Journal of Development Economics 88 (2009) 314–324

Contents lists available at ScienceDirect

Journal of Development Economics

journal homepage: www.elsevier.com/locate/econbase

Financial liberalization, private investment and portfolio choice: Financialization of real sectors in emerging markets☆

Fırat Demir *

Department of Economics, University of Oklahoma, Hester Hall, 729 Elm Avenue, Norman, Oklahoma, 73019 USA

ARTICLE INFO

Article history:
Received 4 July 2007
Received in revised form 7 April 2008
Accepted 8 April 2008

JEL Classification Codes:
E22
O16
D21
G11

Keywords:
Private investment
Portfolio choice
Uncertainty
Financialization

ABSTRACT

Using firm level panel data, we analyze the impacts of rates of return gap between financial and fixed investments under uncertainty on real investment performance in three emerging markets, Argentina, Mexico and Turkey. Employing a portfolio choice model to explain the low fixed investment rates in developing countries during the 1990s, we suggest that rather than investing in irreversible long-term fixed investments, firms may choose to invest in reversible short-term financial investments depending on respective rates of returns and the overall uncertainty in the economy. The empirical results show that increasing rates of return gap and uncertainty have an economically and statistically significant fixed investment reducing effect while the opposite is true with respect to financial investments.

1. Introduction

The effects of uncertainty, risk and volatility on the investment performance of developing countries have been of particular interest in the recent economics literature especially given the declining fixed capital formation rates in major developing countries during the 1990s (UNCTAD, 2003). In this respect, the empirical work so far suggests a general consensus regarding their negative effects on private investment performance in both developed and developing countries. Nevertheless, there are relatively few empirical studies exploring the channels through which uncertainty and risk affect investment. In particular, the interactions among fixed investment, uncertainty, and portfolio choice remain an unexplored field of research. The absence of empirical work on the portfolio choice problem of real sector firms is particularly surprising given the increasing integration of international goods and capital markets and the widening gap between the real and financial sector transactions.[1]

The current paper is the first empirical study that looks into the portfolio choice real sector firms in developing countries face between real and financial sector activities. Accordingly, the current paper argues that following financial liberalization real sector firms face a portfolio choice problem in their investment decisions between two broad categories of assets: fixed and financial. In the face of these two investment options, increasing risk and uncertainty when combined with capital market imperfections, higher real interest rates, and increasing rates of return in the financial markets, may encourage short-term financial investments over long-term fixed investment projects. In other words, increasing availability *and* accessibility of alternative investment opportunities in financial markets when combined with domestic market rigidities and uncertainty can become instrumental in channelling real sector savings to short-term financial investments instead of long-term fixed capital formation and thus lead to deindustrialization in those economies.

The portfolio choice problem and the optimum allocation of resources under multiple investment options is not a new topic in the economics literature. Tobin (1965), for example, already pointed out the substitutability of real and financial assets in portfolio balances. Accordingly, depending on the respective rates of returns investors

☆ The paper is based on the second essay of my Ph.D. dissertation at the University of Notre Dame. I am thankful to Jaime Ros, my dissertation advisor, and to my dissertation committee, Amitava K. Dutt, Kwan S. Kim and Kajal Mukhopadhyay for their support and guidance. I also want to thank Roberto Frenkel, Kevin Grier, Robin Grier, Jiandong Ju, Bernardo Kosacoff, Emery Ventura of Economatica, Erinc Yeldan, session participants at the ASSA 2007 meetings in Chicago and the EEA 2007 meeting in NYC, and the editor and two referees of the journal for their valuable suggestions. For financial support, I thank the Helen Kellogg Institute for International Studies at the University of Notre Dame. Additional financial support from the Office of the Vice President for Research at the University of Oklahoma is also gratefully acknowledged. All remaining errors are mine.
* Tel.: +1 405 325 5844; fax: +1 405 325 5842.
E-mail address: fdemir@ou.edu.

[1] The annual foreign exchange to world trade ratio reached 90/1 in 2004 from 2/1 in 1973 (BIS, 2005).

0304-3878/$ – see front matter
doi:10.1016/j.jdeveco.2008.04.002

decide how to allocate their portfolios between real and financial investments. Likewise, Tornell (1990) argued that given the uncertain environment in developing countries, real sector firms may prefer to invest in more liquid *reversible* assets in the financial sectors that also offer comparable or higher rates of return on their investments rather than on *irreversible* fixed assets. However, despite such insights, there was no empirical study looking into this question of substitution between real and financial assets by real sector firms. Only recently, there is a growing body of research exploring this issue that can be referred to as the financialization literature that focuses on the following key points: i) increasing rates of return on financial capital over and above those on fixed capital, ii) increasing acquisition of short-term financial assets by real sector firms, and iii) decreasing fixed investment rates. Accordingly, using macroeconomic data, Stockhammer (2004), Crotty (2005), Dumenil and Levy (2005), Epstein and Jayadev (2005) provide empirical evidence on this structural change in the portfolio allocation decisions of non-financial corporations in high-income OECD countries.

In contrast, the empirical research on financialization in developing countries is virtually non-existent. Startlingly, the same is true for the empirical studies on uncertainty and investment relationship in emerging markets especially with regard to the portfolio approach to investment. Therefore, while the current paper extends these two lines of research along the portfolio choice, and investment–uncertainty relationship, it is unique in its approach on three points. First of all, it is the first study that focuses on developing countries using empirical evidence from three major emerging markets that are Argentina, Mexico and Turkey. Secondly, unlike others it explores the above questions using firm-level data that not only allows for the analyses of the portfolio allocation decisions of real sector firms at the micro level but also enables the measurement of firm specific investment and profitability rates. And finally, the paper employs semi-annual data that helps capture the immediate effects of changes in the profitability rates and uncertainty on the investment decisions and portfolio allocation of firms, especially with regard to financial investments.

The empirical analysis using firm level panels for each country separately provides strong support to the main hypothesis while identifying certain differences across countries. Briefly, in all three cases, we find that growing rates of return gap between financial and fixed investment assets, and increasing macroeconomic uncertainty and risk have an economically and statistically significant fixed investment retarding effect. In addition, we also find that rising rates of return on financial assets over and above those on fixed assets encourage financial investments over fixed investments at an economically and statistically significant level. On the other hand, the effect of uncertainty and country risk on the share of financial investments in total assets, although economically and statistically significant, appeared to be a heterogonous one across countries. We believe these factors are of significant importance in explaining the deindustrialization process observed by UNCTAD (2003) in most Latin American countries and in Turkey for the last two decades.

The choice of these three countries is of no coincidence. Briefly, Argentina, Mexico, and Turkey have been among the forerunners of economic liberalization in developing countries starting from the early 1980s and their experiences occupy a central place in policy discussions regarding the effects of liberalization programs. The following figures also help emphasize their relative importance among other emerging markets: Argentina and Mexico attracted 42% of total Foreign Direct Investment (FDI) flows and 56% of total International Monetary Fund (IMF) credit to Latin America between 1980 and 2000. Furthermore, between 1990 and 2000 Argentina, Mexico and Turkey together received 38% of total portfolio flows to middle and lower income countries. Moreover, Turkey is currently the largest debtor of IMF accounting for 46% of the total outstanding credits and loans.

However, despite being portrayed as success stories at the early stages of reforms in the midst of comprehensive liberalization programs, their ensuing economic performances were far from initial expectations. In particular, despite the radical increases in capital inflows during the 1990s and 2000s, low fixed capital formation rates remain an important problem and a significant source of puzzlement for policy makers in all three countries (UNCTAD, 2003:XI).[2] In fact, the steadily declining fixed capital formation rates led UNCTAD (2003) to include Argentina, Mexico and Turkey in a group of deindustrializers among other developing countries. In fact, the gross fixed capital formation as a percentage of GDP fell from an average of 20% and 21% to 17% and 19% between 1980–89 and 1990–05 in Argentina and Mexico respectively, while stagnating at the same level of 22% in Turkey that are all below the 25% minimum that UNCTAD (2003:61) identified as the required threshold to generate high and sustained growth in middle-income developing countries.[3]

The current study focuses on three key elements of the recent development experience in these countries that we think have significant explanatory power in understanding such disappointing investment performances amid comprehensive reform programs. The first one is the effects of alternative investment opportunities in the financial markets, where rate of returns has at times exceeded those from long-term fixed investment projects. The second element is the reaction of private sector investments to uncertainty and risk in the face of alternative investment opportunities in financial sectors. And the third one is the persistence of capital market imperfections.

The next section presents a brief review of the literature on the effects of financial liberalization, capital market development, and uncertainty on private investment. The third section introduces the theoretical model and key hypotheses of interest followed by a discussion of the data, methodology and estimation issues. The fifth section presents the empirical results. The final section offers an overall discussion of the findings and concludes the paper.

2. Analytical framework

2.1. Financial liberalization, uncertainty and private investment

In most emerging markets financial liberalization has been accompanied by sharp fluctuations in key macro and micro prices together with increasing uncertainty. Consumption volatility, for example, has increased in emerging markets during the 1990s (Kose et al., 2003). Likewise, capital flows to developing countries during the 1990s compared to late 70s and 80s are found to be ‘high, rising and unpredictable” (Gabriele et al., 2000: 1051). The existing evidence also shows an increase in the volatility of stock markets as well as sales and earnings of firms in both developed and developing country markets for the last three decades (Grabel, 1995; Comin and Mulani, 2006). In the case of growth volatility, although it has declined across developed countries during the 1990s, Montiel and Serven (2004) reported an increase in one third of 77 developing countries with an overall volatility being twice higher across developing countries. In addition, capital flows can have significantly negative effects on investment in tradable goods sectors through changing relative prices, which partly explain the decreasing business savings and employment contraction in these sectors (Frenkel and Ros, 2006). In addition, excess volatility in exchange rates raises inflation uncertainty and encourages financial investments by real sector firms (Felix, 1998; UNCTAD, 2006). Overall, increasing volatility may also become self-exacerbating as the

[2] The net real short-term capital inflows (RSCF) to Argentina, Mexico and Turkey between 1990 and 2005 reached \$63, \$147, and \$120 billion compared to −\$20, −\$64 and \$6 billion respectively between 1982 and 89. Similarly, the real RFDI inflows were \$97, \$203 and \$26 billion between 1990 and 2005 compared to \$6, \$20 and \$2 billion between 1982 and 1989.

[3] Following liberalization, the share of public investment in GDP also fell drastically. By 2000 it dropped to less than 2% in Argentina, Mexico and Turkey from its 1980 levels of 6%, 11% and 4% respectively.