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Economic growth and insurance development: The role of institutional environments

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ABSTRACT

This paper investigates how institutional environments shape the relation between insurance and economic growth by applying an innovative dynamic panel threshold model. Using multiple general measures related to political, economic, and legal environments to assess the soundness of institutional environments, we find that the relation between life insurance and economic growth is negative in the regime with relatively unhealthier institutional environments. However, this significantly negative effect becomes insignificant after a certain level or threshold of institutional quality has been achieved. A generally unhealthy institutional circumstance could deter the growth effect of life insurance sectors. This result might be explained by the problem of moral hazard and adverse selection, the behavior of risk-taking, as well as macroeconomic volatility.

1. Introduction

It is widely recognized that institution quality constitutes a potentially important mechanism for sustaining a country's development in terms of economic and financial aspects. A considerable amount of literature has been devoted to understanding the direct impact of institutions on insurance market activities and economic growth. Although the literature has documented a generally positive relationship between institutional factors and insurance development, several deficits have been indicated by most of the existing studies, conducted to examine the relationship between institutions and growth. A seemingly mysterious situation reflecting that some country-specific conditions may complicate the expected favorable effect of institutions on the economy. This begs the question as to the particular effects of institutional environments on economic performance which is somewhat unresolved and needs further investigation.

There is, however, another strand of the literature, arguing that the influence of institutions on the relation between financial development and economic growth is relevant. The impact of financial development on the growth may depend on the soundness of institutional environments. The idea behind this is that poor-quality institutional environments may hinder the function of financial system. Put differently, although unsound institutional environments are a deterrent for some sectors in the financial system, they may have favorable effects for some aspects that could benefit the economic system. For the insurance sector, whether the beneficial effects from its functions in risk transfer and indemnification as well as in financial intermediation are affected by institutional environments has not been examined in the literature to date.

The purpose of this paper is therefore to examine the effects of institutional environments on the relation between insurance development and economic growth. Our study makes three sets of contributions to the literature. First, in contrast to prior studies that separately examine the direct impact of institutions on insurance development (Ward and Zurbruegg, 2002; Beck and Webb, 2003; Lee et al., 2013) and the effect of insurance on economic growth (Han et al., 2010; Chen et al., 2012; Lee et al., 2013; Chang et al., 2014), we evaluate how institutional environments shape the impact of insurance development on economic growth by a novel dynamic panel threshold model. The dynamic panel threshold model determines the threshold value endogenously and evaluates the effects of the variables of interest on the outcome variable under different regimes, allowing us to assess the growth effect of insurance under different institutional regimes.

Second, while examining the influences of institutional factor, institution is generally considered only for a single dimension. We investigate the effect of multifaceted institutional factor, which is not explored in prior studies. The multidimensional institutions could provide a more comprehensive evaluation than the single indicator of

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external environmental factors. In the legal dimension we utilize rule of law, legal structure, and security of property rights, and we measure political soundness with polity and political rights.[1] Aside from the two institutional dimensions often used in the literature, we additionally include indices related to a country's economic environment to evaluate the effect from the economic aspect. These measures enable us to capture the effect of institutional environments on the insurance-growth relationship. Our paper thus paints a more complete picture on this topic.

Third, our findings suggest that institutional environments influence the effect of life insurance on economic growth in different manners which generate some original implications. Our empirical results reveal that the coefficients on insurance development in the regime below the threshold are significantly negative under all institutional measures but those in the regime above are not significant. Extant studies on the relation between institutions and insurance development document that a sound institution benefits insurance development. Our findings further indicate that a sound institution does not in general help the growth effect of insurance, but an unhealthy one is harmful. This suggests that institutions play a passive intermediate role on the insurance-growth relationship.

The remainder of the paper is organized as follows. Section 2 reviews the related literature on the relation between institutions, insurance, and economic growth. Section 3 discusses the theoretical background and the hypotheses we test. Section 4 introduces the methodology and variables' definition. Section 5 presents empirical results, and Section 6 provides further discussions and implications. Section 7 concludes.

2. Literature review

The role of institutions on an economic system's development has attracted much attention over the past few decades, yet regarding the impact of institutions on economic growth, the evidence is divergent. Some studies note that institution-related variables have a positive impact on economic growth (Clague et al., 1996; Minier, 1998; Persson, 2005), while a negative influence is documented as well (Blanchard and Shleifer, 2000; Persson and Tabellini, 1992; Tavares and Wacziarg, 2001). Glaeser et al. (2004) alternatively support a development view - that is, it is not institutions that benefit economic growth, but instead economic growth induces the improvement of institutions. The institution-growth issue thus remains unsolved.

Although the direct effect of institutions on economic growth remains an open question, another strand of the literature explores the relevance of institution-related variables to financial development, including legal origin (La Porta et al., 1997; La Porta et al., 1998; Shen and Lee, 2006), regulatory environments (Mayer and Sussman, 2001; Lee et al., 2013), environmental conditions of colonies (Beck et al., 2003), and the more recently developed “political economy” view (Pagano and Volpin, 2001; Rajan and Zingales, 2003; Girma and Shortland, 2008).

Institutions are correlated with insurance development as well. From a legal perspective, insurance is a contractual relation between the insurer and the insured. The protection of contractual rights depends on the soundness of the legal rules and jurisdictions. As such, the legal environment is associated with insurance activities. Another legal aspect that may affect insurance is related to the protection of property rights. Insurers need to invest their funds collected from premiums into proper instruments in order to obtain an adequate return that can meet their obligations to the insured in the future. Wen and Zhang (1993) show that an individual's long-term investment behavior is distorted when property rights cannot be assured. The protection of property rights thus has a linkage with insurers' investment behaviors.

As noted above, researchers have begun to pay attention to the influence of the political aspect in financial development. The influence of political environments on insurance market activities are also explored in the insurance literature. Beck and Webb (2003) note that political instability affects the economic horizon of potential buyers and suppliers of life insurance products and thus may discourage the development of a healthy life insurance market. Roe and Siegel (2011) indicate that traditionally important channels of investor protection, such as legal origin, trade openness, colonial conditions, and the related and resultant institutions, cannot function well under unstable political environments. Therefore, the well-functioning of other institutional dimensions, such as the legal rules and jurisdictions above, depends on the soundness of political aspects. Political environments are thus correlated directly with insurance activities or through an indirect effect on other institutional aspects.

Empirical findings on the effect of institution-related variables in insurance development generally support the arguments above. Ward and Zurbruegg (2002) show that political stability exerts a significant impact on life insurance demand both in developed and developing economies. They also find that an improvement in the legal system positively impacts the demand for life insurance, while the effect is not significant in OECD countries, possibly because OECD countries already have a sounder legal system and thus the marginal effect of any further improvement is less. Beck and Webb (2003) find that an overall institutional development, accounting for legal rules and political factors, has a positive effect on life insurance development. Avram et al. (2010) also find that the quality of the legal system and the protection of property rights exert a significant effect on developments in insurance sectors.

The extant studies on the effect of institutions in insurance development mainly explore their direct impact on insurance. It is interesting to investigate if institutions shape the relationship between insurance development and economic growth. The literature has documented that institutions exert a first-order effect on insurance development, yet whether the relation between insurance development and economic growth is affected by institutional environments, i.e., if institutions exert a second-order effect, still awaits exploration. More specifically, some attention should be paid on if institutions exert a non-linear impact on the insurance-growth link. Carter and Dickinson (1992) and Enz (2000) develop a logistic model to depict a S-shaped pattern on the demand curve for insurance. Though there is no direct examination on the non-linear link between insurance and economic growth, findings in some studies imply the existence of non-linearity. For instance, the effect of insurance on economic growth has been shown to depend on the level of economic development. Haiss and Sümegi (2008) find that life insurance plays a more important role on economic growth in mature European countries. As institutional development is usually related to the level of economic development, we could expect that institutional environments should exert an effect on shaping the insurance-growth relationship from which policy implications can be produced.

3. Theoretical background and hypotheses

The insurance literature suggests two possible opposing effects of insurance development on economic growth through its effect on the function of financial intermediation described above. From a theoretical point of view, the services provided by the financial sector can contribute to economic growth through mobilizing domestic savings and encouraging capital accumulation, improving the efficiency of risk management and capital allocation, and fostering the development of trade and commerce (see Levine, 2005, for a comprehensive survey). Accordingly, one would expect a positive relation between insurance development and economic growth.

While the traditional views would predict the favorable effect of insurance development on economic growth, there is increasing attention on how this impact is vanishing (see Panizza, 2014, for an extensive survey). The presence of high levels of inequality, credit market

[1] The binary variable of legal origin is not applicable to the dynamic panel threshold model used in this paper. We thus utilize indices related to the legal system.