Economic Modelling xxx (2014) xxx–xxx

Contents lists available at ScienceDirect

Economic Modelling

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

Does trust contribute to stock market development?

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ARTICLE INFO

Article history:
Accepted 31 October 2014
Available online xxxx

JEL classification:
O16
O17
C11
G02
P52

Keywords:
Social capital
Trust
Institution
Stock market
Bayesian model averaging

ABSTRACT

In view of the increasing contributions of social capital in financial development, we examine the relevance of social capital in stock market development by applying Bayesian model averaging on 37 variables across 60 countries from 2000 to 2006. The results demonstrate that trust is a robust and positive determinant of stock market depth and liquidity, and that trust is the most relevant component of social capital in market development. Macroeconomic instability in the form of inflationary changes has a dampening effect on trust in the trading of stock. Further, social capital and its components, particularly trust, are more relevant to stock market development in countries with weak rule of law, non-Organization for Economic Co-operation and Development (non-OECD) and Organization of Islamic Co-operation (OIC) countries that are generally characterized by lower formal institutional quality. Our results seek to reinforce the relevance of social capital in complementing the much needed reform of stock markets globally.

1. Introduction

By 2007, more than USD15 trillion was held by over 91 million individual investors in stocks and corporate bonds, either directly or through mutual and pension funds (Stout, 2010). These massive investments and securities markets could not have conceivably reached such size and scope but for most people having trust in their investments and common belief in others' trustworthiness (Guiso et al., 2008). However, episodes of financial scandals during the height of the 2007/2008 global financial crisis have eroded trust, a fundamental aspect of social capital, in the financial system. As a result, the understanding of factors contributing to financial market development has been placed at the center stage of global policy and academic discussions. The need for a sound and stable financial system underpinned by strong formal institutional quality and social capital has become the "new normal" in the present era.

Over the years, two trends of financial development have emerged. First, stock markets have developed rapidly in parallel with the banking sector in many parts of the world especially in emerging markets to serve as a direct conduit for efficient resource allocation and an engine for economic development. Despite this progress, there is relatively a smaller set of theoretical and empirical evidence on factors that contribute to stock market development compared to literature on the determinants of economic growth and banking sector development.

The second trend of development is the growth of the Islamic finance industry. In practice, while the global Islamic finance industry has been on a rapid growth and expansionary trajectory in recent years, such development is not uniform particularly across the Organization for Islamic Co-operation (OIC) countries which are expected to take part in the Islamic finance industry. In principle, given that the essence of Islamic finance is risk sharing and that stock markets are the first best means of risk sharing (Askari et al., 2011), the examination of the main determinants that contribute to stock market development becomes a worthwhile research effort.

However, the identification of robust determinants remains a challenge. The potentially plentiful determinants and the many competing theories and evidence developed under specific settings can give rise to uncertainty over the robustness of candidate determinants. To address this challenge, previous studies have used the Bayesian model averaging (BMA) to account for model uncertainty and omitted variable bias issues. Particularly relevant to our present paper are the works of Huang (2010) who used the BMA to identify determinants of banking sector, and stock and bond market development, as well as Horváth (2013) who examined the effect of trust on long-term economic growth employing the BMA. The latter found that trust is an important driver of long-term growth, particularly in countries with weak rule of law. However, neither of these studies examined the role of social capital, particularly trust, as the potential determinant of stock market

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http://dx.doi.org/10.1016/j.econmod.2014.10.056
0264-9993/

development in terms of market depth, breath and efficiency. On this premise, the present paper contributes to the literature by examining the influence that social capital may exert on developing stock markets through a robust selection of determinants using the BMA.

The rest of the paper is organized as follows. To place the present analysis in the context of existing literature, the next section briefly reviews the literature related to social capital and stock market. Sections 3 and 4 introduce the BMA approach and data used in the analysis. Estimation results are presented in Section 5. Finally, Section 6 concludes with the main findings and some concluding remarks.

2. Related literature

Recent years have witnessed burgeoning research on the potential determinants of stock market development in view of the growing contribution of financial markets in various economies. Among the earlier attempts to develop the foundation of a financial theory for stock market development is the partial equilibrium model of stock market growth of Calderón-Rossell (1990, 1991). Based on data from the main active stock markets in 42 countries over the period of 1980 to 1987, this model posits that economic growth and stock market liquidity are the major determinants of stock market capitalization growth. Since then, empirical literature has examined the role of macroeconomic, financial and institutional factors in the development of stock market. The macroeconomic and financial factors include the size of the economy and growth, savings and investment, banking sector development, foreign direct investment, trade and financial openness, and macroeconomic stability.[1] The institutional dimension takes into account formal institutional factors such as legal origin, rules and institutions, law enforcement, interest group and political stability, and endowment.[2]

To some extent, the role of informal institution in the form of social capital has been examined in the context of market development. Conceptually, social capital is multifaceted and its definition has not been uniform (Dasgupta and Serageldin, 2000). Social capital can be defined as "the existence of a certain set of informal values or norms shared among members of a group that permits cooperation among them" (Fukuyama, 1995a,b, 1997, p. 378). These shared and internalized norms lubricate the functioning of a society by fostering trust and reducing the incentive to cheat (Coleman, 1988; Ostrom, 2000; Fukuyama, 2001; Guiso et al., 2004; Lee et al., 2011). Social capital also concerns the "connections among individuals — social networks and the norms of reciprocity and trustworthiness that arise from them" (Putnam, 2000, p.19). Among the dimensions of social capital, trust is recognized as the most prominent (Fukuyama, 1995a,b; Knack and Keefer, 1997; Glaeser et al., 2000; Zak and Knack, 2001).[3] Empirical studies have examined the role of trust, societal norms, social network, and culture represented by religion and language in financial development (Brown et al., 2008; Guiso et al., 2008; Georgarakos and Pasini, 2011; Law and Ibrahim, 2013).[4]

Despite the benefits of stock market, some countries are still characterized by low investor participation. Empirical evidence suggests that low level of trust and weak social network are among the reasons for low participation in and underdevelopment of the stock market. In what follows, the effects of cognitive social capital in the form of trust and societal norms, as well as structural social capital as social network, on stock market participation and development are examined.[5]

According to Guiso et al. (2004), a person's financial decisions are shaped by the social capital of one's birth place and can have long-lasting effects. Individuals who are born or live in places with more social capital (represented by high blood donation, electoral participation, and trust rates) are more likely to participate in the stock market. Willingness to trust, as a reflection of the acceptance of vulnerability or probability of being cheated, influences investment behavior. This connection was examined by Guiso et al. (2008) who demonstrate that only investors with sufficiently high trust will invest in the stock market.[6] Trust is also associated with stock market capitalization and total value traded in the stock market, and is a key complement to formal institutions when a society has little regard for the latter, vice versa (Calderón et al., 2001). However, in a recent cross-country study on the effect of social capital on financial development, Law and Ibrahim (2013) find that although the role of social capital is more significant in the banking sector development, there is no significant relationship between social capital and stock market development.

In addition to trust, social network also affects stock market participation. Physical proximity of investors, particularly through "weak-ties" networks, facilitates word-of-mouth information transmission and frequent interaction with one another. This can effectively reduce fixed participation costs and lower the hurdle for stock market participation (Georgarakos and Pasini, 2011). Empirically, Hong et al. (2004) demonstrate that sociability, represented by social households who interact with neighbors or attend church, fosters participation in stock market. Similarly, a person is more likely to invest in stock market when larger portions of the local community are also stock market investors (Brown et al., 2008). A fund manager is more likely to trade a particular stock if other managers working in the same city are trading the same stock (Hong et al., 2005).

Combining both strands of literature on the implications of trust and sociability in stock market, Georgarakos and Pasini (2011) find that an increase in sociability can counterbalance a reduction in trust, implying that both should be considered when studying stock market participation. While trust has a stronger effect in fostering stock ownership in countries with low market participation and relatively low average trust (Austria, Spain and Italy), sociability promotes stockholding in countries with widespread market participation and high trust (Sweden, Denmark and Switzerland). Given the important role of social capital in stock market, the focus of this paper is to examine the effect of social capital especially trust in stock market development taking into consideration a wide range of other potential determinants.[7]

3. Bayesian model averaging (BMA)

3.1. Background and theory

A model uncertainty problem concerns the question of which variables should be included in the model to capture the underlying data-generating process especially when there are many competing theories and empirical evidence. Uncertainty exists on two levels. The first is uncertainty related to the parameter conditional on a given empirical model, which is assessed in almost all empirical studies. The

[1] Garcia and Liu (1999), El-Wassal (2005), Naceur et al. (2007), Yartey (2007, 2008), Billmeier and Massa (2009), Cherif and Gazdar (2010) and Yartey (2010).

[2] La Porta et al. (1997, 1998, 2008), Pistor et al. (2000), Rajan and Zingales (2003), Armour et al. (2009), Roe and Siegel (2011).

[3] Social capital is "a capability that arises from the prevalence of trust in a society or in certain parts of it" (Fukuyama, 1995a,b, p. 26). In practice, five dimensions of social capital have been incorporated in the World Bank's Social Capital Implementation Framework. These dimensions include groups and networks, trust and solidarity, collective action and cooperation, social cohesion and inclusion, and information and communication.

[4] Earlier studies include Calderón et al. (2001, 2002), Stulz and Williamson (2003), Garretsen et al. (2004), Guiso et al. (2004), Hong et al. (2004, 2005).

[5] Cognitive social capital is people's perceptions about the level of interpersonal trust, sharing, and reciprocity. Structural social capital is the density of social networks, or patterns of civic engagements (Islam et al., 2006; Georgarakos and Pasini, 2011).

[6] Guiso et al. (2008, p. 2557–2558) define trust as the subjective probability of being cheated by equity issuers and by institutions that facilitate and regulate stock market participation. The subjective probability is partly influenced by the characteristics of the financial system including investor protection and contract enforcement.

[7] The role of ethical behavior and trustworthiness in the stock market-growth nexus has been examined by Ng et al. (2015).

Please cite this article as: Ng, A., et al., Does trust contribute to stock market development?, Econ. Model. (2014), http://dx.doi.org/10.1016/j.econmod.2014.10.056