THREE ESSAYS ON CREDIT CONDITIONS: AN EMPIRICAL INVESTIGATION INTO THEIR MACROECONOMIC DETERMINANTS AND IMPLICATIONS FOR FIRM PERFORMANCE

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Abstract

It is a well-documented fact that financial sector development is an important determinant of economic growth. The underlying principle is that a developed financial sector allows an efficient allocation of capital which raises domestic productivity and leads to long-term economic growth (Rajan and Zingales (1998) and Levine (2005)). In this context, the macroeconomic literature has viewed trends in domestic credit growth as a leading indicator of financial sector development, and several studies have established a significant positive association between domestic credit levels and income or output growth.[1] The observed association between credit conditions and growth however, may not always be unequivocal, as episodes of excessive growth in private credit can also be linked to an increased likelihood of crisis (Levine (2005)). The ill-effects of excessive changes in credit conditions can be significant as corresponding periods are often characterized by increased volatility in capital inflows, exchange rates, productivity gains and output (Mendoza and Terrones (2012)). Evidently, there are important interactions between a country's financial sector and the real economy. Domestic credit conditions in particular, assume a dynamic role in this process. While changes in credit conditions reflect the capacity of the domestic banking system; they also represent global developments which are transmitted through the banking system to the domestic economy. Moreover, changes in credit conditions can also have significant implications for growth outcomes. In view of the multi-faceted role of credit conditions in an economy, it is important to understand the contribution of macroeconomic factors that shape domestic credit conditions, and the associated microeconomic or firm-level implications, in terms of access to credit for growth outcomes. The objective of this thesis is to provide empirical insights into distinct aspects related to domestic credit conditions and I attempt to achieve this objective through three independent essays. The first essay examines the macroeconomic determinants of domestic credit levels and in particular, assesses the contribution of capital inflows in shaping domestic credit growth. The second and third essays look into the microeconomic or firm-level implications of credit conditions on two key dimensions of performance. Specifically, the second essay examines the implications of the use of debt on firm-level productivity. The third and final essay examines the implications of constrained access to external finance, or financing constraints, on firm-level export behavior. Overall, this thesis examines a variety of aspects related to credit conditions and in doing so, provides empirical insights into some of the key channels through which the financial sector interacts with the real economy. The first essay examines how domestic credit growth in emerging market economies (EMEs) responds to capital inflows; which have grown in magnitude and volatility in recent years. To this end, the study examines the effect of shocks to capital inflows on domestic credit conditions in emerging market economies (EMEs). We estimate a panel Vector Autoregressive (VAR) model for a sample of 11 Asian and Latin-American EMEs over the period 2003-2013 and identify capital-inflow shocks using sign restrictions. The results suggest that capital-inflow shocks have a significant positive effect on real credit available to the private sector, with debt-inflow shocks exerting a larger effect. To set this result in context, two shocks are additionally identified; in particular, shocks to domestic monetary policy and aggregate demand. The results suggest that while domestic variables explain a larger share of variation in credit, the effect of capital-inflow shocks remains stable and is comparable to domestic shocks. In the final step, we examine whether cross-sectional differences in the regulatory structure of credit markets can create differences in the observed impact of capital-inflows. The results suggest that countries with relatively more liberal regulatory regimes experience a larger effect of debt-inflow shocks.

The role of macro prudential measures, however, is less clear, as similar effects are observed even in countries with a larger number of macro prudential measures in place. The second essay examines the relationship between debt-financing and productivity growth for an unbalanced panel of 4540 firms manufacturing firms in India over the period: 2000-2015. The results indicate that there exists a negative association between the use of debt and productivity, which is statistically and economically significant and robust to alternative definitions of productivity. This negative association remains significant even after accounting for the potential endogeneity of debt. As a next step, we assess the role of a potential source of firm heterogeneity by examining whether the observed effect remains stable across all firm sizes. The results suggest that the smaller firms reduce their investments in productivity by a larger magnitude (relative to the larger firms) following an increase in the level of debt. In the final step, we assess the implications of the use of debt on firm activities such as research and development (R&D), which potentially give rise to productivity improvements. The results indicate that the agency costs of debt are a significant factor associated with lower firm-level expenses on R&D. The third essay examines whether an increase in the constraints faced by firms in accessing external finance influences the export behavior of manufacturing firms in India. We use a sample of 4100 manufacturing firms over the period: 2000-2015 and construct a multivariate index proposed by Musso and Schiavo (2008) to estimate the degree of financing constraints. Consistent with previous studies, we find that firms with better financial health are more likely to start exporting. In other words, financing constraints have a significant impact on the extensive margin of exports. Importantly, on the intensive margin effect, we find that an increase in financing constraints is significantly associated with lower exports (or foreign sales) and this result holds even after accounting for endogeneity issues. Going further, we examine whether the observed association is contingent on firm size. The results suggest that financing constraints are likely to be a more severe concern for the smaller firms (or MSMEs), as a deterioration in the financial health of such firms is associated with a significantly larger decline in their export levels. We also find evidence of industry-level heterogeneity, as a decline in financial health is associated with a significantly more pronounced decline in the exports of firms in industries with greater dependence on external finance.