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Credit constraints and economic growth in a dual economy[☆]

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ABSTRACT

Pervasive credit constraints have been seen as major sources of slow growth in developing economies. This paper clarifies a mechanism through which an inefficient financial system can reduce productivity growth. Using a two-sector model, second, we examine the implications for employment and the distribution of income. Both classical and Keynesian versions of the model are considered; saving decisions are central in the classical version while firms' investment and pricing decisions take center stage in the Keynesian version. We find that, although boosting the asymptotic rate of growth, a relaxation of credit constraints may reduce the share of the formal sector, increase inequality and underemployment, and have little or no effect on the medium-run rate of growth.

1. Introduction

Poor financial systems and pervasive credit constraints have been seen as major sources of slow growth in developing economies. Mexico is a striking example, and the Mexican experience provides the primary motivation for the analysis in this paper; the general argument, however, may apply more widely.

The Mexican economy has gone through a series of structural reforms since the 1980s. It has been opened to foreign trade and capital flows, state participation in economic affairs has been significantly diminished, and an export-led growth strategy has displaced the earlier import-substitution strategy. Each new round of reforms was introduced with promises of high and sustained growth. The results have been disappointing. The economic growth predicted by the reformers has not materialized. Exports have increased but not yielded growth in the economy as a whole. Macroeconomic stability in the form of low inflation and reductions in the fiscal deficit may have been achieved, but even these achievements should be seen in the context of severe crises in 1982–1983, 1986, 1995, and 2008–2009; Lustig (2001) presents an early assessment of the economic shift; Moreno-Brid and Ros (2009), Hanson (2010, 2012), and Ros Bosch (2013a, 2015) are more recent studies.

The literature on Mexican slow growth has two broad strands. The dominant strand points to stagnant total factor productivity. An alternative view regards the low rate of capital accumulation as the most important proximate cause of the sluggishness, and considers low productivity growth to be a consequence of low capital accumulation. Both strands agree that many firms, especially medium and small enterprises, have experienced significant credit constraints and that those constraints have been an important reason for slow growth. In the dominant view, inefficient financial systems contribute directly to low productivity growth; Hanson (2010), and Kehoe and Ruhl (2010), Tinoco-Zermeño et al. (2014), and Bolio et al. (2014). In the alternative view, credit constraints, may have contributed to the low rates of capital formation, with derived effects on productivity growth; Moreno-Brid et al. (2005),

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Moreno-Brid and Ros (2009, 2010); Moreno-Brid and Ros, 2009, and Ros Bosch (2013a, 2015).[1]

This paper contributes a theoretical perspective on the links between credit constraints, labor productivity and macroeconomic growth. We clarify one mechanism through which an inefficient financial system can reduce the rate of productivity growth. Using a two-sector model, second, we examine the implications of an improvement in the financial system for the distribution of income and the growth rates of employment and output in the medium and long run. Two versions of the model are considered, a classical version and a Keynesian version. Saving decisions are central in the classical version while firms' investment and pricing decisions take center stage in the Keynesian version. We find that a relaxation of credit constraints may improve productivity growth in the modern sector and boost the asymptotic rate of growth of output. With slow convergence to the asymptotic state, however, the medium-run effects may be more important, and significant medium-run effects require a positive, direct influence of financial conditions on firms' investment and pricing/output decisions; this direct influence is absent in the classical version of the model. We also find that, if not accompanied by other measures, the alleviation of credit constraints may reduce the share of the formal sector and increase inequality and underemployment. Thus, without taking sides in the larger debate about the fundamental reasons for the 'Mexican morass', we show that the direct effects of credit constraints on accumulation are crucial and that additional policies may be needed if the benefits from alleviating the credit crunch are to be reaped by the Mexicans who need them the most.

A large literature has explored links between financial development and economic growth. Prominent contributions include Greenwood and Jovanovic (1990), Bencivenga and Smith (1991), King and Levine (1993a, 1993b), and Aghion et al. (2005).[2] Our argument has some affinity with King and Levine (1993a). Using a Schumpeterian model along the lines of Grossman and Helpman (1991), their study views finance as a lubricant for innovation. Unlike King and Levine, we emphasize diffusion and the effects of finance on the ability of successful innovators to expand (rather than on investment in innovation). We also differ radically from King and Levine – and from most the existing literature on finance and growth – by using a framework that includes an informal sector with underemployment.

The formal-informal distinction and the presence of underemployment in the informal sector are accepted features of developing economies like Mexico. There is a debate on whether the high levels of informality are a cause of slow growth (OCDE, 2012) or a consequence of slow growth (Ros Bosch, 2013a). But the presence of informality is not in dispute, and all participants in the debate deplore the high levels of informality.

Our two-sector approach has obvious affinities with the literatures on dual and dependent economies (see Temple (2005) and Ros Bosch (2013b) for surveys). The informal sector should not be identified with agriculture. The share of agriculture has declined significantly in Mexico, but the decline has been accompanied by a "massive increase in underemployment in the tertiary sectors of the economy" (Ros Bosch, 2000, p. 104; Moreno-Brid and Ros, 2009, p. 234). It is important to note, too, that the informal sector is not a self-contained subsistence sector, as in simple versions of the Lewis model. Informal production is market-oriented, and low levels of demand from the formal sector reduce informal-sector income. The model in Razmi et al. (2012) comes closest to the one in this paper. We extend this model by introducing credit constraints and endogenous changes in productivity; to keep the analysis tractable, we simplify the analysis by assuming constant returns to scale in the informal sector and fixed consumption shares.[3]

The paper is organized as follows. Section 2 outlines some stylized facts and provides a selective survey of the applied literature on credit constraints in the Mexican economy. Section 3 analyzes the effects of credit constraints on technical change in the modern sector. Section 4 presents a two-sector model with financial constraints in the modern sector. Sections 5 and 6 analyze the implications of the model using classical and Keynesian closures, respectively. Section 7 contains a few concluding comments.

2. Economic growth and financial constraints in contemporary Mexico

2.1. Mexican economic performance

The structural reforms after 1982 have failed to boost economic growth. Using World Bank data we obtain that the average growth rate of per capita GDP in 1961–1981 was 3.75% while the 1982–2015 average, by contrast, is a strikingly low 0.58%.

Not surprisingly, virtually all scholars and policy makers agree that the results have been disappointing. There is also widespread agreement that although credit for consumption and housing has increased, finance for productive projects is difficult to obtain, and financial constraints have been an important reason for slow growth. According to Kehoe and Ruhl (2010, p. 2001) "[t]he most popular set of theories for Mexico's stagnation focuses on its inefficient financial system and lack of contract enforcement".[4] Indeed, in 2013–2014 legal reforms involving changes in more than 30 laws with the explicit purpose of improving access to finance were carried out. Their results are still to be seen.

Fig. 1 presents the evolution of domestic credit to the private sector as a percentage of GDP for the period 1990–2015. This variable is commonly used in the literature as an indicator of financial constraints, and the figure includes data for other Latin American countries. Mexico has the lowest ratio among these countries; the average for the whole period was 21.7%. There has been some progress, and the ratio increased from 17.4% in 1990 to 32.7% in 2015. To put this rise in perspective, however, the only other Latin American OECD member, Chile, saw an increase from 45.3% in 1990 to 110.9% in 2015.

The literature suggests that the lack of credit from the banking system has been particularly important in Mexico; Mántey de Anguiano (2007), Haber (2005), and Haber (2009). Fig. 2 shows the evolution of the domestic bank credit to the private sector as percentage of GDP for the years 1990–2015. Again, for comparative purposes we include the evolution of the same variable in the only other Latin American OECD member, Chile. The figure confirms the low level of bank lending in Mexico. In the early 1990s the ratio was around 30%. It then fell steadily, reaching a low of 12.1% in 2001, before recovering to 24.5% in 2015. The average for the whole period was 19%. In Chile, by contrast, the average was 61%, and the ratio went from 44.2% in 1990 to 81.7% in 2015.

The data in Figs. 1 and 2 do not distinguish between credit to firms and credit for consumption, and there is a broad consensus credit that constraints mainly affect firms rather than consumption.

[1] The distinction is one of degree. The alternative approach does not dismiss productivity issues, and the dominant view acknowledges low investment as part of the explanation of the lackluster economic growth (e.g. Hanson, 2012, p. 8–9).

[2] Levine (2005) and Popov (2017) survey the large empirical literature on finance and economic growth.

[3] The relative price of the informal good (the real exchange rate) is a key variable in Razmi et al. With fixed expenditure shares, this relative price no longer plays the same role as an important component of a strategy for growth.

[4] Kehoe and Ruhl question this emphasis on the financial system, noting that fast-growing China also had a poorly functioning financial system (p. 1011).

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