
Extended Abstract

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The Effect of Financial Sector on Real Economic Performance: Evidence from Saudi Arabia

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Abstract

This paper examines the interrelationship between financial development and economic growth in Saudi Arabia from 1985:I to 2007:4 utilising Granger causality tests in the context of co-integration and vector correction models (VECM). The results from Granger causality tests indicate two-way causality between financial development variables and the economic growth (real sector). This result highlights the role of the financial sector on the real sector of the Kingdom of Saudi Arabia's economy.

Key words; Financial development, Real economy performance, Stock market, Saudi Arabia, Causality.

Introduction

This paper investigates the relationship between financial development and economic growth in Saudi Arabia from 1985:I to 2007:IV using Granger causality tests in the context of co-integration and vector correction techniques. Specifically, it concentrates on answering the following question: is there a mutual relationship between financial development indicators, stock market indices and the macroeconomic variables that represent the economic performance in the Kingdom of Saudi Arabia (henceforth KSA), and what is the nature and strength of this relationship?. The significance of research on the relations between financial development indicators, particularly, stock market performance and real economic activity, has increased recently due to the recent financial crisis and associated production decreases experienced by a number of emerging market economies. (Kaplan, 2008)

In the last twenty-five years empirical literature has shown an increasing interest in a modern empirical method of handling the causality issue founded on the time series pattern.

As the conflict around the relationship between the economic growth and the performance of the financial development continues between economists, there is room for further research on the extent and degree of the impact of the financial sector on the economic variables in order to get valuable results for use in designing economic policies. Such research is quite limited and meager in KSA. In other words, not much is known about the links between financial sector and real economy in Saudi Arabia.

We organise the remainder of this paper as follows. Section Two surveys the theoretical and empirical literature reviews. Section Three explains the variables used and time series methodology applied in this study. Finally, in Section Four, we provide the results of our model and the conclusion of our study.

Literature review

The relationship between financial sector development and real economy has received considerable interest in recent theoretical and empirical studies, because this relationship is still a controversial issue between economists and researchers. In particular, causality relationship- that is the direction of causality- has remained unresolved in both theory and empirics. The theoretical underpinnings of this relationship can be found in the works of Bagehot 1873 and Schumpeter 1911 and more recently in the works of: Gurley and Shaw 1955, 1956, 1960, and 1967, McKinnon 1973, Shaw 1973 and Lucas 1988. Views differ and as a result of this there are four views regarding the direction of causal relationship. These are as follows: financial development promotes

economic growth, economic growth causes financial development, the mutuality relationship (causality) between the development of the financial sector and economic growth and neutralism (independence).

The empirical studies that test the causality theorem between finance and growth involve two main econometric methods. First, many studies have used cross-sectional techniques to sustain the hypothesis that financial sector development is growth enhancing. Financial repression policies are hurtful for economic growth, according to Roubini and Sala-i-Martin (1992), King and Levine (1993a, 1993b), Fry 1997. Second, in the last three decades the empirical literature has revealed a heightening interest in a modern empirical method of handling the causality issue founded on the time series pattern; for instance, Gupta (1984), Jung (1986), Murinde and Eng (1994), Demetriades and Hussein (1996), Arestis and Demetriades (1997), Luintel and Khan (1999), Boulila and Trabelsi (2002) and Guryay et al (2007).

Methods

Quarterly data covering the period 1985: I - 2008: VI is used in this study. The year 1985 was selected as the start of the sampling period due to the fact that the Saudi Stock Market (SSM) was recognised as the formal market in that data. Another reason for the choice of this time span is the data availability of the stock market indices from 1985 onwards. The sample period comprise 92 quarterly observations for each variable, from March 1985 to December 2008. The variables represent financial intermediaries, the Saudi Stock Market, and the main macroeconomic variables such as broad money supply (M2R) or credit to private sector (CPRS) or financial saving (FSR), the Tadawual all- share index (TASI), inflation (CPI), interest rate (IR) and nominal GDP per capita (GDPPC), oil price (OP) and government spending (GE).

Model Specification

In the empirical analysis we apply the dynamic time series method - Johansen multivariate co-integration test, error correction model and Granger causality test - for link between financial development and economic growth. Following literature such as Kown and Shin (1999), Ibrahim, (1999); Ibrahim and Yusoff (2001), Maghayerah (2003), Maysami et al (2004), Adam and Tweneboah (2008) and Rahman et al (2009), such a model can specify as:

$$LTASI_t = \beta_0 + \beta_1 LM2R_t + \beta_2 LGDPPC_t + \beta_3 CPI_t + \beta_4 LOP_t + \beta_5 IR_t + \beta_6 LGE_t + \varepsilon_{it} \quad \dots (1)$$

Where β_1 β_6 are the sensitivity of each of the macroeconomic variables to stock market index, β_0 is a constant and ε_{it} is error correction term.

The coefficients of LM2R, LGDPPC and LGE are expected to be positive, while CPI, LOP and IR are expected to be negative.

Findings and Conclusion

In case of unit root tests, we conclude that all the series' under investigation are found to be non-stationary in level but stationary in first difference. This result is consistent with previous literature that found most macroeconomic factors and stock market indices are non-stationary in level but stationary in differences. It also consistent with hypothesis that the variables under considering (financial intermediaries, stock market indicators and macroeconomic factors) are individually integrated of order one I(1).

The maximum likelihood test developed by Johansen (1988) and Johansen and Juselius (JJ) (1990) provides evidence that the stock market prices index (TASI) is positively and significantly related to the level of real economic activity as proxied by the gross domestic product per capita (GDPPC). The Saudi Stock Market Index (TASI) is significantly affected by changes in gross domestic product per capita, money supply and oil prices - the impact is relatively higher. For example, a percentage increase in real activity would result in a 25.84 percent rise in the stock market price index. On the other hand, the impact of changes in inflation rates and interest rate to the stock market index is an insignificant relationship. To sum up, Johansen multivariate co-integration test supports the long run equilibrium relationship between the financial sector and the real sector. In terms of the Granger causality test the preliminary results suggest bidirectional causality between financial development indicators and economic growth in Saudi Arabia. That is, the broad money supply Granger causes the changes in general stock price index (TASI), gross domestic product per capita (GDPPC), oil price and government expenditure (GE) and vice-versa. In conclusion, this finding highlights the importance of the financial development and stock market indicators to the real economy in Saudi Arabia.

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