

Chandra Dulare (2005) *Monetary and Exchange Rate Policy in Fiji*,
Lautoka: Fiji Institute of Applied Studies 124pp.

No doubt, macroeconometric model building is difficult particularly in light of the controversies that persist over the structural specifications of macroeconometric models and the macroeconomic relationships in general. Further, the lack of consistent time series data makes it even harder for estimating structural models for developing countries. In this respect, Dulare has made a reasonable attempt to estimate a monetary model for the Fiji economy. He has aspired to replicate the macroeconomic behaviour and using the obtained estimates explain how monetary and exchange rate shocks can be stabilized. I find his work exploratory in nature and expect it to be revised further, particularly his specifications and empirical estimations. Failure to do this would make his hard work futile. Notwithstanding the noted limitations, it seems that the author has instigated useful discussions not only for policy but also for further research.

His brief introduction puts the book into perspective, indicating the readers what can be expected in the included chapters. Chapter 2 contains the usual commentary on Fiji's growth performance citing low levels of investment, investor confidence and productivity of exports, massive emigration, widening trade and fiscal deficits, poor infrastructure etc, as being the likely impetus for the lacklustre growth performance. Details of developments of his main variables of interest - the major problems and prospects - are also discussed. He briefly comments on the conduct of monetary policy and discusses the available policy options for Fiji. He argues that there is no significant role of the Reserve Bank of Fiji (RBF) through an interest rate policy. He indicates that monetary policy in Fiji should focus on exchange rate management. While the author has highlighted a number of research questions, I am of the view that no single model can answer all these questions at once. This is an additional reason why I think further work needs to be undertaken.

His model is small (6 behavioral equations with two identities) which makes it easy to work with. Nonetheless, model builders should be mindful of the tradeoff between simplicity of model specification and the amount of information about the economy that they aim to capture. However, there are some limitations in his specification which can be improved upon. First, he postulates that output only depends on two price variables, the rate of interest and exchange rate. This is highly restrictive

in order to adequately capture the goods market equilibrium. In this respect, his model is not an advancement over the existing Mundell & Fleming model that he considers to be inadequate. While the author includes a money supply production function, the macroeconomics literature has yet to wholeheartedly welcome money as an input in production functions.¹

Second, his specification of demand for money, which is the most important equation for his study, needs further attention. It is well known that demand for money depends on the nominal rate of interest and real income. It is not clear if he has used the nominal interest rate in his estimates. Real interest rate has a serious and implausible implication that demand for money should rise with expected inflation. Such an error was made by Jayaraman and Ward (2000 & 2003) in both their estimates for Fiji and Samoa, respectively (Singh and Kumar, 2006). Dulare tends to rely on Jayaraman without noting the aforesaid limitations. Further, his claim that his exposition can be used as an indicator of whether the domestic currency is (under)overvalued is perhaps an exaggeration because it is hard to justify with such a simple specification that these distortions exist.

There are some pedagogic issues in his empirical estimates, although the simulation results obtained by Dulare, except for demand for money, are respectful. First, there seems to be some confusion in his derivations of the implied long-run coefficients. While he takes the contemporaneous values of the coefficients as the implied elasticities, generally the usual long-run constraints are imposed by summing all the coefficients of the respective lagged independent variable to capture their respective implied elasticities. However both these approaches have limitations and it is better to estimate the long-run elasticities with superior techniques such as Johansen's systems method. Further, the author fails to test for unit roots in estimating his OLS based single equations. This leads one to conclude that his OLS estimates are spurious, as there are no indications that the included variables are cointegrated. Therefore, I have some reservations in the comparisons that he makes with the other methods. In both his OLS and 3SLS estimates, the adjusted R-squares are very high. This is not surprising because his estimates are in levels of vari-

¹ While the standard production functions are desirable, Dornbush, Romer and other textbook expositions fail to model supply side but instead use a reduced form Phillips curve. See Singh(2005) and Navile and Rao (1996) for a discussion of this.

ables.² Moreover, it is not clear how he has obtained the Full-Information Maximum Likelihood (FIML) estimates with limited quarterly data. It may be noted that quarterly GDP data is not published for Fiji and using proxies such as industrial production index has limitations in that they do not adequately capture more than half the production activities in Fiji, a similar view on Jayaraman's work was shared by Katafono (2001).

Dulare's study has serious implications for the RBF and its role in Fiji. His commentaries based on computed elasticities are standard and useful, to some extent, for the RBF. However, they need to be verified before being taken at their face values. The following comments need to be made in this respect.

First, Dulare, claims that the real rate of interest has no effect on real output through its implications on investment. This is doubtful as recent studies in Fiji show a strong cointegrating relationship between real rate of interest and private investment (Singh, 2006). In the short run, interest rate also has implications for output (Waqabaca and Morlings, 1999; William and Morling, 2000). Both these studies argue, and perhaps Dulare has mis-interpreted, that monetary policy seems to be useful in smoothing output fluctuation in Fiji. A one percentage point increase in the real short term rate would reduce GDP growth by 0.34 percent (Waqabaca and Morlings, 1999: 28-29). William and Morling (2000: 24-25) suggests that although monetary policy is not the dominant influence on output, it still affects growth with one year's time lag.

Second, Dulare's estimates indicate that the income elasticity of demand for money is very high and vary considerably for Fiji (1.51 in FIML, 0.430 in OLS and 0.812 in 3SLS). While 0.812, seems closer to unity, 1.51 indicates that Fiji has a very inefficient financial system (similar to that of PNG's), despite the prudent supervision by the RBF. However, other recent studies show that income elasticity for Fiji is around unity (Singh and Kumar, 2006; Rao and Singh, 2005).

Further, Dulare claims that short-term interest rate does not have any impact on demand for money in Fiji. This is doubtful. It seems that Dulare paints a picture that leads one to believe that monetary policy applied through interest rate is totally effective in Fiji; this may not be the case.

Further, the author claims that 'there is no role for domestic monetary policy and liquidity management because interest rate does not affect monetary or real sector'. He suggests that price level is determined almost

exclusively by nominal exchange rate and foreign prices. Therefore, under these circumstances, domestic monetary policy is totally impotent and there is no real effect of monetary sector on prices. While this may be true in the short run, in the long-run money supply and price level are proportionally related, at least in theory. He comments that price level is relatively unresponsive to changes in demand pressure, but it may be noted that wage adjustments have severe implications on prices, particularly in the presence of strong trade unionism in Fiji. Furthermore, Dewan et.al (1999) have found that unit labour cost has a strong effect on domestic inflation. Dulare points out that around 60% of Fiji's inflation is imported. Therefore, to counter escalating inflation, monetary policy should target the real not the nominal exchange rate. Since inflation is largely foreign determined, it implies that in order to control the real exchange rate, the RBF has to adjust the nominal exchange rate. Accordingly, I am not sure how real devaluation can be achieved when inflation level is outside the realms of monetary policy. Further, note that frequent adjustments of the exchange rate, unlike the money supply, tend to make domestic monetary policy incredible, which instigates unnecessary speculation in the economy.

Dulare's observations that real interest differentials have no impact on capital flows is not new. Fiji's investment options (both short and long-term) are no perfect substitutes of those offered by others around the globe. Exchange controls, depressed economic climate coupled with political risks will hardly induce perfect capital mobility. Further, he suggests that the Mundell-Fleming assumption for the flexible exchange rate system is 'flawed'. While this may be the case for Fiji, such a serious generalization is unwarranted. One needs to consider that under a flexible regime, the exchange rate is the market clearing mechanism, and reserves have only a limited role. However, I support his views that excess liquidity does exist in the domestic money market which may be due to inflow of foreign currency. He suggests that the RBF has maintained a below par value of the dollar to accumulate 'commitment technology' but this as well may be rational liquidity management practice followed by the RBF.

Although, the author has made a good attempt, I am not thoroughly convinced that his findings can be taken out-rightly for policy adoption. Further work on monetary policy issues in Fiji are warranted in light of the issues highlighted.

² Equation (4.19, 4.31 and 4.43) of his model estimated in first differences have very low explanatory power. The R-square is 0.20, implying inadequacy in specification.

References

- Dulare, C. (2005) *Monetary and Exchange Rate policy in Fiji*, Lautoka: Fiji Institute of Applied Studies.
- Navile, J., and B. Rao (1996) 'The Use and Misuse of Aggregate Demand and Supply Functions.' *Manchester School* 64(2): 189-207.
- Katafono, R. (2001) 'Demand for Money in Fiji.' Staff Working paper (03/2001), The Reserve Bank of Fiji.
- Jayaraman, T.K. and B. D. Ward (2000) 'Demand for money in Fiji: An econometric analysis.' *Pacific Economic Bulletin* 2000: 81-93.
- Jayaraman, T.K. (2003) *Issues in Monetary Economics of the South Pacific Island Countries* Suva: The University of the South Pacific.
- Rao, B. and Singh (2005) 'Cointegration and Error Correction Approach to the Demand for Money in Fiji.' *Pacific Economic Bulletin* June: 72-86.
- Williams, G. and S. Morning (2000) 'Modeling Output Fluctuations in Fiji.' Staff Working Paper (01/2000), The Reserve Bank of Fiji.
- Waqabaca, C., and S. Morning (1999) 'The Conduct of Monetary Policy in Fiji'. Staff Working Paper (01/1999), The Reserve Bank of Fiji.
- Singh, R. (2005) 'A Macroeconometric Model for Fiji.' Unpublished Master of Arts Thesis, Economics Department, The University of the South Pacific.
- Singh, R. (2006) 'An Investment Equation for Fiji.' Staff Working paper (01/2006), Economics Department, The University of the South Pacific.
- Singh, R and Kumar, S. (2006) 'Cointegration and Demand for Money in PICs.' Staff Working paper (03/2006), Economics Department, The University of the South Pacific.

Rup Singh
School of Economics
The University of the South Pacific
Suva, Fiji