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## **Review of Literature on Sectoral Interactions of Financial Sector Development**

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### **ABSTRACT**

This article reviews the literature studies on the sectoral interactions of financial sector development. The economic sectors such as foreign trade, industry, and tourism have been taken into consideration with this respect. The study reviews this literature based on three major distinctions: Time series studies for individual country contexts, panel data studies and cross sectional data studies for group of countries or regions. The major conclusion of this study is that although huge number of studies have been carried out for financial sector development, consensus on its impact on the economic sectors are of still mixed findings.

*Keywords:* Financial Development; Review; Literature.

*Jel Codes:* B26, C10, E44

### **1. INTRODUCTION**

Literature on financial development and its role in economic growth has faced tremendous number of studies since Patrick (1966). Many studies have tested the validity of supply-leading hypothesis where financial sector precedes changes in economic growth and of demand-following studies where economic growth precedes changes in financial sector. However, results of these studies did not reach a common conclusion as they are of mixed findings. It is generally found and argued that financial sector has a catalyst role for economic growth (Sodeyfi, 2016; Fethi & Katircioglu, 2015; Katircioglu et al., 2015; Chandio, 2014; Fethi et al., 2013a; 2013b; Jenkins & Katircioglu, 2010; Waheed & Younus, 2010; Soukhakian, 2007a; Soukhakian, 2007b). As also mentioned in the study of Jenkins & Katircioglu (2010), it is proved that financial development is essential for economic growth (Calderon and Liu, 2003) as it provides support for achieving a high economic growth (Chang, 2002) and also has a positively significant relationship with economic growth (Mazur & Alexander, 2001). But, on the other hand, De Gregorior and Guidotti (1995) argues that financial sector development significantly might reduce economic growth for countries with high inflation rates.

The links of financial development / sector with the sectors of the economy remained unstudied over a very long years. The last two decades have started to fill this gap with this respect. Among the studied research areas are the links of financial sector with trade, tourism, and energy sector. Against this backdrop, this article reviews empirical studies which have been done for the nexus between financial sector and economic agents till the date. The study is organized and designed separately as panel data, time series, and cross-section data categories. The next section will start by time series data studies.

## **2. REVIEW OF FINANCIAL DEVELOPMENT INTERACTIONS**

This section reviews time series data studies in the field with a main focus on individual countries. Table 1 summarizes their major findings with this respect:

**Table 1. Summary of Literature Studies**

Authors	Topic	Finding
Jenkins & Katircioglu (2010)	Finance, Trade, & Growth	Bidirection among any pair
Beck (2002)	Finance & Trade	Finance leads to Trade
Gokmenoglu et al. (2015)	Finance, Trade, & Growth	Finance and Trade leads to growth
Kletzer & Bardhan (1987)	Credit markets & Trade	Credit markets affect trade
Soukhakian (2007b)	Finance, Trade, & Growth	Finance leads to Trade
Neusser & Kugler (1998)	Finance & Manufacturing	Finance leads to manufacturing
Buyuksalvarci & Abdioglu (2010)	Stock markets and macroeconomic performance	Stock markets leads to macroeconomic movements
Kalim & Shahbaz (2012)	Stock markets & FDI	FDI leads to stock markets
Katircioglu (2012)	Finance, Trade, & Growth	Finance leads to Trade
Nazlioglu et al. (2009)	Finance and investment	Bidirectional causality
Rjoub (2011)	Stock markets and business cycles	Business cycles cause stock volatility
Shaeri et al. (2016)	Finance & Oil Markets	Oil markets affect financial sector
Siddiqui (2008)	Banking & Stock Markets	Banking reforms affect stock markets
Cetin & Ecevit (2017)	Finance & Energy	Financial sector affects energy consumption and stimulates pollution
Katircioglu & Taspinar (2017)	Finance & Energy	Financial sector impacts on environmental pollution
Jalil & Feridun (2011)	Finance & Energy	Financial sector impacts on environmental pollution
Kahouli (2017)	Finance & Energy	Mixed causality
Omri et al. (2015)	Finance & Environment	Neutrality hypothesis
Coban & Topcu (2013)	Finance & Energy	Finance causes energy
Abbasi & Riaz (2016)	Finance & carbon emissions	Finance cause emissions
Furuoka (2015)	Finance & Energy	Energy markets drive financial development
Ohlan (2017)	Finance, Tourism, & Growth	Tourism affects growth through financial sector
Katircioglu et al. (2017)	Finance & Tourism	Bidirectional Relationship
Chen (2010)	Finance & Tourism	Tourism enhances corporate performance
Kumar (2014)	Finance & Tourism	Capital drives tourism
Bell & Rousseau (2001)	Finance & Industry	Finance drives industry
Shahbaz et al. (2017)	Finance & Industry	Finance drives industry
Imamoglu et al. (2018)	Finance & Informality	Finance drives informality
Berdiev & Saunoris (2016)	Finance & Informality	Finance drives informality

Jenkins & Katircioglu (2010) studies on the links of financial sector with international trade and growth in Cyprus and found that output (economic) growth precedes changes in financial sector and international trade confirming the validity of demand-following hypothesis. Beck (2002) focused on the link between financial sector and international trade and found that trade patterns depend on financing. On the other hand, Gokmenoglu et al. (2015) also focused on the links of financial sector with trade and growth in the case of Pakistan and found that financial and trade sectors precedes significant changes in the economy of Pakistan. Kletzer & Bardhan (1987) found that financial (credit) markets are major determinants of international trade financing. Soukhakian (2007b) studied on the

links of financial sector with trade and growth in Japan and found that trade sector is finance-led. Neusser & Kugler (1998) studied on the effects of financial sector development on manufacturing industry in the OECD countries and found that there exist significant effects of financial sector on manufacturing production.

Buyuksalvarci & Abdioglu (2010) focused on the Causal Relationship between stock markets and macroeconomic aggregates in the case of Turkey and found that stock markets significantly affects foreign exchange and gold markets, money supply, inflation levels, and industrial production in Turkey. Thus, they suggest that money markets are stock markets driven in Turkey. Chimobi (2010), Karacaer & Kapusuzoglu (2010), Saqib & Waheed (2011), and Kaushal & Pathak (2015) found similar evidences respectively in the cases of Nigeria, Turkey, Pakistan, and India. On the other hand, Kalim & Shahbaz (2012) prove the significant role of foreign direct investment (FDI) on the stock markets in Pakistan. Katircioglu (2012) studied on the effects of financial sector on international trade and economic activity and found that financial sector significantly impact on trade and growth in Sub-Saharan Africa. Similar results were also found in the study of Katircioglu et al. (2007) for India. Nazlioglu et al. (2009) analyzed interactions between financial development and investment patterns in Turkey and found that there is bidirectional causality between private investment and financial development while unidirectional causality that runs from public investment to financial sector development exists in this country. Rjoub (2011) finds that business cycles and financial crises significantly leads to volatilities in the stock markets.

Shaeri et al. (2016) studied on the relationship between oil price risks and financial/non-financial sectors and found that oil price risks significantly affect these sectors while Sodeyfi & Katircioglu (2016) find that oil prices significantly affect business conditions and economic growth in the selected countries and Memis & Kapusuzoglu (2015) find that global oil prices significantly impact on stock markets. Siddiqui (2008) studied on the effects of banking sector reforms on stock volatility of banks and found significant effects in Pakistan.

The last decade has also faced studies that focused on the effects of financial sector and development on energy sector and its role in environmental degradation. Table 1 also summarizes such studies. For example, Cetin & Ecevit (2017) test the effects of financial sector development on energy consumption and therefore carbon dioxide emissions in Turkey and found that financial sector significantly impact on energy sector and indirectly this leads to increases in the emissions level. Katircioglu & Taspinar (2017), as an interesting approach, test the moderating role of financial sector in the environmental Kuznets' Curve for Turkey and found a significant moderating role of financial sector on the effects of real income growth and energy consumption on carbon dioxide emissions. Similar result has been found by Jalil & Feridun (2011) for the case of China. However, Kahouli (2017) examined the short and long run causality relationship among economic growth, energy consumption and financial development in the case of the South Mediterranean Countries and found mixed results on the causality evidence between financial development and energy consumption although long term association is found in general. Omri et al. (2015) focused on financial development, environmental quality, trade and economic growth in the case of MENA countries and confirmed neutrality hypothesis between financial sector and environment quality.

Coban & Topcu (2013) analyzed the nexus between financial development and energy consumption in the European Union (EU) using a dynamic panel data analysis and found that changes in financial development precedes changes in the volume of energy consumption in the EU countries. Abbasi & Riaz (2016) studied on the relationships between CO<sub>2</sub> emissions and financial development in Pakistan using an augmented VAR approach and found that financial sector development in Pakistan leads to increases in the levels of carbon emissions through energy consumption.

Furuoka (2015) analyzed the relationship between financial development and energy consumption using a heterogeneous panel of Asian countries and found that financial sector in Asian countries are energy markets driven. They conclude that they are energy markets who drive financial sector development in Asian countries. Bekhet et al. (2017) studied the role of financial development on energy sector and emission levels in the case of Gulf Cooperation Council (GCC) countries and found that changes in financial sector development leads to changes in energy consumption and therefore carbon emission levels. It is important to note that in the last decade there have been too many studies in the energy economics literature that search the nexus of finance and energy or finance and pollution; thus, articles presented in this study are sufficient enough to show that generally these studies found

significant relationship between financial sector and energy markets. But, the direction of causality till the date is of mixed findings.

Financial sector has been also linked to tourism sector as a new debate in the literature. Ohlan (2017) focused on interactions between tourism and financial sectors in the case of India and found that there is a long term link between tourism and various financial sectors. Furthermore, Ohlan (2017) found that tourism affects the growth of the Indian economy through the financial sector. Katircioglu et al. (2017), on the other hand, extended the study of Ohlan (2017) and analyzed the empirical relationship between financial development and tourism development in Turkey, which has shown tremendous development in both sectors in the last decade. Katircioglu (2017) found that tourism development in Turkey is significantly influenced by financial markets; their results also reveal that changes in tourism sector precede changes in financial volume. At the end, Katircioglu et al. (2017) concludes that tourism development and financial development in Turkey have a long-term and reinforcing interaction. Chen (2010) concludes that tourism growth enhances corporate performance of the Taiwanese hotels where Kumar (2014) finds unidirectional causality that runs from capital growth to tourism in Vietnam. It is very important to note that the nexus between financial sector and tourism is a quite new research area and deserves further attention from researchers owing to the fact that there are only a few studies in the area.

Financial sector has also been linked to industrialization recently in the relevant literature. Bell & Rousseau (2001) tested the role of financial sector in industrialization development in India and found that industrialization in India is finance-led. They found that the financial sector in India was instrumental in promoting aggregate investment and output. They also found that in the steady shift toward industry that has characterized India's development. Again Shahbaz et al. (2017) focused on testing the validity of finance-led industrialization in the cases of India and China and they confirmed the significant role of financial sector in industrialization development in both countries.

Recently, Imamoglu et al. (2018) focused on an interesting study field where they linked financial sector to informal economic activity. It is important to note that various definitions of informal economic activity are available in the relevant literature (Imamoglu, 2016; Fethi et al., 2006; 2004; Williams, 2011; 2010; 2008; Williams & Round, 2009). According to the findings of Imamoglu et al. (2018), financial sector exerts spillover effects on the size of informal economic activity in the case of the selected European Union countries. They also confirmed the validity of an inverted U-shaped relationship between financial development and informal economic activity. Berdiev & Sounoris (2016) did similar investigation for the case of 161 selected countries and found that financial development reduces the size of the shadow economy. On the other hand, they also found that there exists a reverse causality that runs from shadow economy to financial development. Some studies among the others which found similar results are Blackburn et al. (2012), Bose et al. (2012), and Capasso & Jappelli (2013).

The review in this article has shown that financial sector significantly interacts with economic sectors no matter which region or country is concerned. The next section will conclude the study.

### **3. CONCLUSION**

The aim of this study was to review and criticize interactions of financial sector with the other economic aggregates or sectors. The various studies using time series, cross section, and panel data methodologies have been selected with this respect. As a conclusion, it can be said that financial sector is always in close relationship and significant relationship with the other economic aggregates. The selection of methodology and countries/regions did not show any difference. Therefore, no matter what region/country or methodology is selected, financial sector exerts significant effects on sectors like trade, industry, informal economy, and tourism among the others. Some studies also confirmed the reverse relationship where economic sectors significantly impact on financial sector development. However, results of different studies are not homogeneous and are of mixed findings. But finally, this study concludes that financial sector is not only a source of macroeconomic performance but also a significant source for sectoral performance in the economies.

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