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# The formal and informal institutional framework of capital accumulation

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ABSTRACT

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This paper studies the impact of social trust and formal legal institutions on capital accumulation in a panel of countries. The results not only confirm that both social trust and the quality of formal legal institutions have a positive impact on capital accumulation, but also show that they are substitutes. Specifically, the impact on capital accumulation of an upgrade of the quality of formal legal institutions is larger when social trust is low than when social trust is high, and vice versa. These findings apply both to total investment and to its foreign component, foreign direct investment. *Journal of Comparative Economics* **43** (3) (2015) 754–771. Université libre de Bruxelles (ULB), Centre Emile Bernheim, CP-114/03, avenue F.D., Roosevelt, 50, 1050 Brussels, Belgium.


## 1. Introduction

Although five decades of theoretical and empirical research have uncovered a flurry of determinants of economic growth, the role of capital accumulation as a key driver has seldom been challenged. The classic studies of Levine and Renelt (1992) and Sala-i-Martin (1997) even showed the investment ratio to be the most robust correlate of growth. At the same time, investment has been found to be sensitive to its institutional environment, as reported for instance by Barro (1991), Mauro (1995), and Méon and Sekkat (2005). These findings give support to North's (1990) view that secure property rights over capital and profits are necessary to give an incentive to accumulate capital.

It is thus tempting to jump to the conclusion that a set of simple institutional reforms would guarantee capital accumulation, and should be uniformly adopted. However, yielding to that temptation would be ill-advised. Indeed, as Rodrik (2007) points out, attempts at importing the same set of good practices everywhere may prove futile, if not counterproductive, if they do not take their environment into account. As Dixit (2009) points out, the informal institutional environment, which chiefly includes trust, matters as much as the formal environment. Williamson (2009) nicely summarizes the distinction between formal and informal institutions by defining the former as those that are government defined and enforced, while the latter are private constraints. Evidence supports the view that formal rules interact with their informal environment. In

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some instances, both factors have been found to be substitutes. For instance, Johnson et al. (2002a) observed in a sample of Eastern European post-communist countries that firms resorted to bilateral relationships where courts were inefficient. Steer and Sen (2010) describe how Vietnamese firms compensate for the shortcomings of the formal legal system by using relational contracts. At the aggregate level, Ahlerup et al. (2009) report evidence that trust and the quality of government interact negatively in growth regressions, suggesting that they are substitutes.

Conversely, formal and informal rules have also been found to be complements. For instance, Lambert-Mogiliansky et al. (2007) observe that the outcome of the enactment of bankruptcy law in Russia differed across regions, depending on the popularity of governors and the quality of their relationship with the federal center. Bjørnskov (2011) studies the impact of legal quality on corruption, observing that it reduces corruption in high-trust countries but has no significant effect in low-trust countries. In other words, legal quality and trust are complements. At the aggregate level, Williamson (2009) reports evidence of a positive interaction between formal and informal institutions in regressions where the dependent variable is per capita output. This is consistent with the idea that formal and informal institutions are complements.

Surprisingly, no attempt has been made at empirically investigating the interaction of formal and informal rules in determining investment. This is precisely the aim of our paper. To do so, we investigate the impact of formal legal institutions and generalized trust on capital accumulation in a large panel of countries, paying careful attention to the interaction between formal institutions and trust. Trust can be defined as the willingness to make oneself vulnerable to another person's actions, based on beliefs about his/her trustworthiness (Bohnet, 2008). Williamson (1993) argues that trust in transactions can often be interpreted as the outcome of calculativeness, but remarks that social trust is affected by the culture of the society where it is embedded. He argues that a society that closes the eyes to lying and hypocrisy would limit the efficiency of contracts. Social trust is therefore a key informal institution. Since the influential studies of Putnam (1993) and Knack and Keefer (1997), social trust has repeatedly been found to affect economic outcomes, but its interaction with formal institutions has been almost entirely overlooked.

The interaction of trust with formal institutions matters in several respects. Firstly, from a policy perspective, it is important to determine whether local informal factors may affect the impact of formal incentives to invest in a country. If so, then policy advisers will have to take local culture into account before formulating recommendations. In other words, the same set of measures will not be relevant everywhere and irrespective of the local context. Our paper makes a contribution in this respect and may qualify the general literature devoted to the institutional determinants of investment by analyzing how formal and informal factors interact. Secondly, the paper contributes to the literature on the impact of trust by investigating the extent to which it may interact with formal institutions. Thirdly, the paper contributes to our understanding of the interaction of legal rules and their environment by including foreigners in the picture. Whereas our main focus is the overall investment ratio, we add to our baseline results by studying the determinants of the foreign component of capital accumulation, namely foreign direct investment (FDI). Indeed, all the studies in the literature have focused on how the interaction of legal rules and their environment can shape domestic outcomes. By assessing their impact on FDI, we observe how foreigners react to the local formal and informal characteristics of the local country.

To address those questions, the rest of the paper is organized as follows. In the next section, we discuss the formal and informal determinants of capital accumulation by surveying the existing literature. In the third section, we describe our empirical strategy. Baseline empirical results are reported in Section 4. Section 5 reports robustness checks and an extension to FDI, while Section 6 concludes.

## 2. Theoretical framework

We start this section by recalling that trust and informal institutions directly affect capital accumulation. We then separately survey arguments suggesting that they could be substitutes and arguments suggesting that they could be complements.

### 2.1. The direct impact of formal institutions and trust

The key reason why formal regulations may affect capital accumulation is the gist of the classic argument of North and Weingast (1989) and North (1990). If property rights over capital and profits are insecure, then incentives to invest will be low.

The argument applies particularly well to the finance sector, with a subsequent impact on investment. Financial transactions are virtually impossible if property rights are not clearly defined, because the lender must be confident that the borrower will eventually repay his/her debt. Unsurprisingly, the law and finance literature spurred by La Porta et al. (1997, 1998, 2000) repeatedly reported a strong relation between formal laws and financial development. The impact of formal institutions on financial development provides an indirect channel through which formal institutions can affect capital accumulation. The impact of financial development is highlighted in a number of theoretical contributions, going back to the early works of Greenwood and Jovanovic (1990) or Bencivenga and Smith (1991), and surveyed in Levine (2005). Castro et al. (2004, 2009) merge the two strands of literature in a model that relates investor protection and investment through capital market imperfections.