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Book review

Tarron Khemraj, *Money, Banking and the Foreign Exchange Market in Emerging Economies* (Edward Elgar, Cheltenham, UK and Northampton, MA, USA 2014) 162 pp.

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In 162 pages this book makes an outstanding and novel presentation of the current functioning of the banking and foreign exchange markets in emerging economies and small open economies. According to the author's analysis, the economic consequences of moving from a closed and repressed financial system to an open and liberalized financial system has been the creation of a new 'institutional framework' which has posed structural difficulties to maintain monetary stability and an adequate expansion of the aggregate demand in developing countries.

In each chapter the author states his main hypothesis, which allows the reader to follow the argument through the chapters and to understand the different implications of the book's main hypothesis; namely that, primarily in emerging economies and small open economies, central banks have been allowed indirectly to pursue two nominal anchors (for example, nominal interest and exchange rate) instead of only one nominal anchor as proposed by the conventional open-economy macroeconomics theory (the Trilemma). The author persuasively argues this has been largely due to the new 'institutional framework' imposed by the current international monetary system, such as a permanent accumulation of foreign exchange reserves by central banks, high liquidity within the national banking systems, high concentration of the banking systems, continuous sterilization policies, and monetary policies to control the inflation rate.

The book displays a great deal of knowledge of the main monetary, banking, and exchange-rate theories, ranging from the old IMF balance-of-payment (absorption) approach to the post-Keynesian monetary debate between horizontalists and structuralists. However, the author seems to agree with many points put forth by the post-Keynesian endogenous money (structuralist) perspective, even claiming that his theoretical approach could be seen as an extension of the endogenous money approach applied to emerging markets and small open economies. Thus, the author proposes an oligopolistic theory of bank liquidity preference applied mainly to developing countries in an open-economy context.

Along these lines, the author underscores the main differences between a well-developed money and capital markets system, as in the US case, in contrast to an emerging economy which uses a kind of hard currency to undertake its international transactions, and where the capital market is not well-developed; such differences, under the actual international monetary system, have led to a systematic oligopolistic determination of the lending interest rates by commercial banks (which are the main providers of finance in these countries), to the rationing of credit, and to low levels of investment and economic growth.

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Traditionally, developing economies in general, and emerging markets in particular, have had a great need for foreign exchange in order to finance their international transactions, to repay their external debt, and to accumulate foreign exchange for precautionary reasons. In light of these facts, central banks, by and large, have been forced to buy foreign exchange and compete for it with commercial banks (foreign exchange constraint), according to the author. Furthermore, when the central banks need to eliminate excess liquidity within the banking system, they have to supply additional government bonds to a concentrated banking industry, that is, to a commercial banking industry that has oligopsony market power, so the selling price of the government bonds is marked down below where the competitive rate would have been. Hence, this 'compensation system' (endogenous sterilization) has allowed commercial banks to maintain ample margin on determining the level of the lending interest rates they are able to charge (that is, the *spread*), in addition to their market power and profits.

Although a few economists from developing countries have previously developed similar diagnoses under the actual liberalized financial systems with an insufficient development of the capital markets (see for instance Levy and Mántey 2006 for a description of the Mexican case), Khemraj's merit is exceptional, as his book not only describes the main challenges for these kinds of countries, but also proposes microeconomic models with macroeconomic implications as he models the economic interactions between an oligopolistic banking industry and the central bank with different monetary and exchange-rate policy stances. Moreover, the author formulates mathematical models that could be adapted to different countries with more or less similar structural and institutional characteristics.

The author's method of analysis in each of the seven chapters is rigorous and succinct. By and large, he starts off by presenting the stylized facts along with a discussion of relevant monetary theories. Then he also presents a graphical analysis showing the interaction of the relevant variables and the consequences of different monetary and exchange-rate policies. To understand the determination of the main variables and their dynamic interrelation with other key variables to reach a short-run equilibrium, the author formulates mathematical models using mainly derivatives and partial derivatives (short-run multipliers). Readers can find the whole mathematical derivations and simulations of the models in the appendix at the end of each chapter. Chapters 2, 4, and 5 present econometric estimations of the main models for different developing countries, which are particularly helpful to reinforce the main theses.

In chapter 1, the author presents the motivation and scope of the study, mentioning, *inter alia*, that very often economists and central banks in developing countries use models to explain the characteristics of the money, capital, and foreign exchange markets in developed economies, therefore when these models are applied to the developing countries with different realities and structural characteristics, the outcome is in many cases misleading. Examples of these models are: DSGE models, the Taylor rule, monetary transmission mechanism, and Tobin's Q.

Chapter 2 presents data for 42 developing countries, showing evidence of liquidity preference curves consistent with the minimum mark-up interest hypothesis. That is, in a Cartesian plane where the y axis is the lending rate and the x axis is the amount of banking reserves in the local currency, the author found that for these economies 'liquidity preference curves are initially steep at high interest rates and then becomes flat (perfectly elastic or almost perfectly elastic) as the loan rate falls' (p. 12), so this relationship indicates that there is a *minimum threshold rate* for banks that guarantee their maximization of profits but also that at this minimum rate reserves no longer exert a liquidity effect on the lending rate and that once the liquidity preference curve is flat the interest rate is purely a mark-up phenomenon that the banks determine. The rest of the chapter, for the most part, explains the techniques of how the central banks deal with this phenomenon (endogenous liquidity management) and the transmission mechanism of the monetary policy in developing countries with an oligopolistic banking sector.

Chapters 3, 5, and 6, in my opinion, are where the author's main contribution lies. In these three chapters he builds a variety of models and shows the economic consequences of his oligopolistic theory of bank liquidity preference which he presented evidence of in chapter 2. For example, in chapter 3 he develops five microeconomics models to present the cases of credit rationing, investment demand constraint, the foreign exchange market, and the loan deposit market and open market operations in an imperfect market framework.

Chapter 4 discusses the case where a developed economy falls into a banking liquidity trap (BLT) after a financial downturn. In the second part of this chapter the author develops the core equations and then simulates the dynamic responses of the output and the inflation rate when the economy is in a BLT and the central bank undertakes expansionary monetary policies (quantitative easing).

In chapter 5 the author intertwines the 'compensation mechanism' described above and the post-Keynesian endogenous money theory in an open-economy context in order to provide evidence that in developing countries central banks have a dual nominal anchor due to the fact that central banks, in a context of a capital account liberalization, 'could simultaneously intervene in the foreign exchange market and also manage commercial bank reserves or target its policy interest rate' (p. 87); to tackle this task the author relies on the empirical estimation of equation 1:

$$\Delta DA_t = \alpha + \beta \Delta FA_t + \gamma Z_t. \tag{1}$$

Equation (1) is a central bank reaction function, which measures the extent to which domestic assets are changed (ΔDA_t) in response to a contemporaneous change in foreign assets (ΔFA_t), that is, the degree to which the monetary authority sterilizes the impacts of capital inflows on its monetary base. The vector Z_t indicates other exogenous variables that could be included in the reaction function. The parameter β can take the values from –1 to 0. If $\beta = 0$ it indicates that changes in international reserves are completely reflected in reserve money, so this result would support the conventional (money neutrality) hypothesis of the Trilemma. Here, 'two conditions must simultaneously be present in order for dual nominal anchors to exist: (1) the sterilization coefficient must be closer to –1; and (2) the economy must be classified at least as *de facto* pegged exchange rate or managed float' (p. 93). According to the author's estimations of β for 30 countries under different exchange-rate regimes, in general, the estimates are consistent with the hypothesis of dual nominal anchors as β for the majority of countries is far from being zero. Therefore, these results are consistent with the idea that the central bank partially sterilizes in order to inject liquidity into the banking system.

Chapter 6 presents a follow-up model from chapter 3 where the investment demand is constrained due to the high lending rate explained by the minimum mark-up interest hypothesis and due to the recurring cycles of real exchange-rate appreciation in emerging market (exchange-rate undershooting!). The final part of this chapter presents a mathematical model simulating the interactions between output, inflation rate, exchange rate, and financial intermediation (credit). Once the main equations for each variable are formulated, the author estimates the short-run multipliers and simulates the dynamics of the GDP, inflation rate, and commercial bank hoarding due to different monetary shocks.

Finally, chapter 7 wraps up the main conclusions and theses of the book. Overall, Khemraj's book is a great contribution that fills the vacuum of books engaged in understanding, under a heterodox perspective, the realities and challenges of money, banking and exchange-rate markets in emerging markets. I strongly recommend this book for master students in economics, finance, and development economics who want to comprehend the banking, exchange-rate dynamics, and financial sector in developing countries. This book, I must say, would be extremely difficult for an undergraduate student without having taken at least a money and banking class (or monetary economics) and without having some general knowledge of the main problems of developing countries.

For future editions, I believe that this book could be easier to read, especially for beginners, if it had some boxes where the author could pin down some key concepts and definitions. Also, it would be valuable to assess the differences and similarities regarding the degree of foreign exchange constraint among developing countries in order to clarify the peculiarities of each financial system.

REFERENCE

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