



Financial development and economic growth in an oil-rich economy: The case of Saudi Arabia[☆]



Nahla Samargandi^{a,b}, Jan Fidrmuc^{a,c,d,e,*}, Sugata Ghosh^{a,c,f,1}

^a Department of Economics and Finance, Brunel University, United Kingdom

^b Department of Economics, Faculty of Economics and Administration, King Abdulaziz University, Saudi Arabia

^c Centre for Economic Development and Institutions (CEDI), Brunel University, United Kingdom

^d Institute of Economic Studies, Charles University, Czech Republic

^e CESifo, Munich, Germany

^f Brunel Macroeconomics Research Centre (BMRC), Brunel University, United Kingdom

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ABSTRACT

We investigate the effect of financial development on economic growth in the context of Saudi Arabia, an oil-rich economy. In doing so, we distinguish between the effects of financial development on the oil and non-oil sectors of the economy. Using the Autoregressive Distributed Lag (ARDL) Bounds test technique, we find that financial development has a positive impact on the growth of the non-oil sector. In contrast, its impact on the oil-sector growth and total GDP growth is either negative or insignificant. This suggests that the relationship between financial development and growth may be fundamentally different in resource-dominated economies.

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1. Introduction

In this paper, we explore the link between financial development and economic growth in an oil-rich economy, Saudi Arabia. To the best of our knowledge, our paper is one of the first studies to specifically consider the role that financial development plays in a resource-dependent economy, and the potentially different effects that it may have on the resource-extraction and conventional sectors of such an economy. Countries whose economies are dominated by oil or other natural resources possess specific features not shared by either industrialized or developing economies. A large fraction, often lion's share, of economic activity is represented by resource extraction, characterized by low added value and often by a high degree of state regulation. Economic performance is predominantly driven by the prices of natural resources that are determined in world markets rather than by domestic economic developments.

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* Corresponding author at: Department of Economics and Finance, Brunel University, Uxbridge UB8 3PH, United Kingdom. Tel.: +44 1895 266 528.

E-mail addresses: nsamrgandi@kau.edu.sa (N. Samargandi), Jan.Fidrmuc@brunel.ac.uk, jan@fidrmuc.net (J. Fidrmuc), sugata.ghosh@brunel.ac.uk (S. Ghosh).

URL: <http://www.fidrmuc.net/> (J. Fidrmuc).

¹ Tel.: +44 1895 266887.

The literature on the relationship between financial development and economic growth is voluminous. There is, however, no consensus view yet on either the nature of this relationship or the direction of causality. Four different hypotheses have been proposed.

The first view is that financial development is supply-leading, in the sense that it fosters economic growth by acting as a productive input. This view has been supported theoretically and empirically by a large number of studies. One of the earliest contributions is by Schumpeter (1934) who argues that the services provided by financial intermediaries encourage technical innovation and economic growth. McKinnon (1973) and Shaw (1973) were the first to highlight the importance of having a banking system free from financial restrictions such as interest rate ceilings, high reserve requirements and directed credit programs. Such policies tend to be prevalent in all countries, but are especially common in developing ones. According to their argument, financial repression disrupts both savings and investment. In contrast, the liberalization of the financial system allows financial deepening and increases the competition in the financial sector, which in turn promotes economic growth. Similar ideas are put forward by, among others, Galbis (1977), Fry (1978), Goldsmith (1969), Greenwood and Jovanovic (1990), Thakor (1996), and Hicks (1969). They view financial development as a vital determinant of economic growth, which increases savings and facilitates capital accumulation and thereby leads to greater investment and growth.

Empirically, several studies support the supply-leading view. A prominent contribution is by King and Levine (1993). They study 80 countries by means of a simple cross-country OLS regression. Their

findings imply that financial development is indeed an important determinant of economic growth. Similar results have been found by [Chistopoulos and Tsionas \(2004\)](#), who examine the long-run relationship between bank development and economic growth for 10 developing countries. They utilize panel cointegration techniques and find a uni-directional relationship going from financial development to economic growth. [Atje and Jovanovic \(1993\)](#) assess the role of the stock market on economic growth and find that the volume of transactions in the stock market has a fundamental effect on economic growth. Subsequent studies confirm these results by focusing on both market-based and bank-based measures of financial development (see for example, [Demircuc-Kunt and Maksimovic, 1998](#), and [Levine and Zervos, 1998](#)).

The second view is demand-following. In contrast to the previous position, [Robinson \(1952\)](#) argues that financial development follows economic growth, which implies that as an economy develops the demand for financial services increases and as a result more financial institutions, financial instruments and services appear in the market. A similar view is expressed by [Kuznets \(1955\)](#), who suggests that as the real side of the economy expands and approaches the intermediate stage of growth, the demand for financial services begins to increase. Hence, financial development depends on the level of economic development rather than the other way around. This view has also been empirically confirmed by several studies such as [Al-Yousif \(2002\)](#) and [Ang and McKibbin \(2007\)](#).

The third view is one of the bidirectional causalities. Accordingly, there is a mutual or two-way causal relationship between financial development and economic growth. This argument was first put forward by [Patrick \(1966\)](#) who posits that the development of the financial sector (financial deepening) is as an outcome of economic growth, which in turn feeds back as a factor of growth. Similarly, a number of endogenous growth models such as [Greenwood and Jovanovic \(1990\)](#); [Greenwood and Bruce \(1997\)](#); and [Berthelemy and Varoudakis \(1997\)](#) posit a two-way relationship between financial development and economic growth. Additional support for this view can be found in the empirical study by [Demetriades and Hussein \(1996\)](#), who studied 13 countries and found very strong evidence supporting bidirectional causality.

Finally, the fourth view states that financial development and economic growth are not causally related. Based on this view, financial development does not cause growth or vice versa. This view was initially put forward by [Lucas \(1988\)](#) who states that “economists badly over-stress the role of financial factors in economic growth”. His view is also supported by [Stern \(1989\)](#).

In addition, some empirical studies of the effects of financial development on economic growth highlight the potential negative association between finance and growth. For example, [De Gregorio and Guidotti \(1995\)](#) find a negative impact of financial development on growth in some Latin American countries. [Van Wijnbergen \(1983\)](#) and [Buffie \(1984\)](#) also point out the potentially negative impact of finance on growth. They argue that the high level of liberalization of the financial sector (financial deepening) results in decreasing the total real credit to domestic firms, and thereby lowers investment and slows economic growth. [Al-Malkawi et al. \(2012\)](#), who examine the short- and long-run relationship between financial development and economic growth in the United Arab Emirates (UAE), suggest that the relationship between them is negative. They attribute this result to the transition phase of the UAE financial system during the period of study, as well as to the weak regulatory environment of the financial intermediaries.

To the best of our knowledge, only few studies attempt to investigate the relationship between financial development and economic growth in the context of a natural-resource dominated economy.² [Nili and](#)

[Rastad \(2007\)](#), and [Beck \(2011\)](#), are among the few authors who consider how the abundance of oil can affect the relationship between financial development and economic growth, and whether there is any indication of a natural resource curse in the relationship between financial development and economic growth. [Nili and Rastad \(2007\)](#) examine the role that financial development plays in oil-rich economies. They find that financial development has a weaker effect in oil-exporting countries than in oil-importing countries. They suggest that this result is not only due to the high dependence on oil in the former but also due to the general inefficiency of financial institutions in oil-dependent countries. [Beck \(2011\)](#), in turn, argues that the ambiguity in the relationship between financial development and economic growth in oil-rich (or natural-resource-rich) countries in the previous literature reflects the fact that economic growth is driven by different forces in these countries, and that the financial sector has a different structure and plays a different role there. Nevertheless, his findings indicate, contrary to [Nili and Rastad \(2007\)](#), that there is in fact no significant difference in the impact of financial development on economic growth between resource-based countries and non-resource based countries. However, when he assesses the level of countries' reliance on natural resources, he finds that countries that depend more on exports of natural resources tend to have underdeveloped financial systems. This is despite the fact that banks in resource-based economies tend to display higher profitability and are more liquid and better capitalized. However, they offer less credit to the private sector, which he attributes to the incidence of financial repression in resource-based countries. Therefore, he concludes that resource-based countries can be subject to the natural resource curse in financial development.

We seek to contribute to this debate by considering the case of a resource-dominated country: Saudi Arabia.³ The economy of Saudi Arabia is heavily dependent on oil revenue. Recently, however, the government has been promoting diversification toward the non-oil sector and reducing country's dependence on the petroleum sector. Since the implementation of the fourth development plan (1985–1990), in particular, significant priority has been given to the financial sector. We investigate, therefore, the role that the financial sector plays in this country's economy, and whether this role differs between the traditional sector (petroleum) and the emerging non-oil sector.

To this effect, we collect time-series data from 1968 to 2010 and apply an ARDL bound test approach to cointegration to examine the long and short-run impact of the financial sector on economic growth. There are various methods for examining the existence of a long-run relationship between the variables of interest: [Engle and Granger \(1987\)](#) and [Johansen \(1988, 1991\)](#) are the most widely adopted approaches. We, however, follow the ARDL bound test approach for testing the finance and growth nexus due to the favorable features of this technique compared to the other conventional approaches, as discussed in more detail in the methodology section. Furthermore, we deviate from the usual approach by using principal component analysis (PCA) to build a single composite indicator of financial development.

Our findings indicate that financial development has a statistically significant and positive effect on the non-oil sector only. In contrast, the effect on overall GDP is either not statically significant or negative and significant. We consider this an important result, not only from the perspective of an oil-rich economy, but also in the general context of the financial development-growth debate.

The remainder of this paper is organized as follows. [Section 2](#) provides a brief overview of the Saudi economy and discusses the key

² A number of studies provide evidence that countries endowed with natural resources have a tendency to grow more slowly than less resource-abundant countries. This phenomenon is known as resource curse thesis (see [Nankani, 1979](#); [Sachs and Warner, 2001](#)). Resource curse refers to the negative externalities stemming from the abundance of natural resources to the rest of the economy. See [van der Ploeg \(2011\)](#) for a recent survey on the curse of natural resource abundance.

³ Substantial literature focuses on single country studies, e.g., [Murinde and Eng \(1994\)](#) for Singapore; [Abu-Bader and Abu-Qarn \(2008\)](#) for Egypt; [Lyons and Murinde \(1994\)](#) for Ghana; [Odedokun \(1989\)](#) for Nigeria; [Agung and Ford \(1998\)](#) for Indonesia; [Wood \(1993\)](#) for Barbados; [Khan, et al \(2005\)](#) for Pakistan; [Hondroyannis, et al. \(2005\)](#) for Greece; [Ang and McKibbin \(2007\)](#) for Malaysia; [Majid \(2007\)](#) for Thailand; [Mohamad \(2008\)](#) for Sudan; [Singh \(2008\)](#) for India; [Safdari et al. \(2011\)](#) for Iran; [Thangavelu and Ang \(2004\)](#) for Australia; [Muhsin and Eric \(2000\)](#) for Turkey; [Qi and Teng \(2006\)](#) for China; [Ghatak \(1997\)](#) for Sri Lanka and [Al-Malkawi et al. \(2012\)](#) for UAE.

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