

IMPACT OF PARTICIPATION AND CONVENTIONAL BANKS ON ECONOMIC GROWTH: CASE OF TURKEY*



KATILIM BANKALARI VE KONVANSİYONEL BANKALARIN EKONOMİK BÜYÜME ÜZERİNDEKİ ETKİSİ: TÜRKİYE ÖRNEĞİ



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Abstract

The main purpose of this study is to focus on the concept of economic growth with special reference to the case of Turkey, relies on an approach from the perspective of participation banks and conventional banks to examine the institution of banking and economic growth. Using quarterly data for the period of 2006-2017, the study uses the loan volumes of the conventional and participation banks in order to measure the impact of GDP representing economic growth and of the banks upon the financial system. The series are tested for stationarity via ADF unit root test and then their structural breakpoints are identified by using Zivot-Andrews test. Then Johansen cointegration and Granger causality test are applied. As the result, no trace of cointegration correlation is identified in the long term between the variables subjected to Johansen cointegration test. The causality correlation of the variables is tested via Granger causality test. Although it can be said that there is one-directional causality correlation as reverse for conventional banks, there is no bidirectional causality correlation between the variables for the participation banks in the long term.

Keywords: Economic growth, participation banks, conventional banks.

Öz

Bu çalışmanın amacı katılım bankaları ve konvansiyonel bankaların Türkiye'nin ekonomik büyümesine olan etkisini analiz etmektir. Analiz materyalleri olarak 2006 – 2017 yılları arası çeyrek dönemlik veriler kullanılarak ekonomik büyümeyi temsilen Gayrı Safi Yurtiçi Hasıla verileri ile bankaların finansal sisteme olan etkilerini ölçmek için konvansiyonel ve katılım bankalarının kredi hacim verileri kullanılmıştır. Analiz testleri olarak Adf birim kök testi ile durağanlıkları sınanan serilerin Zivot-Andrews testi ile yapısal kırılma noktaları belirlenmiştir. Johansen eşbütünleşme ve Granger nedensellik testleri ile sınanmıştır. Analiz sonucunda Johansen eşbütünleşme testi uygulanan değişkenler arasında uzun dönemde eşbütünleşme ilişkisine dair izlere rastlanmamıştır. Granger nedensellik testi ile nedensellik ilişkileri test edilen değişkenlerin aralarında uzun dönemde konvansiyonel bankalar için ters yönlü bir tek yönlü ilişkiden bahsedilebilirken katılım bankaları için ise iki yönlü nedensellik ilişkisine de rastlanmamıştır.

Anahtar Kelimeler: Ekonomik Büyüme, Katılım Bankaları, Konvansiyonel Bankalar.

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GENİŞ ÖZET

Giriş:

Türkiye gibi özellikle gelişmekte olan ülkelerde kurumların ekonomik büyüme üzerindeki etkileri daha fazla önem arz eden sonuçlar ortaya koymaktadır. İyi organize edilmiş ve verimli çalışan kurumlar var olan kapasitenin daha etkin kullanılması, denetleyici ve düzenleyici fonksiyonlarla yoğunlaşmış ve nitelik kazanmış bir yapıya kavuşmasını tetikler. Bu yapı, var olan kapasitenin âtil yanlarını minimuma indirerek ya da tamamı ile efektif bir alan oluşturarak daha iyi kanalize olur ve dolayısıyla ekonomik büyüme için daha etkin bir faaliyet alanı kazandırır. Çalışmanın temeli ise büyüme kavramının modern dönem dinamiklerinden olan bankacılık kurumlarının ekonomik büyüme üzerindeki etkisini farklı açılardan incelemektir.

Araştırma Amacı:

Bankacılık kurumu günümüz koşullarında farklı amaç ve kitlelere özel hizmet vermek amacıyla farklı yapılanmalar göstermektedir. Çalışma konvansiyonel olarak nitelendirilen geleneksel bankacılık kurumları ve çeşitli ahlaki norm ve faiz hassasiyeti açısından farklılaşan katılım bankacılığı kurumları özelinde bankacılık kurumlarının ekonomik büyümeye etkisinin varlığını incelemeyi amaçlamaktadır. Katılım ve konvansiyonel bankaların Türkiye'nin ekonomik büyümesi üzerinde etkileri olup olmadığı sorusuna cevap aramaktadır.

Metodoloji:

Çalışma ekonomik büyüme değişkeni olarak GSYİH verileri, bankacılık değişkeni olarak ise bankaların kredi hacmi verilerini çeyreklik dönemler halinde kullanarak hipotezi 2006-2017 yılları arasında sınamaktadır. Veriler zaman serisi analiz yöntemi ile test edilmiştir. Serilerin sırasıyla ADF birim kök testi ile durağanlıkları sınanmış, Zivot-Andrews testi ile yapısal kırılma noktaları sınanmıştır. Johansen eşbütünleşme testi ile eşbütünleşik bir ilişkinin varlığı sınanmış ve Granger nedensellik testi ile nedenselliğin varlığı test edilmiştir.

Bulgular:

Yapılan sınamalar sonucu durağanlıkları elde edilen serilerin yapısal kırılma noktaları belirlenmiştir. Eşbütünleşme testleri sonucundan değişkenler arasında uzun dönemde eşbütünleşme ilişkilerine rastlanmamıştır. Nedensellik test sonuçlarına bakıldığında ise değişkenler arasında uzun dönemde konvansiyonel bankalar için ters yönlü bir tek yönlü ilişkiye rastlanırken katılım bankaları için iki yönlü nedensellik ilişkisine de rastlanmamıştır.

Sonuç:

Granger nedensellik bulgularına göre, katılım bankalarının kredi hacimleri ile gayri safi milli hasıla arasında uzun vadede tek veya iki yönlü ilişki yoktur. Gayri safi milli hasılanın konvansiyonel banka kredisi hacimlerinin nedeni olduğu söylenebilse de konvansiyonel banka kredisi hacimleri gayri safi milli hasılanın nedeni değildir.

1. INTRODUCTION

The concept of economic growth has gained prominence after the industrial revolution. It is essential to examine this concept referring to improvement in life standards from a historical perspective. Welfare has been at the epicenter of the policy goals of states in the history and this concept referred to wealth of nations as well as betterment and wellbeing of the individuals. Welfare has been a step towards achievement of the current living standards and encompasses economic growth as well. Hammurabi, prescriber of the first human-made laws in history, notes that god calls his name to secure welfare of the mankind in the text of his laws (Tosun & Yalvaç, 2002). Improvement of life standards has been one of the major goals of states and political entities. Economic growth has gained different forms through changes in the forms of government in the history. In the past, wars and spoils have served as sources of economic growth; however, today, technological advances, labor force, production and physical capital play prominent role in generating wealth and welfare. Additionally, population size, institutional design, human capital, human development and environmental factors are to be considered as essential components of a steady economic growth. Today, impacts of institutions in developing countries like Turkey are important. Well-organized and well-operating institutions contribute for effective use of the existing capacity and for achievement of a structure and outlook equipped with supervisory and regulatory functions. This structure minimizes the idle capacity and creates an effective domain for better economic activities which eventually contribute to economic growth. In this sense, banking institutions are one of the institutions that offer qualified contribution to the economic growth in the developing nations. The banking institution which becomes visible and influential in the economy through its roles in the banking-related financial crises within the financial system has been studied as it provides findings supporting the premise that these institutions have great impact on economic growth.

2. BANKING AND PARTICIPATION BANKING

Banks which initially emerged as venues for storing money over the time have turned into indispensable parts of the loaning mechanism as well. People and institutions seeking loans turn their eyes to banks; however, contemporary practices also make non-banking mechanisms and institutions including institutions offering financing for non-saving purposes alternative to the conventional banks which start suffering from loss of profit. As a result, now banks attempt to offer alternative instruments including investment funds and insurance policies (Bishop, 2013).

Banks have expanded the scope of their activities and objectives and become universal actors of the financial system and indispensable part of the economies and monetary & credit policies. However, they also consider the local priorities and needs, thus, they become major elements of the national economic policies and legal structures as well. National authorities have taken the banks under control through legal instruments considering the economic structures and needs but they have also taken measures to make sure that the banks operate freely and smoothly in a way to contribute to the national economy. By doing so, national administrations have recognized the role the banks play in the contemporary understanding of the global economy and finance. Due to differences between policies and policies national authorities employed vis-à-vis the banks, structural differences are observed among their standings and functions in different countries. As a result, it is now difficult to offer a general framework and description that fit all banks which exhibit structural differences. A number of definitions have been offered to describe the nature and activities of the banks. These definitions often fall short but yet place emphasis upon their role as collecting deposits and lending loans (Geylan, 1985).

In a simple sense, a bank is an economic enterprise that collects deposits, use these deposits in the most optimal way possible through loaning and borrowing transactions and that is most focused on credit transactions. In other words, banks are the institutions that perform capital, monetary and

credit operations and transactions, provide funds and financing for private and public entities, the state and the enterprises so that they cover their financial needs. Money and all other instruments that represent it are within the scope of the banking activities. By using these instruments, banks serve as mediators, transporters and collectors; in this way, they collect deposits from individuals and use these deposits within the economic cycle. By collecting deposits and lending loans, they contribute to monetary and credit policies. Additionally, banks protect movable assets of the people and entities, get involved in stock exchange activities and transactions to contribute to development. As a whole, they make positive contribution to the national development through the activities and transactions they perform. In the post-modern era, the banks have expanded the scope of their activities that now go beyond the traditional services. Considering the global and national circumstances of the time and change, they offer innovative solutions in their products and services. Like every enterprise, banks seek to maximize their profit and incorporate shareholders, debtors and creditors as stakeholders in their activities which are performed on the basis of capital utilization (Ayanoğlu, 2013). In short, banks serve as financial mediators, meet credit and loan demands, play effective role in monetary policies, make contribution to economic stability, keep payment systems vibrant through technological advances and provide funds for exports and imports.

Participation banking, on the other hand, as opposed to the conventional banking, has attracted attention from people and entities from different backgrounds, particularly in petroleum-manufacturing states mostly because of the observable contribution of the interest-free funds and instruments to the development in the aftermath of the 1960s. Initially, funds have been accumulated in predominantly Muslim countries due to religious sensitivities; motivation and urge to use this accumulation within the economic system led to new pursuits as well. The interest-free models made part of the economic life as a result of the religious stance associated with the fact that Islam strictly prohibits interest-based transactions have contributed to the development of interest-free banking as a major alternative. The interest-free banking model that started to emerge under the lead of Qatar, Indonesia, Saudi Arabia, Malaysia and United Arab Emirates is now also popular in non-Muslim countries including the United States, Great Britain and European countries as well (Özer & Şekeroğlu, 2017). Currently, there are strong views suggesting that Islamic economic model in its broadest sense can be referred to as an alternative to the existing models that are unable to effectively deal with the economic issues in times of crisis. Of these views, the approach by which Islamic economy is regarded as a third way in economic affairs particularly draws attention.

The third way approach can be explained as a set of efforts and pursuits to get rid of a vicious cycle of crisis and turmoil in the global economy which has been stuck with only two alternatives (capitalism and socialism-communism) for a long time. Dated back to the late 19th century, the third way approach has been first voiced by Pope Pius X who made a call for search of a third way as alternative to socialism and capitalism; the call was based on the need for alternative innovative policies that properly address the social needs (Romano, 2006). A discourse raised by Tony Blair and Bill Clinton in 1998 basically suggests that for contemporary concepts including rapidly changing economy, technological advances, economic growth, social justice and inequality, a middle way, independently of the capitalist or socialist policies and approaches, should be identified in the economy to achieve lasting welfare and social justice (Giddens, 2008). Against this backdrop, Islamic economy, while not having a long history and intellectual background, emerges as an alternative model of social and economic justice and welfare to the capitalist and socialist premises. Capitalism has strong abilities and dynamics; but its achievements are due to pure inequalities and exploitation of labor by the capital holders. Islamic economy places greater emphasis upon inequality and social justice than emphasis placed by socialist economy. From this perspective, Islamic economy presents itself as a third way. Modern capitalism avoids dealing with inequality whereas Islamic economy aggressively addresses this problem and presents itself as candidate to resolve it. At the same time, it preserves the energy and vibrancy of the economy thanks to its emphasis upon trade and entrepreneurship (Hefner, 2006). Islamic economy makes a difference through its interest-free model

and profit-and-loss-sharing scheme where Islamic banks play the most sophisticated role. When pursuing economic policies, the globalized world relies on financial institutions as the primary channels. Therefore, all these alternative thoughts and views of Islamic economy shall implement its policies and practices through the interest-free financial systems.

Participation banking was first introduced in Turkey in 1984, seeking to involve the monies not part of the economic system due to religious concerns by reliance on interest-free financing practices and transactions. Other goals and objectives include strengthening the activities and relations between Turkey and Islamic countries, benefitting from the funds accumulated in petroleum-manufacturing nations and attracting some of these funds to national economy of Turkey (Pehlivan, 2016). It is superficial to call the participation banking practices in Turkey as Islamic banking. In the literature, the activities and practices of Islamic banking institutions are referred to as private financial institutions, interest-free banking and Islamic banking; in Turkey, such activities are associated with the terms participation banking or participation bank operating by the principle of loss-and-profit-sharing. The term holds a more goal-oriented and universal connotation and places emphasis upon the fact that participants in the activities of such institutions subscribe themselves to the principle of loss-and-profit sharing without becoming involved in interest-based transactions. Currently, participation banks perform most roles and functions of the conventional banking institutions including insurance, barter, financial leasing, factoring as well as other similar financial methods and practices. When performing these activities and transactions, they rely on an interest-free model and thus serve as alternative to the conventional banks; additionally, they also play roles that complement the conventional system by creating diversity within the economic system (Özulucan & Deran, 2009).

Under the banking regulations in Turkey, participation banks are authorized to collect funds and deposits; depositors who take part in the participation scheme of these banks become shareholders of the potential loss or profit associated with the activities of the bank. In the funding process, three main methods; profit-and-loss-sharing, manufacturing support and financial leasing, are employed. Instead of providing loans in cash for commercial and industrial enterprises, participation banks rely on financial support methods compatible with the interest-free transaction models in compliance with the existing legislations. Participation banks now take a larger share of the banking sector as well. Their rise within the banking sector and the significant growth rate of their products and services indicate that the participation banks become crucial components and actors of the financial and economic system (Pehlivan, 2016).

3. THEORETICAL BACKGROUND

As a discipline and as a scholarly endeavor, economics has gained importance and prominence over the course of history because economic activities have become dependent upon institutions and the institutionalization of these activities. No institution has ever been able to stand independently. Every institution has emerged out of power struggle and interaction between the ruling class and the governed entities and masses. It now becomes apparent that power struggles and pursuit of rights remain in effect as a reflection of economic thoughts and views in the political domain of institutions. In this process, the institutions appear to be mediators that determine the macro effect of the micro activities. The institution of banking is one of the most important institutional settings in this process. Playing central roles in the heartland of the financial system, the banking institutions serve as key actors of mediation between people and the financial system. Therefore, relationship between banking and economic growth, a macroeconomic factor, holds significance because the most important indicators of the financial activities that contribute to economic growth can be observed in banking institutions. Another concept that should be addressed in reference to economic growth is sustainable development. For a sustainable economy, this concept bears huge importance. A review of the economic growth data reveals that there has been welfare improvement since the Second World War. The prewar indicators and data reveal that economic growth and development has not been

sustainable and stable in this period. However, the sustained growth, achieved in the aftermath of the Second World War, led to improvements in living standards and general level of welfare.

Economic growth depends on a number of factors; but capital and technology, two main sources and components of growth, are included in the financial system through the lead role of banking sector. In contemporary world, the main difference between developing and developed nations is the advanced status of the financial systems in the latter. It should be noted that banks are the central institutions of the financial system. The financial systems of developing nations including Turkey make progress through the banking sector. Advanced technology makes access to financial markets easier and transparent; as a result, the rapid inclusion of the people and entities in the financial markets contribute to the sustainability of the banking sector simply because banks serve as the first channel to perform transactions and become part of the financial system. In well-developed markets, knowledge and information is transmitted very fast; for this reason, individual investors rely on individual preferences rather than seeking counseling of firms that analyze the source of investments. This will ensure development of broad market where banking institutions will be eliminated; but this will also obscure the promotions and incentives towards innovative projects that would contribute to growth. The role of transmission the banks play in this process is to specify and analyze the information they receive, to alleviate the impact of potential obstructions by maintaining long term relationships with the firms or individual investors and to make incentives and investments more efficient and effective. The banks have the leverage to make investment in public markets without expressing their decisions; this allows the firms, managers and individual investors to do research on the market conditions before making investment. This will generate positive effects upon source allocation and growth and offer fertile opportunities for the investors in the market (Levine, 2004). The banking sector includes the funds and deposits needed for growth in the system and ensures their usage in more active and efficient projects; this attracts the entities and individuals to the sector; eventually, the process leads to an increased amount of saving which resolves a problem that many nations encounter. The banks support the capital accumulation through credit and loaning system and contribute to generation of jobs. All these factors directly contribute to economic growth.

When examining the relationship between finance and growth, it is appropriate to rely on Romer's endogenous growth model. Romer, explaining his model, internalizes the technological change, reviews the impact of welfare outcome and growth rate in the long term and concludes that it is proper to analyze the results based on numeric methods in terms of balance and efficiency (Romer, 1986). In his article published in 1993, Pagano, explains the linkage between development and growth through endogenous growth model. Use of a certain portion of savings for investment contributes to explaining the impact upon growth (Pagano, 1993). The model analyzes linkage between production and investment, growth rate, capital efficiency, saving ratio. The model can be formulated as follows:

$$g = A\phi s - \delta \quad (1)$$

In this equation, g represents growth rate, A refers to capital productivity, ϕ to certain portion of investments, s to saving ratio and δ to amortization ratio. According to the model, financial development is affected by change in each of the variable on both sides of the equation (Tsuru, 2000). The model suggests that financial development mainly affects growth into ways: banking sector and financial institutions. When we review the equation from the perspective of banking sector, it becomes apparent that the banking sector is influential at the stage of channeling savings into investments which will lead to increased amount of savings. Increased amount of savings will also lead to greater economic growth. Savings will bring about a more effective source distribution through banking institution and will improve efficiency of the financial system. Therefore, increase in the capital will create positive impact upon growth. However, a certain detail in terms of the activities of Islamic finance should not be overlooked. From the perspective of banking institutions,

some differences in terms of source efficiency shall be observed in countries where Islamic finance is prevalent. Obviously, the Islamic financial institutions are able to use the funds they attract in products and services compatible with the tenets of Islamic jurisprudence whereas the conventional financial institutions have greater leverage in this regard. A similar case shall be observed in the case of savings as well. Islamic finance has an inherent structure that is compatible with the premises of Islamic law under which savings can only be used in commercial transactions (Demez, Karakoyun, & Hobikoğlu, 2017).

4. LITERATURE REVIEW

Initial works on the relationship between growth and banking were done in the second half of the 1800s. Those works first focused on industrialized nations like Britain; subsequently, Schumpeter, Gurley, Shaw, McKinnon further contributed to this emerging literature. Levine's works, on the other hand, adds wealth and richness to the finance-growth literature. Walter Bagehot is the first scholar to study in this field. Bagehot (1896) notes that money is undisputable source of power and that Britain is the country with the largest monetary accumulation. He further adds that Bank of England, by making use of the loans and monetary funds, contributed to the development and reconstruction efforts of the undeveloped nations. Bagehot argues that the banks makes huge contribution to the growth and development of the nations through financing infrastructure efforts including construction of railways and that they may empower small investors who would in turn contribute to the economic growth. In cases where the interest rates of the loans by banks are smaller than the profit rates of the small investors, the investors will maximize their profits through the loans they borrow and they will make these funds and the profits part of the financial system (Majumder & Eff, 2012). Joseph Schumpeter analyzed the role of banks and loans in the system that would finance the entrepreneurs. Schumpeter (1911) argues that an advanced financial system generates innovative products and processes that would make investors achieve their goals and thus accelerate technological innovation process and economic process (Adusei, 2012).

Robinson (1952) who investigates the relationship between finance and growth relied on a different approach and offered a demand-oriented proposal. According to this proposal, financial development is not the actual element and initiative is the guide whereas finance is the component that follows. As the economy follows a trajectory of growth, financial services generate their own demand. Robinson argues that this promotes financial development (King & Levine, 1993). Gurley and Shaw, in their article "Financial aspects of economic development" (1955), proposed that the interests of the society are important element in the analysis of the impact generated by financial system upon economic growth. Gurley and Shaw argue that as a whole, the neoclassical synthesis and particularly the Harrod-Domar growth models incorporate serious flaws, also noting that this analytical tradition fails to consider the financial mediators that identify the banking sector as a declining industry compared to other financial institutions (Stolbov, 2013). They base this criticism upon the empirical findings of Goldsmith who documented that the US banking sector experienced a 30 pct decline relative to the other financial mediators (120.5 pct as comparison to 94.7 pct). According to Gurley and Shaw, banks are not unique and indispensable in generating loans and credits and other financial mediators also optimally affect the optimal money supply in the economy. This impact is of the nature to back up the idea that growth associated with non-banking institutions is significant and taken into consideration.

Gerschenkron (1962) notes that underdeveloped and developing nations cannot trust the unaudited and non-institutionalized capital markets to generate funds for large firms; for this reason, compared to the developed nations, the less developed and developing countries need an institutionalized banking sector that offer auditing and innovation as well (Miwa & Ramsever, 2002). Patrick (1966) presnted the interlinkage between financial development and economic growth with

reference to supply and demand. In the demand-oriented approach, the financial structure determines its demand according to economic growth. In other words, financial demand is passive in the growth process but allows growth. In the supply-oriented approach, it is assumed that the financial institutions accumulate savings which are transformed into investments. Supply is essential for the development of sectors of the economy; this will then contribute to growth. Patrick is the first to attempt on identifying causality between finance and growth (Stolbov, 2013). Cameron (1967) analyzed the financial institutions with reference to banks and referred to these institutions as the initial stage of economic growth and industrialization. Basically, Cameron views the banking system as a player that leads and promotes economic growth (Nordvik, 1993).

A review of the scholarship up to 1960s shows that most of these works were focused on theoretical resolutions. It appears that empirical works started to become more visible since then. Goldsmith (1969) attracted attention with his work where he reviewed the period of 1860-1963. The work identified correlation between economic growth and size of financial system. McKinnon (1973) and Shaw (1973) authored a seminal work that served as a reference for the future analyses on the subject. McKinnon and Shaw stressed the capital accumulation and its impact upon growth, noting that the major reason for lack of capital accumulation was underdevelopment of financial system. Lucas (1988) reviewed the correlation between financial system and economic growth through endogenous growth model. Romer and Lucas, referring to the correlation between financial institutions and economic growth, noted that the financial institutions contribute to economic growth by improving the productivity of investment. King and Levine (1993), in their work where they reviewed eighty countries for the period of 1960-1980, argued that welfare level is associated with rapid growth rate, physical capital accumulation and economic efficiency. Levine and Zervos (1998), in their work focusing on the period between 1976 and 1993, identified correlation between the stock exchange market and advanced banking institutions and economic growth, capital accumulation and efficiency. Works by Levine expanded the sphere of the theory and contributed a great deal to theoretical advancement.

This section deals with studies focusing on Turkey specifically. These works mainly address the period in the aftermath of 2000 and evaluate linkage between financial development and economic growth. Kar and Pentecost (2000), in a study reviewing the causality between financial development and economic growth in Turkey, suggests that when measured by income level, causality is established from financial development towards economic growth, and when bank deposits and loan data are used to support financial development, growth leads the way for financial development. It appears that there is strong evidence suggesting that growth leads to development of financial sector. Gökdeniz, Erdoğan and Kalyüncü (2003), in their work focusing on the period of 1989-2002, does not identify any correlation between financial development and economic growth.

Atamtürk (2004), in his work focusing on the period of 1975-2003, employed the Granger causality test and identified correlation between development of financial sector and economic growth. This study which tested supply-oriented hypothesis also concludes that financial development has significant and positive impact upon economic growth. Onur (2005), relying on autoregressive model for the period of 1980-2003, concludes that financial liberalization, financial development and financial openness are not the cause of gross national product and that gross national product is significant vis-à-vis financial development, financial openness and financial liberalization. Aslan and Küçükaksoy (2006), relying on Granger causality test for the period of 1970-2004, refers to causality from financial development towards economic growth and offers findings that support the hypothesis suggesting that financial development contributes to economic growth. Aslan and Korap (2006), relying on Johansen cointegration and Granger causality tests for the period of 1987-2004, underlines a long term correlation between financial development indicators and economic growth. However, the direction of causality may vary according to the financial development indicators. Acaravcı, Öztürk and Kakilli (2007), reviewing the period of 1986-2006, analyze

correlation between financial development and economic growth by using VAR analysis. The study finds no causal relationship between financial development and economic growth in the long term and refers to one-directional causality from financial development towards economic growth in the short term.

Kandır, İskenderoğlu and Önal (2007), focusing on the period of 1988-2004, run causality and cointegration tests by using stock exchange markets and banking data for financial development. The findings in the study suggest that financial development does not support economic growth; however, economic growth has some impact upon financial development. Afşar (2007), from a theoretical perspective, reviews the studies conducted in the field and examines the findings of the analyses on financial development and economic growth. The study stresses that there is strong correlation between financial development and economic growth, adding that there is no strong indication on the direction of causality. Altunç (2008), focusing on the period of 1970-2006, notes that the direction of the causality between financial development and economic growth varies by the factors representing financial development. Nazlıoğlu, Ege and Bayrakdaroğlu (2009), focusing on the period of 1987-2007, conclude that financial development has negative impact upon growth, also adding that private sector loans provide positive effect upon growth. Öztürk, Darıcı and Kesikoğlu (2011), for the period of 1992-2009, review eight countries and Turkey by relying on panel data analysis and conclude that there is evidence for one-directional causality between economic growth and financial development. Özcan and Arı (2011), using data for the period of 1998-2009 via VAR analysis, conclude that there is one-directional causality from economic growth towards financial development. İnce (2011), relying on cointegratio and Granger causality tests for the period of 1980-2010, refer to strong correlation in the short term between economic growth and financial development whereas they find no trace of correlation in the long term. Vurur and Özen (2013), reviewing correlation between conventional banking loans and economic growth for the period of 1998-2012 by using Granger causality test, refer to bidirectional causality from deposits towards economic growth, and from economic growth towards loans. Noting that expansion of deposits positively affects economic growth and loan volumes, the study further suggests that need for investment and financing as a result of economic growth shall make positive impact upon loan volume. Güneş (2013), analyzing data for the period of 1988-2009, refers to no trace of causality from financial development towards economic growth. Bozoklu and Yılcı (2013), reviewing some developing nations including Turkey for the period of 1998-2011 by reliance on Granger causality test, conclude that financial development is a strong cause of economic growth and that improvement in financial systems will increase economic growth rates of the nations. Bağcı and Akın (2016), relying on panel data analysis for the period of 2001-2015, conclude that the banks incorporate a number of factors affecting economic growth and that economic growth is sensitive to the developments in the banking sector. Decline in interest rate, expansion of bank deposits and of the loans lead to the rise in gross national product and to an increase in growth rate. Turgut and Ertay (2016), relying on Granger causality test for the period of 2003-2013, reveal that there is causality from banking sector towards economic growth. The study notes that the banking sector has determinative impact and may serve as an influential instrument that would determine the economic growth.

Furqani and Mulyany (2009) attract attention by means of being one of the initial works with special reference to Islamic finance. Focusing on Malaysia, the study relies on 32 observation points generated by three-monthly data for the period of 1997-2005. The variables' stationarity has been tested via unit root test and they are further subjected to Johansen cointegration tests; finally, vector error correction models are created via Granger test. The study concludes that Islamic banking has an effect towards investments in the short term whereas in the long term, a bidirectional interaction has been observed. The correlation between Islamic finance and the gross domestic product supports the banking-growth hypotheses. Abduh and Chowdhury (2012), reviewing the period of 2004 and 2011 by using cointegration and Granger causality tests for Bangladesh, examine the long term correlation between economic growth and Islamic banking. The analytical findings suggest a positive and

significant correlation between economic growth and Islamic banking in long and short term. The study notes that Islamic banking is an important factor in the devising of the national economy policies. Abduh and Omar (2012), focusing on the case of Indonesia for the period of 2003-2010 relying on ARDL approach, identify a bidirectional, long term and significant correlation between development of financial system incorporating Islamic values and economic growth. Abduh, Brahim and Omar (2012), reviewing the case of Bahrain for the period of 2000-2010 by reliance on Johansen and Juselius cointegration tests, analyze the long and short term linkage and correlation between economic growth and Islamic and conventional financial systems. The study concludes that there is no substantial evidence for short term correlation between Islamic financial system and economic growth whereas there is significant positive causality in the long term. For the conventional financial system, it is possible to speak of correlation in both long and short terms. Yazdan and Sadr (2012), reviewing the cases of Iran and Indonesia for the period of 2000-2010, identify a strong and positive bidirectional correlation in both short and long terms between economic growth and the financing provided by Islamic banks. Johnson (2013), reviewing 345 Islamic financial institutions from 190 countries for the period of 1960-2006 by reliance on two-staged least squares methods, identifies no significant correlation between Islamic finance, and financial stability and economic growth, and argues that this is attributable to the legal roots and origins of these instruments. Tajgardoon, Behname and Noormohamadi (2013), reviewing Asian countries for the period of 1980-2009 by reliance on Granger causality test, identify bidirectional correlation between Islamic banking and economic growth. Tabash and Dhankar (2014b), focusing on the case of United Arab Emirates for the period of 1990-2010 by reliance on Granger causality test, identify strong one-directional correlation between economic growth and Islamic finance. Tabash and Dhankar (2014a), in their study on Qatar, Bahrain and United Arab Emirates, conclude that Islamic banks support economic growth. The test results identify positive and significant correlation between economic growth and Islamic banking; the study refers to bidirectional correlation for Qatar and Bahrain and one-directional correlation for the United Arab Emirates from Islamic banking towards economic growth. Zirek, Celebi and Hassan (2016), reviewing 14 members of the Organization of Islamic Cooperation for the period of 1999-2011 by using panel data analysis, identify positive and significant correlation between Islamic financial system and economic growth. They note that expansion of the size of Islamic deposits, loans and assets leads to greater economic growth.

5. METHODOLOGY

Relationship between banking and economic growth has been first identified as part of the debates on the management of the funds in the developed and industrialized countries in the aftermath of the industrial revolution. This relationship, first analyzed within the basis of the theoretical premises offered by Bagehot and Schumpeter, attracted little attention up to mid-1900s; but this subject started to become popular in the aftermath of the Second World War. The war opened up a new era which borne serious consequences for the entire world, particularly the European nations. Most countries worked on to make sure that they survive the economic and financial turmoil and as part of these efforts, they took measures to strengthen their financial systems. Central banks in Britain and France were established for the financing of wartime activities (Goodhart, 2010). The banks established for this purpose were then seen as a solution for the development of the nations. With the amplified and intensified relationship between growth and financial markets, the linkage between growth and banking gained importance and attracted attention. As seen in the literature, number of accounts focusing on this matter increased since mid-1900s since when scholars also worked on numerical methods and analyses that go beyond theoretical approaches. The studies were mainly conducted by reliance on econometric methods. This study employs a dataset specific to economic growth and banking and runs an analysis by exercising unit root test, cointegration test and causality test.

The dataset to be used for economic growth is compiled out of the gross national product data based on the current production prices for the year 2009 accessed through the Central Distribution System Seasonal National Accounts of the Turkish Statistical Agency. In the analysis, economic growth is identified as dependent variable, and two different data groups representing two separate banking schemes. Because the study is focused on participation and conventional banks, data has been compiled for each of these banking systems. The gross national product data refers to economic growth whereas a dataset based on loan volumes of banking institutions has been compiled. The cumulative loan volumes of the participation banks retrieved from the Turkish Association of Participation Banks (TKBB) are used for participation banks. For the conventional banks, the total volumes of conventional bank loans retrieved via the Central Bank of Turkey's Electronic Data Distribution System are analyzed.

The data from the period of 2006-2017 is used in the study; 48 observation values are identified on the basis of four quarters for every year. The 2006 data range shall be more appropriate to effectively evaluate the distribution of the impacts of the 2008 global financial crisis. There are two major banking crises that may affect the selection of data groups in the study: the 2001 banking crisis and 2008 global financial crisis. The reviews and analyses show that the consequences of the 2001 and 2008 banking and financial crises were most severe in the years that follow the actual turmoil and crisis. For this reason, the impacts of the 2001 banking crisis have been eliminated within three years afterwards, making an analysis more accurate. Therefore, the selection of 2006 has not been included in the analysis of the 2001 crisis. The 2008 Global Financial Crisis has not been most disrupting as the 2001 Banking crisis in Turkey. However, its impact on the global scale has been devastating. As per the data in hand, the impacts of the 2008 crisis become more visible and measurable as of 2010. Therefore, the data for the year 2006 and its aftermath does not generate a tangible trend. Another reason for the selection of 2006 as the starting point is that the participation banks got involved in the sector and started to become influential actors. The interest-free financial systems that attracted attention after the 2008 crisis made the participation banks more popular which then contributed to their growth and expansion. For this reason, a review of 2006 and afterwards provides qualified data for the analysis of participation banks. From this perspective, selection of 2006 makes the analysis more plausible and acceptable.

6. ANALYSIS AND FINDINGS

Econometric model employed in this study is as follows:

$$\log Gsyh_{it} = \beta_{0it} + \log Kb_{1it} \beta_{1it} + \log Mb_{2it} \beta_{2it} + u_{it} \quad (2)$$

The variables tested in the study are LGSYH for gross national product, LKB for the participation banks and LMB for the conventional banks. To identify the stationarity, the variables are first subjected to the Zivot-Andrews structural break test; subsequently, they are tested via Johansen cointegration test to determine whether they are cointegrated; and finally, the variables are tested via VAR-modelled Granger Causality test. For the analysis, the variables are tested to determine stationarity. Augmented Dickey-Fuller unit root test is used to determine stationarity. The ADF unit root test results for the variables are presented in Table 1. LGSYIH, LKB and LMB variables are tested first at level and then subjected to stationarity test for primary differences. The unit root test results at level for the variables show that the variables are not stationary suggesting that series are not unit-rooted. Differences should be taken to transform non-stationary variables into stationary variables. To this end, the primary difference of the series is taken and the stationarity test is repeated. It becomes evident that the probability values of the series whose primary difference is taken are

smaller than 0.05 and thus, they are stationary and unit-rooted. That the series are stationary at primary difference allows to run cointegration tests between series and to investigate whether or not there is a long-term correlation (Fuller & Dickey, 1981).

Table 1: Augmented Dickey-Fuller Unit Root Test Values

Augmented Dickey Fuller	Level values		Primary difference values	
	Probability	Test statistics	Probability	Test statistics
LGSYH	0,7436	-1,6819	0,0000	-7,0771
LKB	0,7084	-1,7592	0,0000	-6,1483
LMB	0,3979	-2,3538	0,0070	-4,3054

Zivot Andrews unit root test developed by Zivot and Andrews (1992) to identify the structural breakpoints is run for the variables. The findings reveal that the probability values for the variables are smaller than 0.05. This means that they are unit-rooted for series. For the LGSYH, the breakpoint is last quarter of 2008; for LKB, it is the first quarter of 2008 and for LMB, it is the last quarter of 2015.

Table 2: Zivot – Andrews Structural Unit Root Test Values

Zivot - Andrews	Probability	Test Statistics	Break points
LGSYH	0,0015	-4,3509	2008: Q4
LKB	0,0110	-5,6736	2008: Q1
LMB	0,0046	-4,0440	2015: Q4

Johansen cointegration test analyzes whether or not there is a long-term correlation between series in order to test existence of a balance in the long run at the non-stationary series. It does not provide any data on the direction of the correlation; for this reason, causality test is employed to identify the direction of the correlation. For a proper Johansen cointegration analysis, the series need to be stationary at the same degrees. If the series are not stationary, the difference of the series is taken until they become stationary. However, the differentiation not only removes the impact of the permanent shocks of the series but also leads to disruption in the data in the long run for the series and causes certain errors (Cochrane, 1997).

There are two tests in the Johansen cointegration analysis: Trace and Max-Eigen tests. Trace test hypothesis is $H_0: r \leq r_0$, $H_1: r \geq r_1 + 1$ whereas Max test hypothesis is $H_0: r = r_0$, $H_1: r = r_0 + 1$. There is no cointegration vector if $r = 0$. If test statistics > critical value, then H_0 , in other words, null hypothesis is rejected (Johansen, 1988).

Table 3: Johansen Cointegration Test Values

Johansen Cointegration	Eigenvalue	Trace statistics	0,05 critical value	Probability value
LGSYH - LKB	0,2264	15,0599	18,3977	0,1379
	0,0749	3,5057	3,8414	0,0612

Table 4: Johansen cointegration test values

Johansen cointegration	Eigenvalue	Max-Eigen statistics	0,05 critical value	Probability value
	0,2264	11,5541	17,1476	0,2703
LGSYH - LKB	0,0749	3,5057	3,8414	0,0612

Table 5: Johansen Cointegration Test Values

Johansen cointegration	Eigenvalue	Trace statistics	0,05 critical value	Probability value
	0,1881	9,5645	18,3977	0,5231
LGSYH - LMB	0,0040	0,1842	3,8414	0,6677

Table 6: Johansen Cointegration Test Values

Johansen cointegration	Eigenvalue	Max-Eigen statistics	0,05 critical value	Probability value
	0,1881	9,3802	17,1476	0,4568
LGSYH - LMB	0,0040	0,1842	3,8414	0,6677

A review of the values presented at Tables 3, 4, 5 and 6 from the perspective of Johansen cointegration test criteria reveals that the test statistics values are smaller than the critical value at the 0.05 level of significance in all tables and that this indicates H_0 hypothesis cannot be rejected. No cointegration correlation has been identified between gross national product and the loan volumes of participation banks in the long term. Similarly, the results indicate no relationship between the gross national product and the conventional banks as well.

It is possible to offer some comments on the correlations between the variables by reliance on various tests one of which is the causality test that investigates causality between correlations and determines direction for a correlation. The Granger causality test is one such test that analyzes the causality between variables through mathematical methods. The Granger causality test is run in case series are stationary. This test investigates whether or not the independent variable is causally related to the dependent variable. In this setting H_0 hypothesis is offered as non-causality whereas H_1 hypothesis suggests that the independent variable is the cause of the dependent variable.

Table 7: Granger Causality Test Values

Granger Causality	Dependent Variable	Independent Variable	Probability value
LGSYH -LKB	LGSYH	LKB	0,5781
LGSYH - LKB	LKB	LGSYH	0,5060

Table 7 presents bi-directional causality test results for the LGSYH and LKB variables. For H_0 hypothesis, first line indicates that LKB variable is not the cause of LGSYH. For H_1 hypothesis, on the other hand, LKB variable is the cause of LGSYH. A review of the relevant variables for the first line reveals that the probability value is greater than 0.05.

This means that the H_0 hypothesis is accepted. We also conclude that LKB variable is not the cause of LGSYH variable. A review of the second line reveals that the probability value is greater than 0.05 which means that the H_0 hypothesis is accepted. This suggests that LGSYH variable is not the cause of LKB variable, meaning that there is no bi-directional causality between variables.

Table 8: Granger Causality Test Values

Granger causality	Dependent variable	Independent variable	Probability value
LGSYH -LMB	LGSYH	LMB	0,5240
LGSYH - LMB	LMB	LGSYH	0,3871

Table 8 presents one directional causality test results for the LGSYH and LMB variables. H_0 hypothesis, for the first line, reveals that LMB variable is not the cause of LGSYH variable. For the H_1 hypothesis, on the other hand, LMB variable is the cause of LGSYH variable. A review of the first line variables reveals that the probability value is greater than 0.05 which means that the H_0 hypothesis has been accepted. It also means that the LMB variables not the cause of LGSYH variable. A review of the second line results suggests that the probability value is not greater than 0.05. This means that the H_1 hypothesis has been accepted and that LGSYH variable is the cause of LMB variable.

A review of the literature reveals that there are a number of studies focusing on the impact of participation banks and of conventional banks on economic growth. Number of studies covering the impact of both the participation and conventional banks at the same time, and there is none in this category taking Turkey as a case. A review of the studies focusing on conventional banks and participation banks separately suggests that there is a vast literature for conventional banks for the case of Turkey whereas number of studies on participation banks is fairly limited. Studies analyzing the impact of conventional banks on economic growth mostly conclude that financial development is the cause of economic growth; however, when different time intervals are taken into consideration, not all studies refer to causality between financial development and economic growth for the case of Turkey. Most of these studies do not identify co-integration correlation; on the other hand, the findings of this study concur with those studies that identify such correlation. When the time interval is taken into consideration for the case of Turkey, there is no study focusing on conventional and participation banks at the same time. Additionally, the results and findings of the study support the findings presented in the literature.

7. CONCLUSION

This study investigates the impact of the conventional banking that made enormous progress in the aftermath of the 2008 financial crisis and of the participation banks that consolidated their status and strength through the measures and supervision cautions taken subsequent to the 2001 banking crisis in Turkey. As part of this investigation, the study analyzes the effect of loan volume of the participation banks upon the gross national product which represents national economic growth. The data has been adjusted through extraction of seasonal peaks and tested by ADF test for stationarity; the data has been transformed into stationary through first degree differences. Zivot-Andrews structural break test has been employed to identify structural breakpoints. A review of these points reveals that for LGSYH representing economic growth, the fourth quarter of 2008 is the breakpoint whereas the first quarter of 2008 is the breakpoint for LKB representing participation banks. For LMB representing the conventional banks, the fourth quarter of 2015 is a breakpoint. Johansen cointegration test is used to identify status of cointegration between variables; the findings reveal that there is no cointegration correlation in the long term between the loan volumes of participation banks

and the gross national product. The findings also underline no cointegration correlation in the long term between the loan volumes of conventional banks and the gross national product. These findings for the long term do not mean that they shall hold the same significance for short term. According to Granger causality findings, there is no one or bi-directional correlation between participation banks loan volumes and the gross national product in the long run. Differently, there is one-directional correlation has been identified between conventional bank loan volumes and the gross national product. Although it can be said that the gross national product is the cause of conventional bank loan volumes, conventional bank loan volumes is not the cause of the gross national product.

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