing world market for growth in income. Although Japan stands out as a counter-example, island economies like Jamaica have limited resources and, must plan within narrow confines. Development specialists argue whether import substitution or exports should be the focus of industrialization. Park (1992) suggests that South Korea began with import substitution and gained the growth in human capital necessary to become competitive on the international market for goods traditionally dominated by more industrialized nations. Singapore, on the other hand, focussed on opening its economy to foreign direct investment (FDI). Hong Kong chose a path that evolved from a simple "Trading Post" history. Revenues stemmed

primarily from business activities. Therefore, to the extent that these could be encouraged, growth could be assured. This does not imply that every country should risk their sovereignty by opening ownership of national resources to all. It can be argued that any trade related development process must be custom-tailored to the individual country. It is clear, however, that an increasing trade deficit of major proportion to GDP is not consistent with growth. Increasing exports lend positively to GDP growth.

It might seem inappropriate to compare a country like South Korea with over 40 million people with Jamaica, a small island of 2.5 million people, except that prior to 1970, Jamaica had a higher standard of living than either of these two nations. It is also useful to know what the differences have been both from a policy standpoint and from a trade environment standpoint.

One instructive comparison is in the trade deficit maintained with the United States. Jamaica has maintained a trade deficit with the US throughout the period in question. Figure 10 shows the net exports with the U.S. for Jamaica from 1968 to 1994. By comparison, the net exports with the U.S. for Singapore and South Korea are shown in Figures 11 and 12. The trade surplus by both South Korea and Singapore is obvious from the graphs. Although both South Korea and Singapore show periods of trade deficits, these periods do not compare to the "occasional" surplus year for Jamaica. Is this trade balance a reflection of preferential trade treatment of goods imported into the US from Singapore and Korea?

The Reagan administration established a trade agreement known as the Caribbean Basin Initiative (CBI) in the mid-1980's. The agreement established reduced tariffs on certain commodities that meet specific rules of origin criteria. The CBI resulted in a

significant increase in exports from the Caribbean (including Jamaica) to the U.S. Simultaneously, however, imports from the U.S. increased dramatically, resulting in a net increase in Jamaica's trade deficit with the U.S. The composition of imports is a better indicator of the long-term impact of trade deficits. If capital goods are the focus of increased imports, this suggests a future strengthening the economy. A more detailed analysis of the data in the next article will provide answers.

The simple comparison is that Singapore and South Korea maintained better trade balances and achieved higher growth. As the data shows, Singapore and South Korea maintained a trade surplus with the US during most of the 1980's and early 1990's. By contrast, even with the CBI, Jamaica's trade deficit with the US has climbed dramatically since the eighties. This deficit growth and subsequent devaluation of the currency coincides with the removal of import tariffs and quotas by the Jamaica Labour Party regime in 1980. As the pressure of demand for imports increased during the 1980's, the demand for US dollars put increasing pressure on the Jamaican dollar. This pressure, combined with domestic inflation possibly fueled by fiscal irresponsibility, forced devaluation. On the other hand, the promised boon to exports from devaluation did not seem to materialize. In fact, closer observation of the data suggests that prior to the last major devaluation, imports had begun to fall off significantly.

Figure 13 compares Jamaica's per capita GDP with GDP minus net exports. This gives an indication of the contribution of the trade deficit/surplus to GDP growth.[2]

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[2] This is an unorthodox comparison since some gains from trade are not offsetting. However, in a strict accounting sense, a trade deficit is a drag on GDP and when trade dwarfs the domestic economy it is difficult to ignore.

Throughout the period, the trade deficit was a drag on GDP and in the early 1980's, per capita GDP remained flat instead of rising because of the rising trade deficit. Singapore and South Korea by contrast had trade surpluses, which increased their respective per capita GDP.

What does it all mean?

Comparing Jamaica with South Korea and Singapore statistically shows that the Jamaican economy has yet to recover to its pre-embargo levels of per capita output. It also suggests a future rational path. Despite all the controversy surrounding growth theory, most camps will agree that

- Increasing capital increases labor productivity,
- Monetization of debt leads to inflation,
- Inflation destabilizes financial markets,
- Unstable financial markets increase the cost of capital and deters investment,
- Trade surpluses contribute positively to GDP (tautology).

A comparison of Jamaica with these two NIEs shows that Jamaica has fallen behind in capital formation, controlling inflation, and managing government consumption. The high cost of capital which grows out of inflation and the crowding out of private investment by government is evident in the Jamaican economy. It also shows that an increasing, consistent

trade deficit has been the Jamaican profile, whereas South Korea and Singapore have maintained surpluses during the expansion period.

This scenario is probably typical for many so-called Third World nations. The reasons for this dismal state of affairs are probably unique and yet overlapping in core for each country. What is not clear is whether the so-called success stories in east Asia reflect entirely endogenous growth from the proper policies or exogenous (political) shocks. For example, is a liberal market economy the source of success of South Korea as much as preferential trade treatment, which provided ready access to a major market? Did Singapore's stable financial market occur as a policy action or did FDI in export commodities provide sufficient foreign currency to stabilize financial markets? Even if growth in these countries are a result of political preferential treatment, how does a country negotiate such preferential treatment in the post-cold war/post-Uruguay Round era? Strategic locations allow Egypt and Israel access to foreign aid grants, which need not be repaid. Much poorer nations with little or no strategic importance are saddled with debt many times their GNP, which must be repaid out of scant export earnings. Some of these countries that have had preferential trade treatment in the past have lost that extra edge. Will their performance drop accordingly? Will the enforcement of GATT rules level the playing field, or remove a past source of competitive edge, (e.g. intellectual property rights enforcement in Pacific Rim nations)? Trade liberalization still will be a political football. Countries with power will still be able to stroke their allies and strangle their enemies; and those to whom they are indifferent must lobby. One thing is evident and that is that poor nations will no longer be able to depend on the international financial institutions to provide

investment directly to governments. The future must be to attract private investment in plant equipment, whether service or industry based. Unless a substantial middle class can be generated overnight, domestic savings will be insufficient to provide the investment needed for growth, so for the near future, capital must come from international sources. With increased foreign capital, developing nations must scrutinize their balance sheets to ensure that net repatriated returns to capital do not exceed the benefits of income growth through domestic factor input returns.

How Do Capital-Poor Countries Attract Foreign Investors?

The puzzle of limited (private) capital flows from developed to less developed countries still remains, given the huge potential for marginal productivity increases from capital. Any measure of industrialization will indicate that these nations are under-capitalized and the potential returns are much more than industrialized nations can hope to gain. Instability is one explanation as discussed above. The rational response to this instability is a risk premium. But some studies have shown that even with risk premiums, there is a certain irrationality to the way financial markets ignore less developed countries.

Information flow also has been cited as a potential deterrent to foreign investment. In the mid-90's "emerging markets" caught the interest of portfolio investors but suffered from the "Tequila Effect" when the sudden collapse of the Mexican peso left many investors with losses and leery of developing economies. Some analysts blame the slow flow of information for the crisis of confidence in Mexico in early 1995. More transparency in financial markets through improved information gathering and communication will engender

confidence in international investment. Political stability has always been of concern to foreign investment. Although Jamaica does not have a history of political instability, assurances of property rights and international rule of law within a democratic framework reflects a stable climate that will open doors for capital inflows by private investors and reduce the dependency on international financial agencies.

Domestic investment is preferable to FDI. But without a large enough middle class with sufficient disposable income to boost domestic saving, the international savings must be the source of investment for developing countries. FDI is preferable to government borrowing. Government borrowing places a tax burden on future generations unless micromanagement uses foreign borrowings as loans denominated in the appropriate currency for private investment opportunity. The new South Africa has astutely avoided the international financial agencies. Instead, South Africa has advertised heavily in international publications to encourage foreign investment in domestic industries. In addition, the government has successfully gone to the international bond market with a major offering in 1994. After the initial warm reception, the international bond markets have not been one hundred percent favorable to the second South African issue. Nonetheless further issues are in the works. Of course this latter option which removes the burden of restrictions associated with international financial agencies may not be available to most developing countries, but the small island nation of Mauritius has recently entered the international bond market and with its excellent economic growth over the past decade should fare well. A comprehensive plan of marketing and a decisive effort to increase information flow in

conjunction with property rights guarantees to foreign investors will go a long way to attracting capital to developing countries.

The Current Outlook For Jamaica

The present administration is striving to keep Jamaica on a firm growth path. Advances in the equity market shows that financial markets are being opened. Fiscal responsibility appears to be the mode. The central bank, although still under the guidance of the Ministry of Finance, appears to be more cognizant of the impact of financial market stability on the economy over the long run. Inflation has been curtailed sharply - down to 1% increase in May 1995 with the prospect of falling to single digits by 1996. If this stability can be sustained, then the prospect for sustainable growth is encouraging. In recent months failures of some commercial banks due to liquidity crises have forced the central bank to intervene. It appears that these interventions have been successful in shoring up the financial sector. The current Finance Minister, Dr. Omar Davies, is providing an atmosphere that engenders internatinal confidence. Trade negotiations, both regional and bilateral, are setting the stage for future growth.

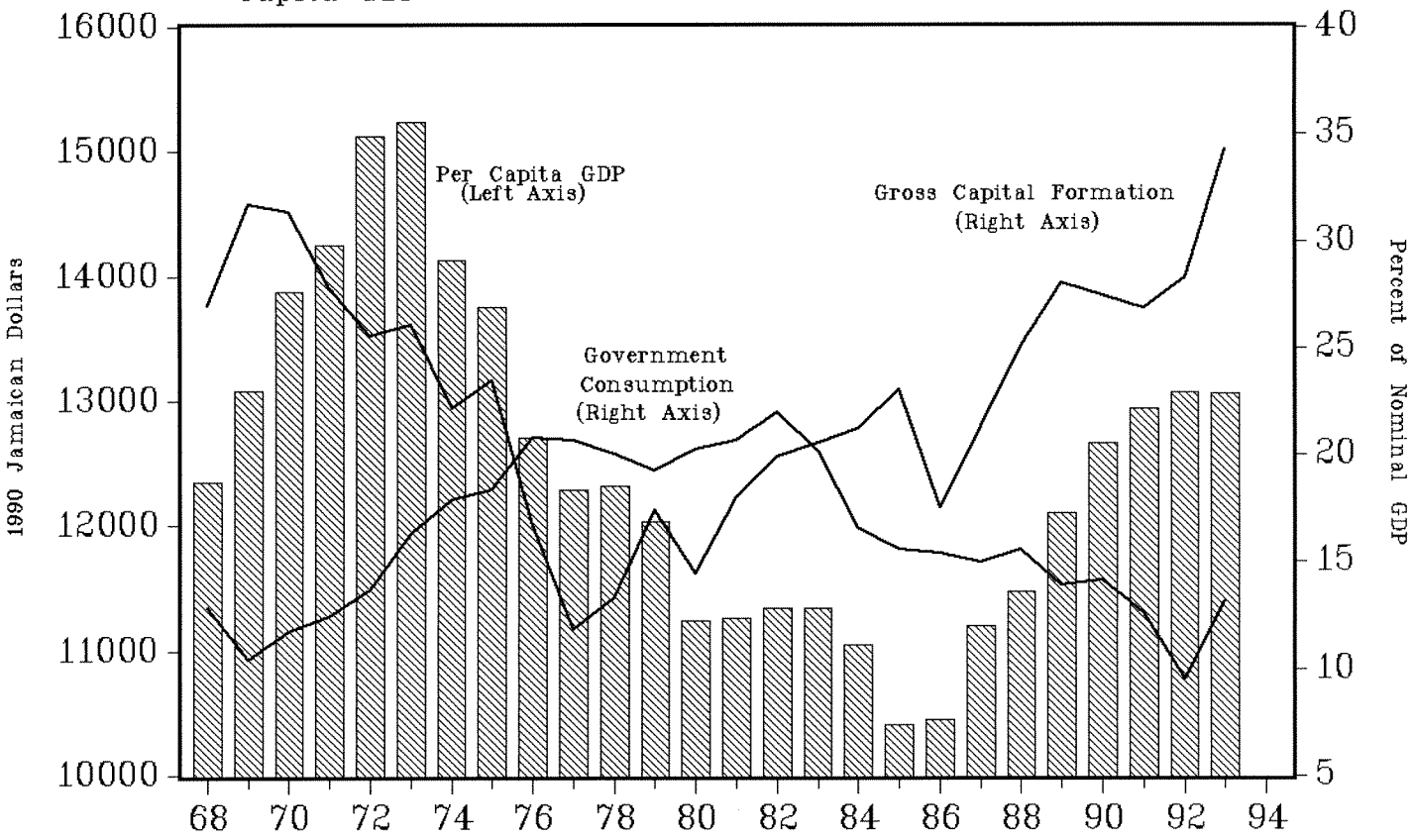
References

Findlay, Ronald, and Stanislaw Wellisz, editors, *Five Small Open Economies*, 1993, Published for the World Bank, Oxford University Press.

Lucas, Robert E. Jr.. "Why Doesn't Capital Flow from Rich to Poor Countries?" *The American Economic Review* (May 1990), Vol. 80, No. 2, pp. 92-96.

Park, Sung Sang. "The Korean Economic Development Experience: Its Relevance to Jamaica," *in Jamaica: Preparing for the Twenty-first Century*, Edited by Patsy Lewis, Ian Randle Publishers, Kingston, Jamaica 1992.

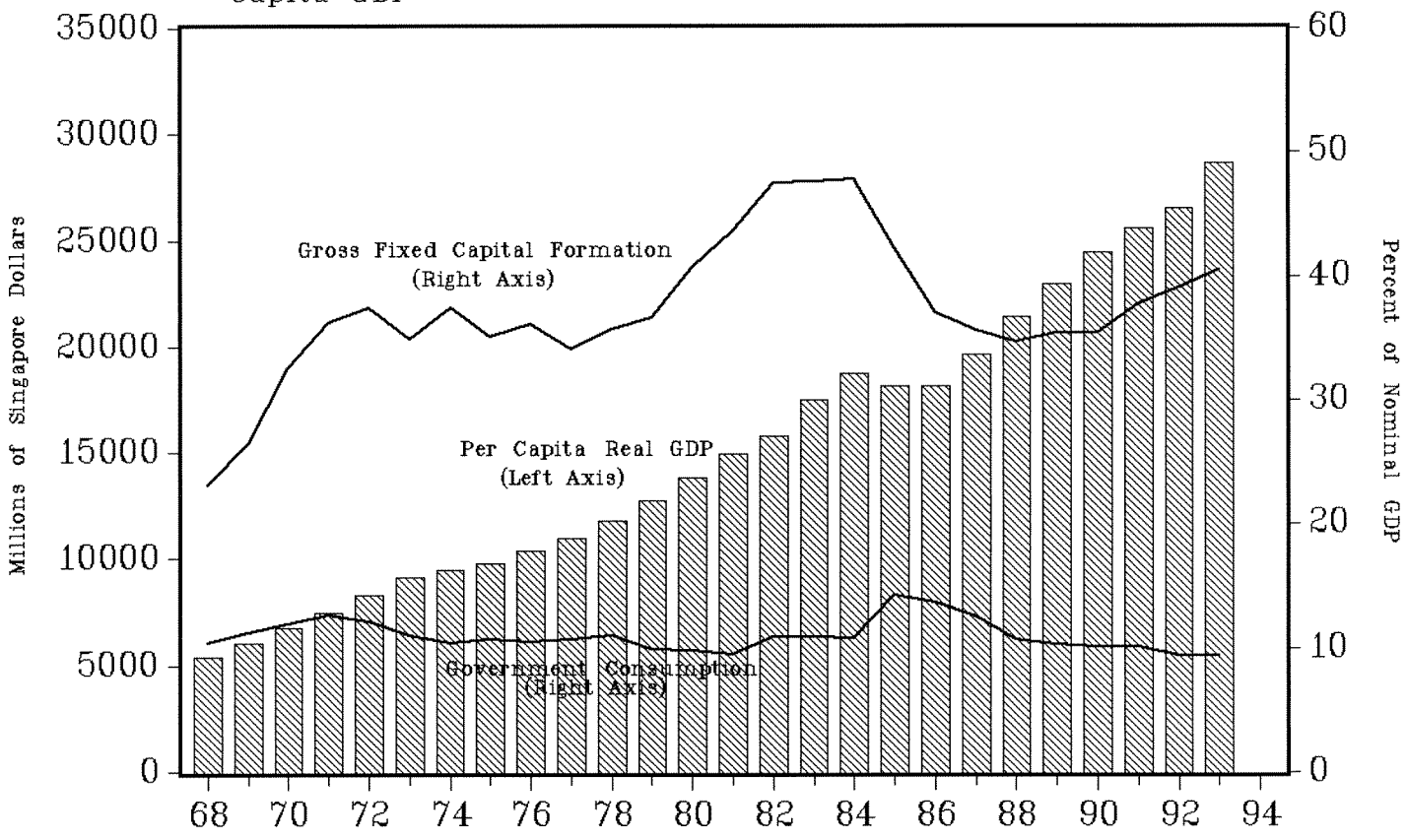
Figure 1
Jamaica's Gross Fixed Capital Formation and Government Consumption as a Percent of GDP Compared to Real Per Capita GDP



SOURCE: IMF International Financial Statistics

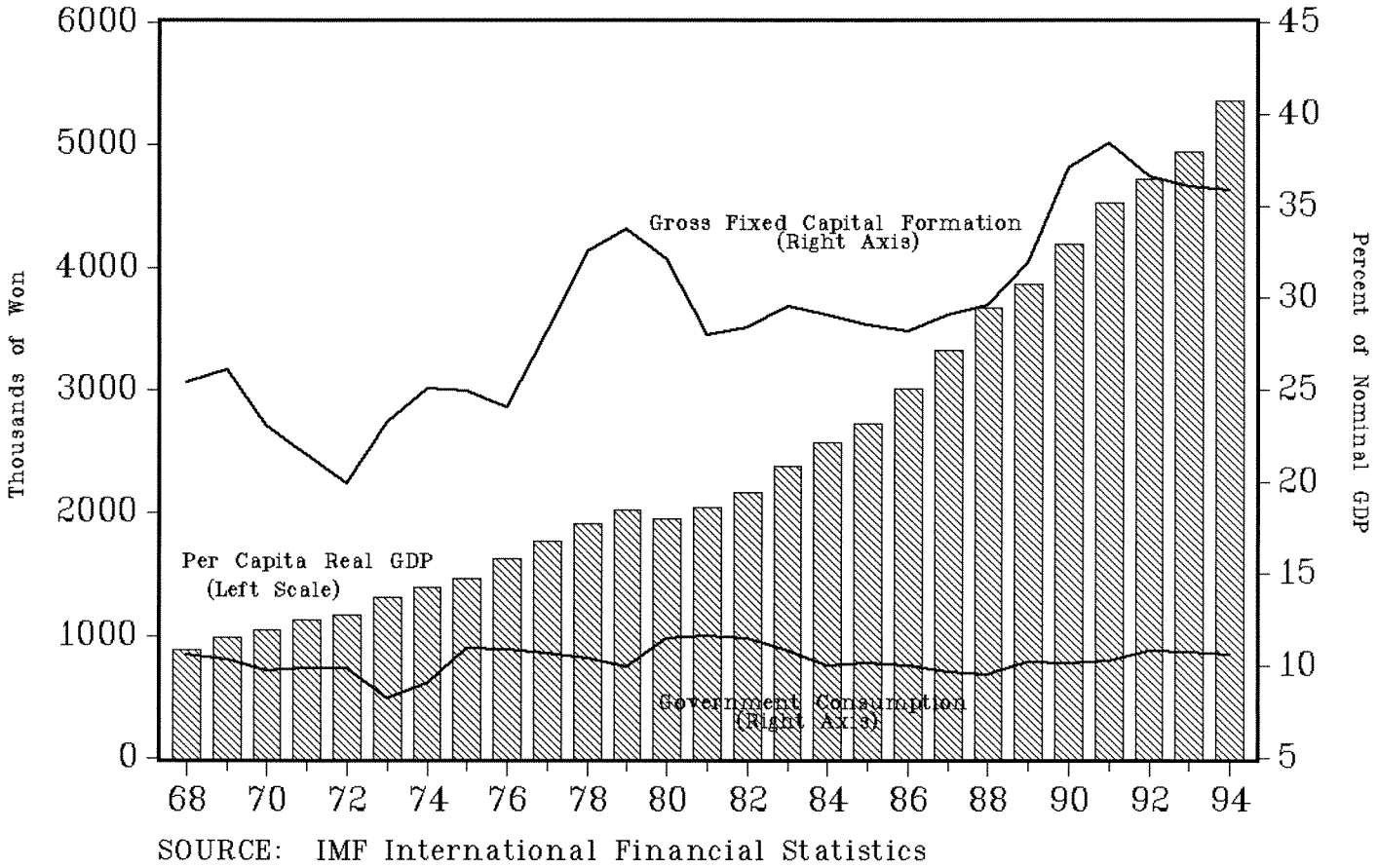
Figure 2

Singapore's Gross Fixed Capital Formation and Government Consumption as a Percent of GDP Compared to Real Per Capita GDP



SOURCE: IMF International Financial Statistics

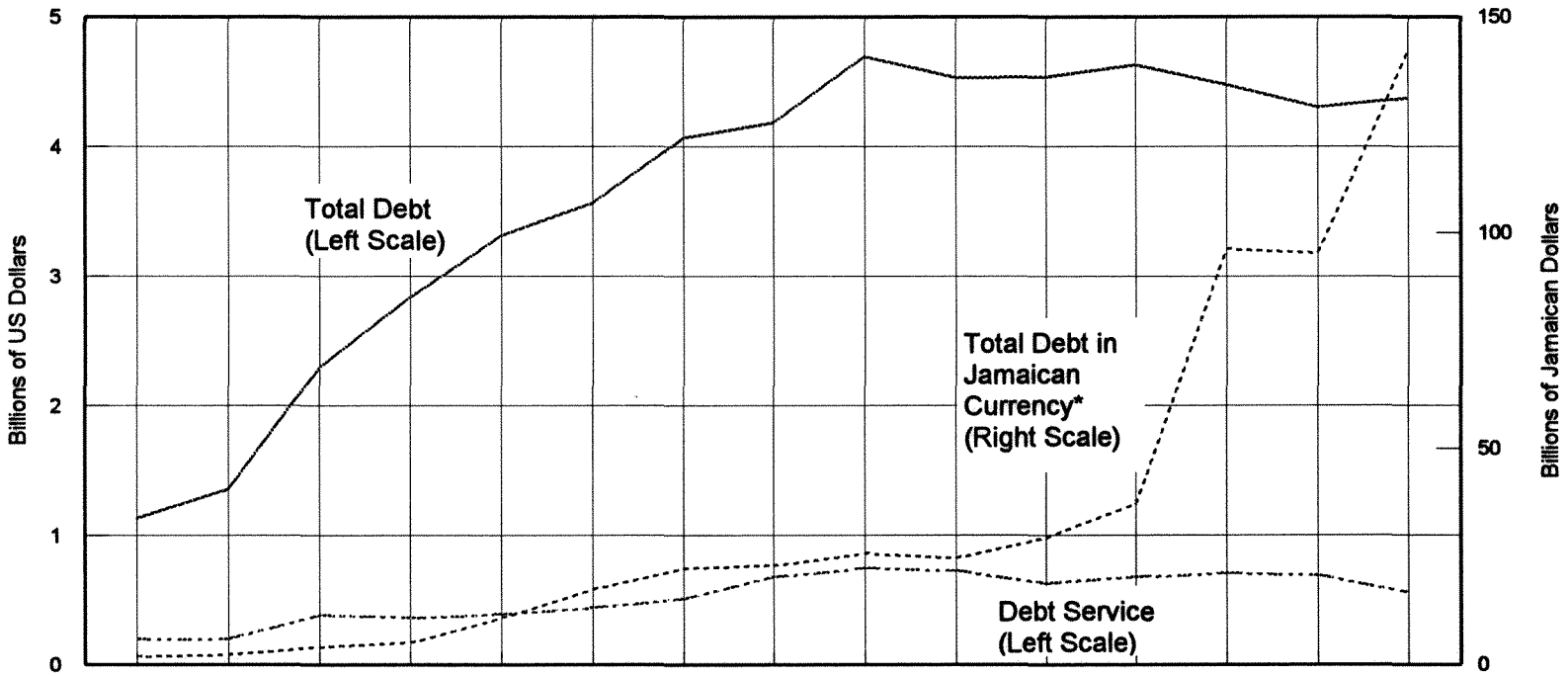
Figure 3
South Korean Gross Fixed Capital Formation and Government Consumption as a Percent of GDP Compared to Real Per Capita GDP



SOURCE: IMF International Financial Statistics

Figure 4

Jamaica's Total External Debt



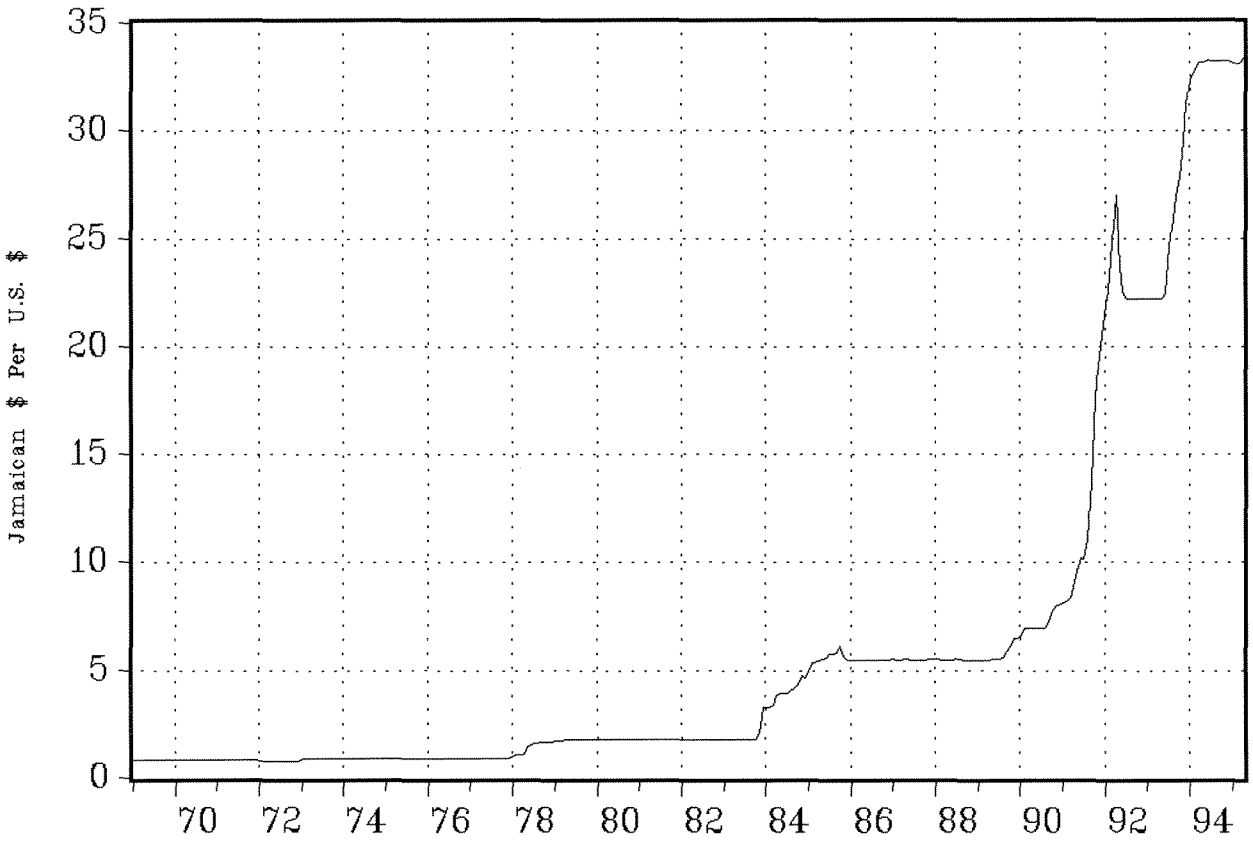
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
- Disbursed Debt (Millions US$)	1132.00	1357.00	2299.30	2842.40	3313.50	3566.00	4068.10	4187.20	4696.30	4532.50	4536.30	4628.10	4480.30	4303.60	4374.00
- Debt Service Paid (Millions US$)	199.00	201.00	382.00	361.40	391.50	441.30	511.40	675.10	747.30	725.70	629.60	675.90	709.00	691.40	558.00
- Debt in Billions ofJ$*	2.01	2.42	4.09	5.06	10.87	17.58	22.29	22.95	25.83	24.84	29.40	37.21	96.28	95.45	142.02

* Computed using end of year exchange rate

Source: IADB Economic and Social Progress in Latin America (various years)

Figure 5

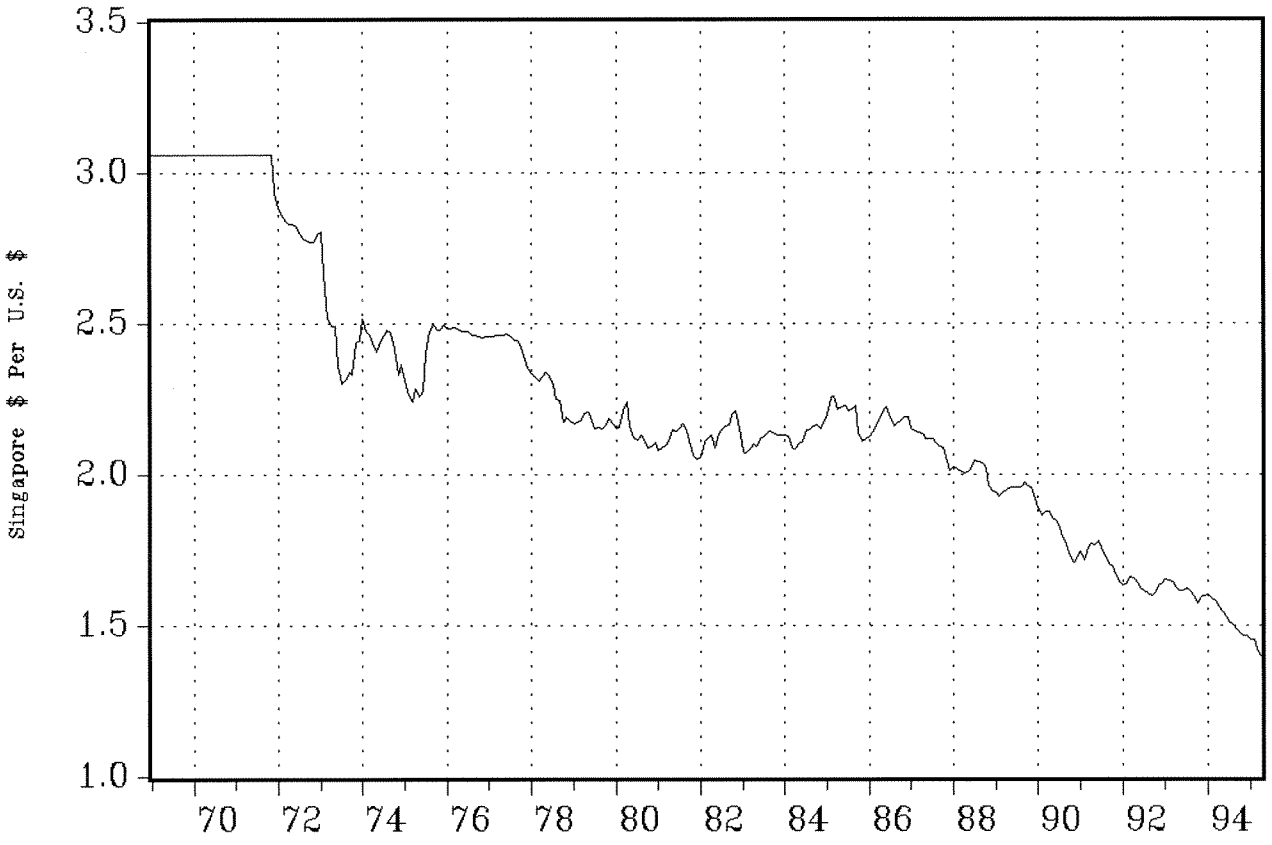
Jamaica's Monthly Average Exchange Rate



SOURCE: IMF International Financial Statistics

Figure 6

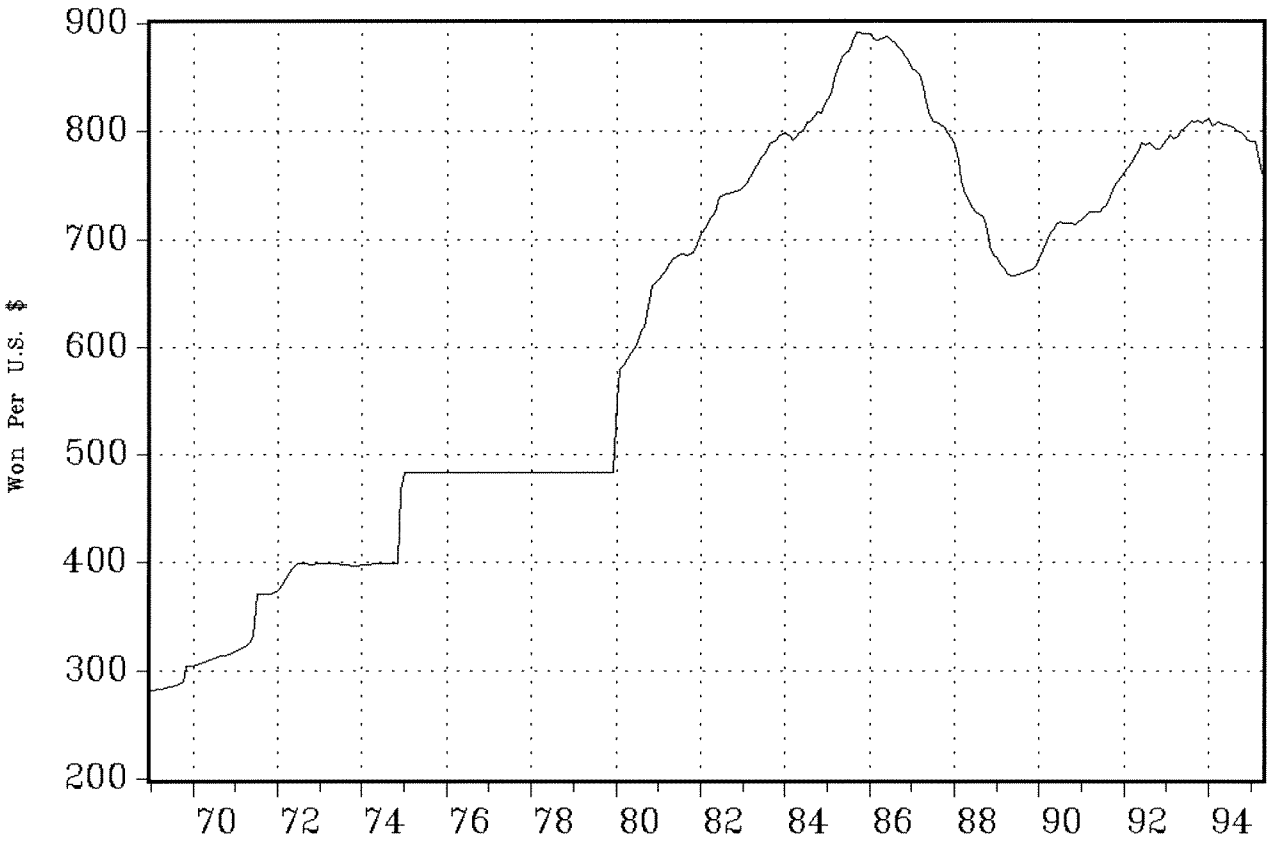
Singapore's Monthly Average Exchange Rate



SOURCE: IMF International Financial Statistics

Figure 7

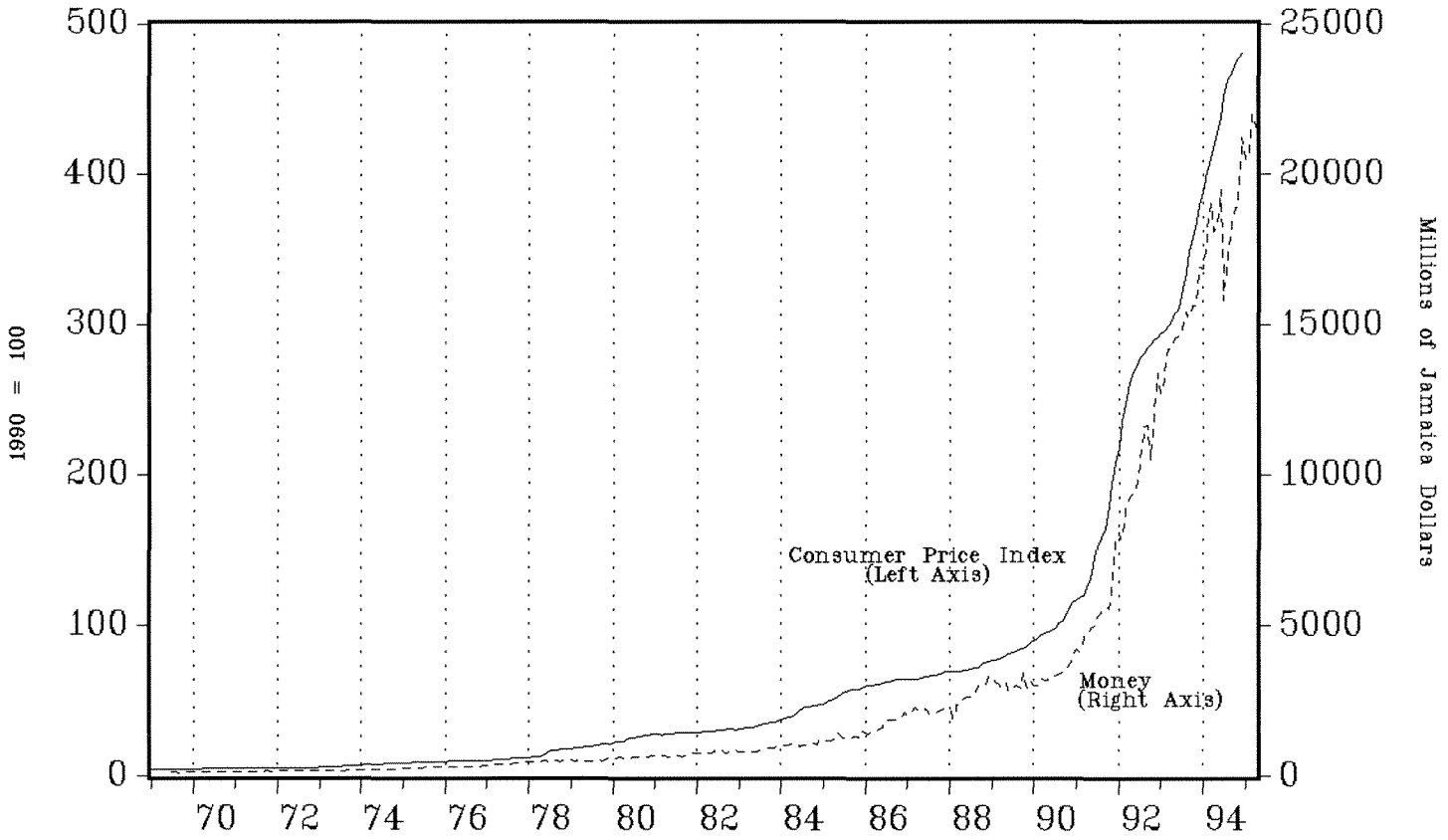
South Korea's Monthly Average Exchange Rate



SOURCE: IMF International Financial Statistics

Figure 8

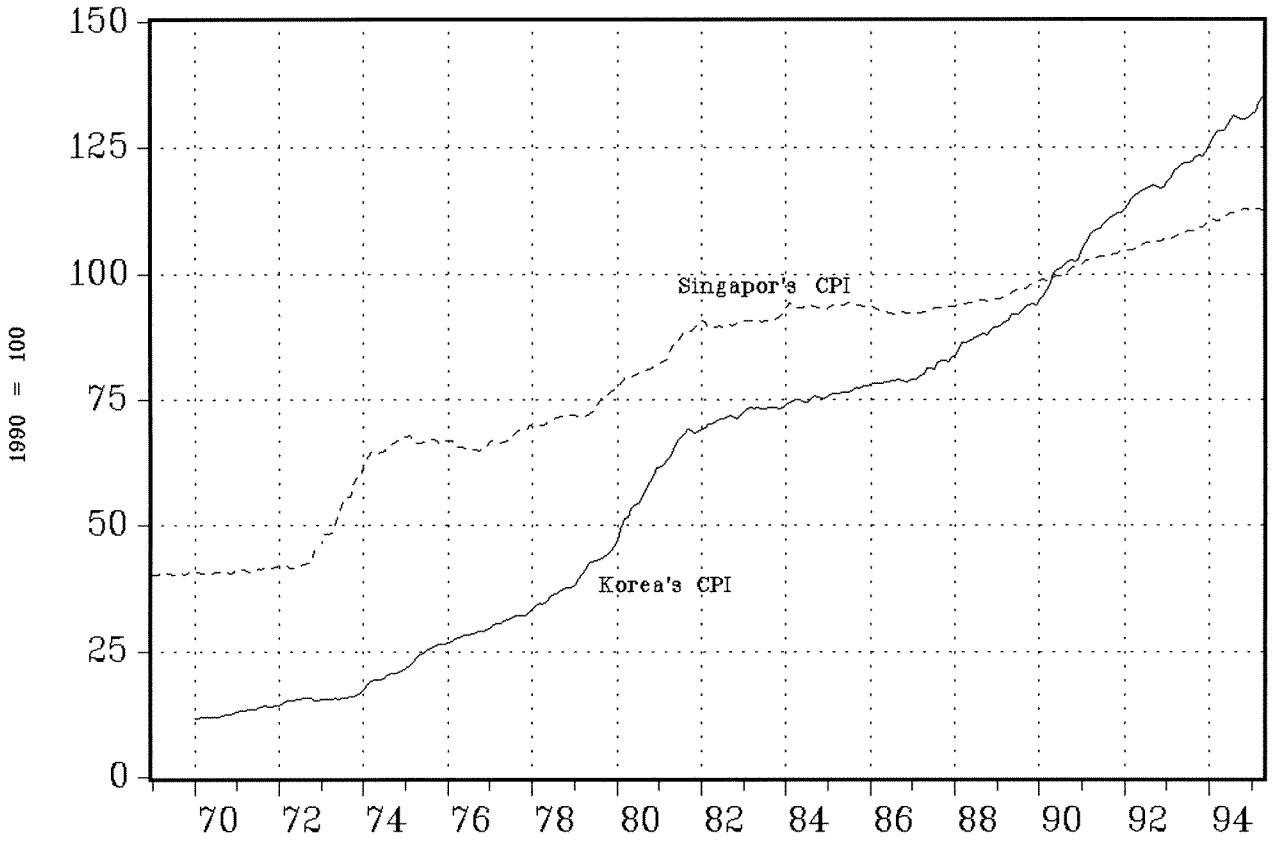
Jamaica's Consumer Price Index and Money Supply



SOURCE: IMF International Financial Statistics

Figure 9

Consumer Price Index for South Korea and Singapore

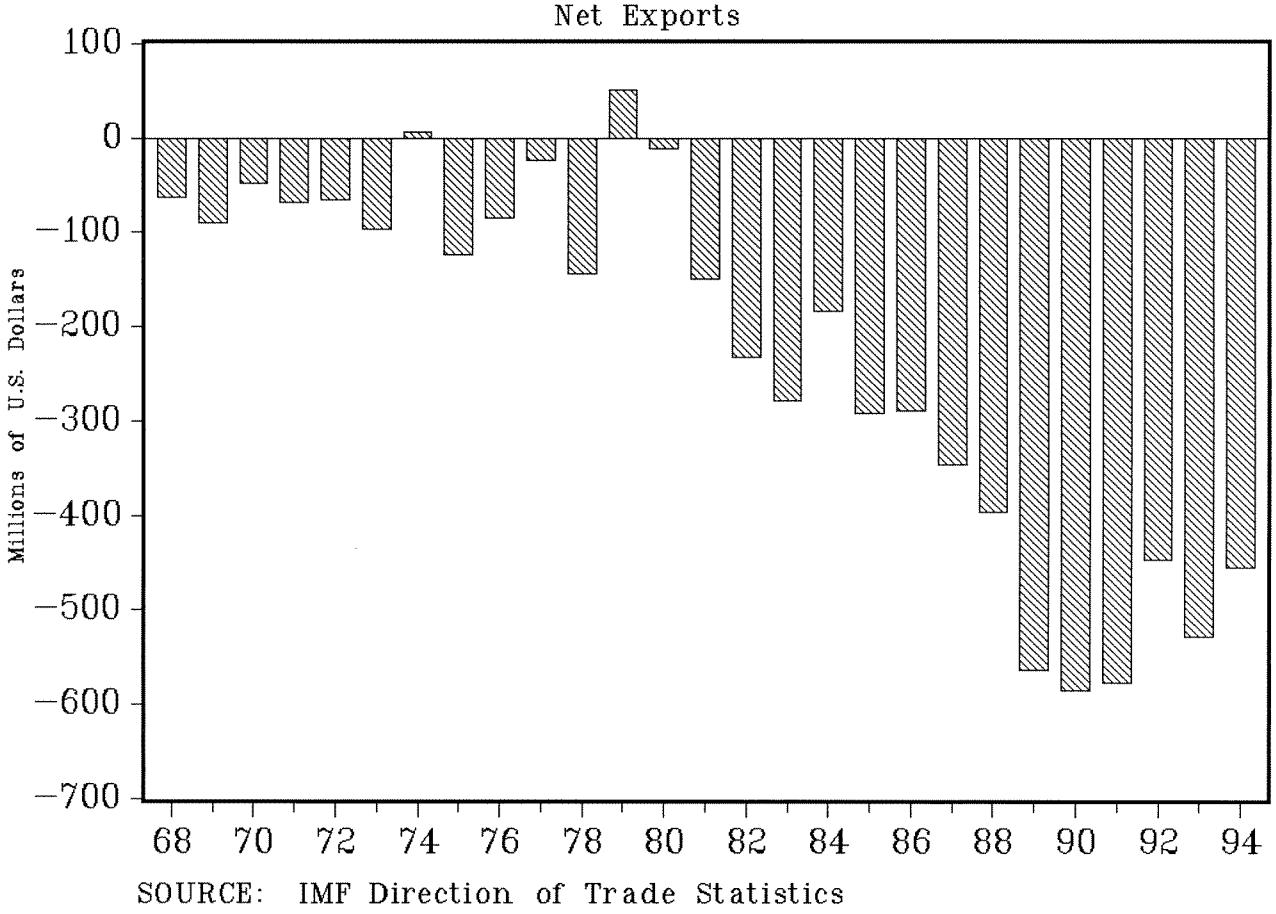


SOURCE: IMF International Financial Statistics

Figure 10

Jamaica's Trade Balance with the United States

Net Exports

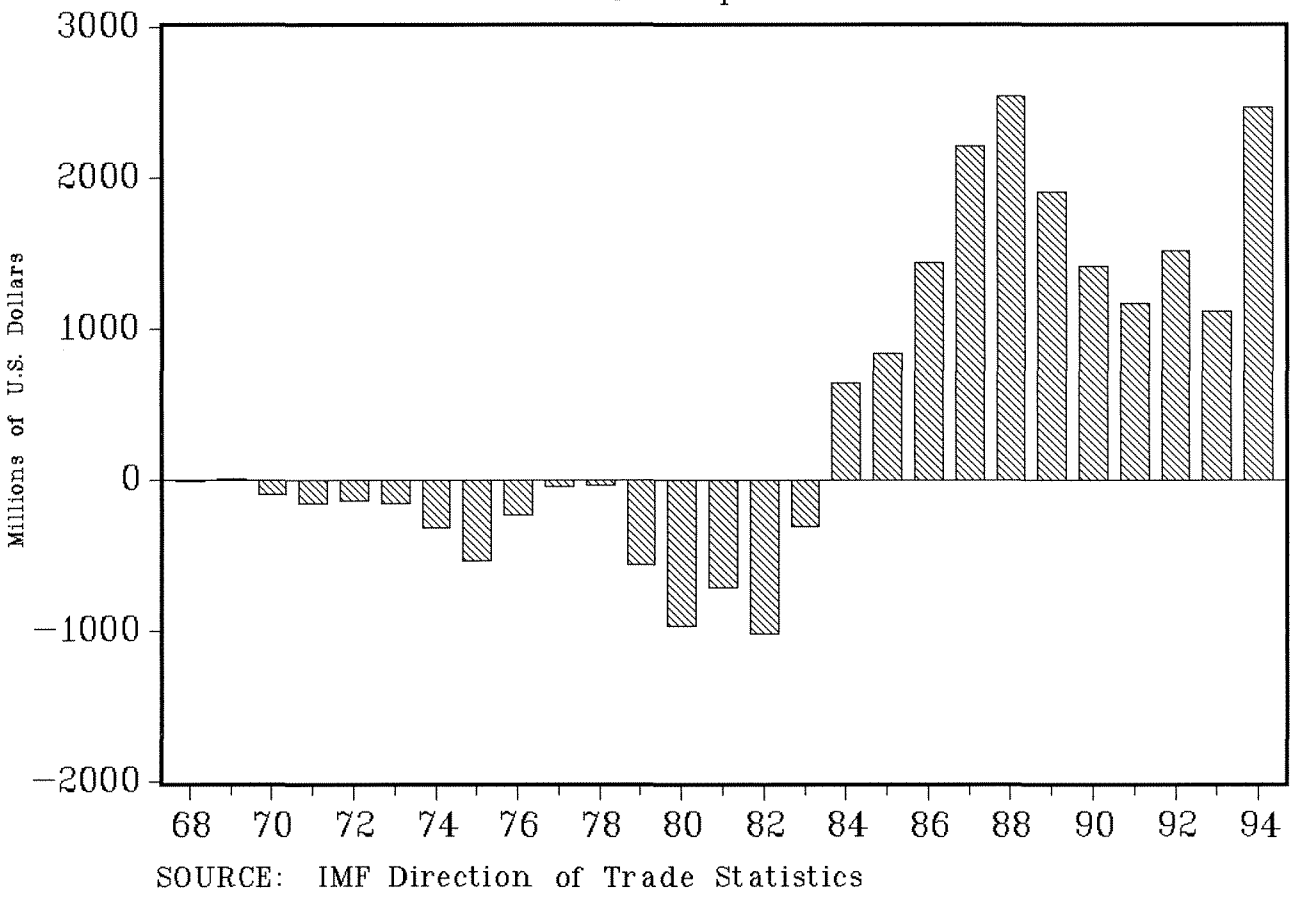


SOURCE: IMF Direction of Trade Statistics

Figure 11

Singapore's Trade Balance with the United States

Net Exports

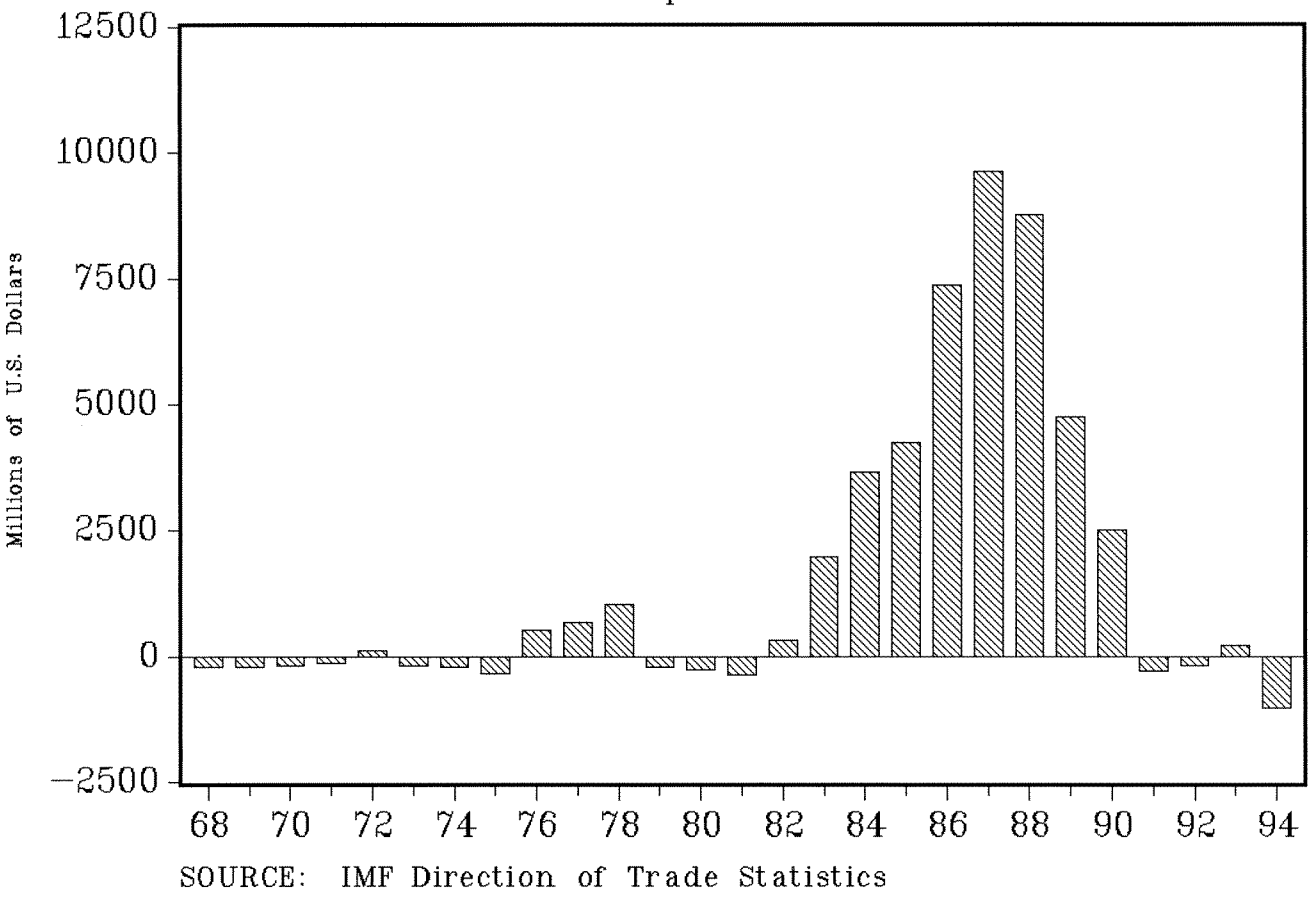


SOURCE: IMF Direction of Trade Statistics

Figure 12

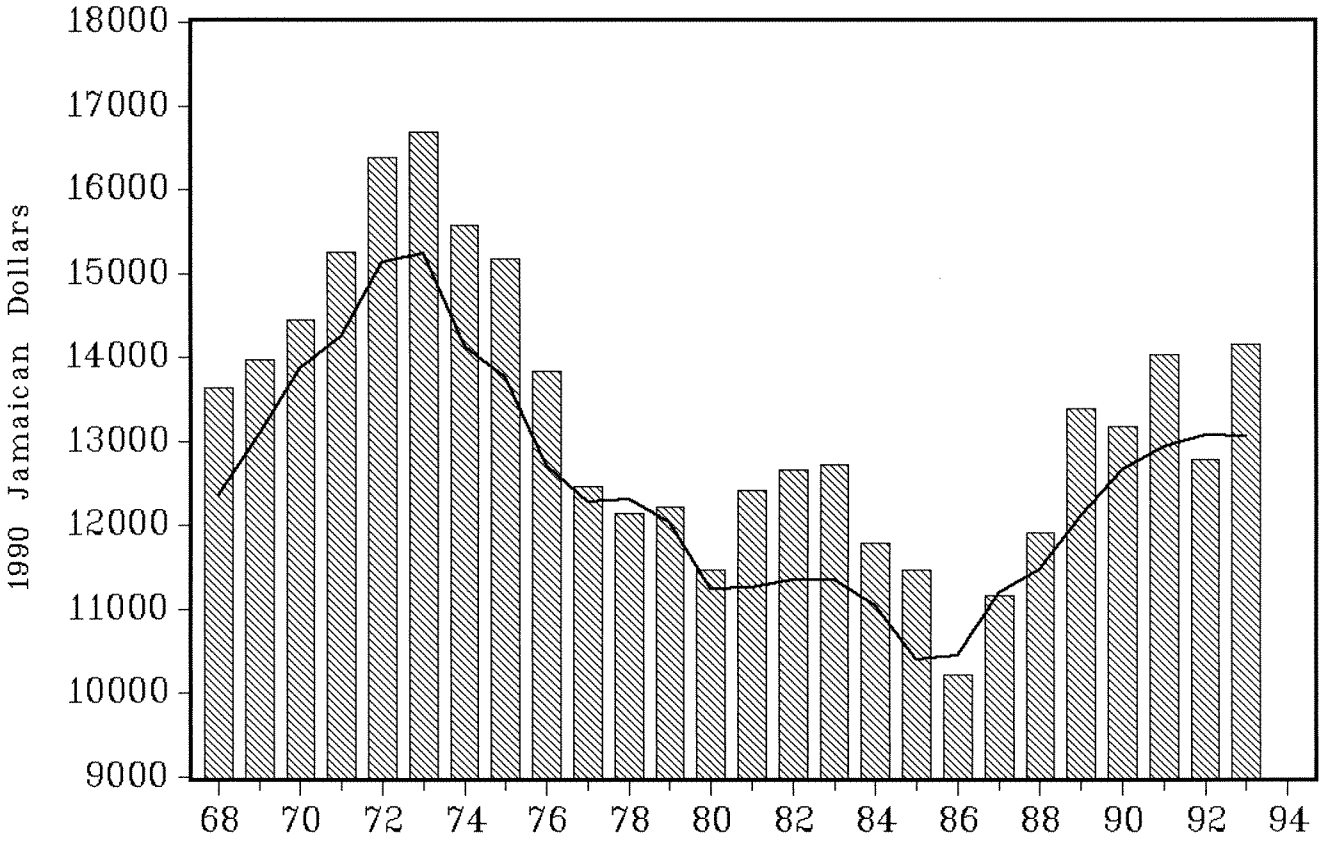
South Korea's Trade Balance with the United States

Net Exports



SOURCE: IMF Direction of Trade Statistics

Figure 4
Jamaica's Per Capita GDP with and without Net Exports



Source: Author's calculations