THE ROLE OF DEVELOPMENT BANKING IN PROMOTING INDUSTRIALIZATION IN TURKEY

Hüseyin Öztürk†, Derya Gültekin-Karakaş††, Mehtap Hisarcıklılar†††

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Abstract

Development banks are influential institutions in financing development. Since their establishment back in the 19th century, development banks have played a leading role in supporting development in many countries. Despite the liberalization process of the 1980s and 1990s, development banks have continued to play an active role in financing development in many country cases. In the Turkish case, the performance of development banking in supporting development has varied over time. However one feature has remained constant: even during the period of import substituting industrialization between the 1960s and 1979, development and investment credits did not contribute to the alleviation of regional imbalances. Moreover, total fixed capital investments, which are the core rationale for development banking in Turkey, have been mainly financed by commercial banks. Given the severe recession in the global economy, the development banks in Turkey may play a leading role in financing industry and social projects.

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1. Introduction

† Corresponding author, International Capital Market Department, Republic of Turkey, Undersecretariat of Treasury General Directorate of Foreign Economic Affairs. Tel: + 90 312 212 88 87 Fax: + 90 312 212 85 50, e-mail: huseyin.ozturk@hazine.gov.tr

†† A.Prof. Dr., Faculty of Management, Istanbul Technical University, e-mail: dkaraka@itu.edu.tr

††† A.Prof. Dr., Faculty of Management, Istanbul Technical University, e-mail: hisarciklilar@itu.edu.tr

Development banks are state-backed financial institutions that are concerned with the provision of long term loans to not only profitable projects but also to socially beneficial ones. The rapid industrialization in many countries in the 19th century was achieved by state provision of long term loans to risky projects via development banks (Diamond, 1957; Boskey, 1961). In many countries such as Germany, Japan, France and Holland, development banks were intensely utilized to meet the needs of growing industry (Diamond, 1957). During this period, development banks provided technical support and cheap loans. They were also stakeholders in poor corporates. Last, but not the least, point is that they were very successful in accommodating entrepreneurship within those national economies.

Many advanced countries of today financed development projects via development banks during the course of their development. Yet, development banking activities became widespread in less developed countries at the second half of the 20th century. The necessity of rapid industrialization pushed less developed countries to utilize development banking scheme to this end. The development discourse at that time also rationalized state intervention in the financial sector. In those days, it was strongly argued that state regulation and intervention in finance would boost efficiency in real sector and fair allocation of resources. Accompanying the following state-dominant policymaking process, development banking was intensely utilized until the 1980s. However, state involvement in the financial sector has gradually diminished since then in line with the neo-liberal shift in economic policies. Financial activities have been directed by free market dynamics rather than regulated and directed markets.

Although the 1980s and 1990s witnessed financial liberalization in many parts of the world, the structure of development banking has not lost its vividness. In the post-1980 period, the decline in preferential credits to prioritized sectors coupled with the backwardness in capital markets particularly in developing countries exacerbated the need for financial intermediation of long-term financing. As will be discussed below, development banking as a notion has evolved in diversified directions in different countries but never lost its dynamism.

The Turkish development banking, in part, eccentrically departs from its peer country cases. As a dynamic structure, development banking is supposed to give fresh impetus to development in capital intensive parts of the country and help poverty reduction in rural areas. However, Turkish development banking has never been so active in financing development and eliminating poverty as development banks in other developing countries. In Turkey, development banking activities were not held for either poverty alleviation or project finance even during the import substituting industrialization (ISI) period before the 1980s.

This study examines the evolution of Turkish development banking for an evaluation of its performance in terms of financing industrialization. It analyzes the role of development-investment credits for gross fixed investments in the 1963-2005 period by applying a co-integration and error correction modeling framework. We also discuss to what extent development banking has been effective in regional development and poverty reduction in Turkey. Also, on the basis of the discussion of the global changes in development banking in the post-1980 period, implications of the current financial crisis for development banking are highlighted.

The remainder of this paper is designed as follows: Section two discusses development banking within the context of institutional regulations in the process of industrialization. Section three provides a historical overview of development banking as a source of social utility. Section four sheds light on Turkish development banking experience in its historical context and discusses its role in development with a regional emphasis. Section five presents the data and section six examines the relationship between fixed investments and development-investment credits. The recent developments in development banking under the conditions of the current global financial crisis will be the foci of section seven. Section eight will conclude.

2. Development Banking within the Context of Institutional Regulations in the Process of Development

The period after the World War II when Keynesian policies were applied in developed countries coincided with a time when less developed countries were craving for economic development. In this period, a literature which explores the dynamics of the inequality between the industrialized and underdeveloped countries was flourished. Rosenstein-Rodan (1943), Nurkse (1953) and Rostow (1956)'s works were the products of this endeavor and mainly concentrated on the causes of underdevelopment. The new literature discussed the ways for achieving rapid industrialization. Underdevelopment was mainly explained with the lack of adequate capital and it is argued that sufficient capital should somehow be accumulated. With the help of the spirit of the time, the state was pointed out as a catalyst in capital accumulation. Thus the main difference between the then new literature and classic literature was the role given to the state itself.

Rosenstein-Rodan (1943), Nurkse (1953) and Rostow (1956) assert that capital inadequacy was the main cause of underdevelopment, though their works do not specify the mechanisms that state would utilize to sustain development. In other words, the roles of the state in disseminating entrepreneurship and supporting productive capital were not clear in these studies. Gerschenkron (1962) and Cameron (1972), however, emphasize the significance of the institutional structure beyond suggesting the state as a pioneer in development. Similar to the above-mentioned studies, Gerschenkron (1962) specifies that underdeveloped countries might converge to industrialized countries by realizing "great spurt" with the help of strong financial institutions. In this context, one may note that Gerschenkron (1962) emphasizes the importance of state-backed development banks for late-industrializers of Europe in the 19th century. In this work, he reiterates the German banking system as a strong financial structure.[1] He also exemplifies his claim with the Russian experience. Russia's need for capital was heavier than Germany in which the state itself was directly involved in the establishment of large scale enterprises. Cameron (1972), on the contrary, advocates that the state involvement in industrialization would not be so efficient, and individuals were to be the main driving force in development. He also criticizes Gerschenkron (1962) due to the fact that merely two country cases would not be the evidence of a successful state intervention.

After the World War II, the world economy as a whole grew continuously for nearly two and a half decades. During this period, not only the industrialized countries but also the less developed countries achieved high growth rates thanks to the strategy of the ISI. However, after the 1970s the global growth trend did not continue. With the emergence of stagnation in advanced economies rooted in the falling rates of profit (Brenner, 2001), the crisis spread across the less developed ones. This has led to even the thought of the end of development economics. Since then, the role of the state in economy as a regulator, employer and direct investor has been underestimated (Wade, 1990). The blockage in the ISI strategy forced the developing countries to leave this policy option after the 1980s. Meanwhile, the crisis in advanced capitalist countries led capital to utilize mechanisms to overcome the problem of falling rates of profits. Firstly, due to the rising liberalization and deregulation of markets, money capital and productive capital have increasingly internationalized in search of higher profits (e.g. the relocation of production to late developed countries, rising international financial flows). Also, the state has withdrawn from many aspects of the

[1] See Riesser (1911: 27-44) for the role of the development banking and statist banking system in transforming the production structure.

economy through privatization, decreasing welfare expenditures etc. and has increasingly facilitated the global integration/expansions of their national capitals. However, the financial crises of the 1980s and 1990s that followed the liberalization of international financial flows in many country cases have pointed out the need for re-thinking the role of the state in economy. As an early study, Wade (1990:9) reiterated that unless the necessary steps are taken to reshape the institutional framework of economy, the suitable climate for productive investment would not be attainable. [2]

Since the 1980s the late developed countries have adopted financial liberalization so that the mobility of financial capital has increased. In this period, capital flows across national borders gained a speculative and shorter-term characteristic along with the rising volumes of foreign direct investment. The less developed countries have tried to attract international financial flows in order to meet their capital needs. Those inflows have tended to be in the form of portfolio capital in many country cases and the associated short-termism has caused severe financial crises as Mexico, Turkey, Thailand, and the Philippines. So, many emerging market economies tended to utilize financial flows pragmatically to enhance capital accumulation. South Korea, for instance, used these financial inflows for productive investment, on the other hand, Malaysia and Taiwan used for real estate development, consumer financing and sock exchange speculation.

Hence, financial liberalization and accompanied international capital flows have been accused of frequent financial crises and of the detachment of financial sector from the real economy. Thus, the hegemony of neo-liberal policies in shaping international capital markets has been questioned. With such a perspective, Amsden (1989) and Wade (1990) analyzed the South Korean and Taiwanese experiences respectively. Even the World Bank (1997) argued the need for a revision of the role of the state in economy. Furthermore, Chibber (1999, 310) stressed that many successful Asian countries had achieved high growth rates due to the state involvement in their economies. That is the success of these countries was mainly due to the cooperation between domestic private capitals and their states.

The question whether the state should intervene in the economy has remained contentious. However, the frequencies of financial crises all over the world require economic policies to have a social dimension. Below, the discussion of the functionality of development banking will continue with a historical perspective.

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[2] See also Akyüz 1993; 2008.

3. Development Banking in Retrospect

The rapid industrialization of Continental Europe in the 19th century was accompanied by the emergence of large financial institutions that are concerned with the provision of long-term loans as in France and Netherlands (Diamond, 1957). The existing commercial banks were unable to provide industry with long-term finance for two main reasons. Firstly, they were unwilling to bear the inevitable risks associated with the financing of new enterprises. Secondly, they lacked the specialized skills required to deal with the higher risk related to long-term investments (Boskey 1961; Basu, 1965; Aghion, 1999). Hence, given the scarcity of private provision of long-term finance, many of these new large financial institutions were sponsored by national governments.

As well, after the World War I, the need for reconstruction stimulated the development of state-backed financial institutions. The involvement of banking systems in the industrialization of Europe during the previous century (19th century) spread to other European countries such as Belgium, Poland, Finland, Italy and Hungary (Diamond, 1957; Boskey, 1961; Alsahlawi and Gardener, 2004). Aware of the fact that financial institutions can play a proactive role in financing development, these banks also successfully functioned as catalysts for industrialization. As the reconstruction proceeded, the institutions were assigned with the role of providing long-term finance to relatively new industrial sectors, such as iron, steel and shipbuilding as required for rapid development. All the cost born by the projects were shouldered by the state itself. State support took the form of share capital provision, cheap loans, the provision of state-guarantees to bond issues of these institutions, or a combination of the three (Diamond, 1957). The notion of development banking structure was also adopted by Latin Americans during the Great Depression years of the 1930s. *Corporacion de Fomento* in Chile has pioneered development banking in this geography. The state itself employed development banks to enhance development in a closed economy under the heavy economic conditions of the Great Depression. In such an extraordinary environment, Latin American development banks wanted to utilize the opportunity of trade barriers that aimed to limit import and export. They basically tried to divert local capital to their local industries. However in the period of 1925 and 1945, the diminishing export revenues and decreasing capital inflows led the Latin experience to be unsuccessful.

The demands for reconstruction after the World War II triggered another wave of state-sponsored financial institutions. The German Kredintaltanlt fur Wei-darufban (KfW) and the Japan Development Bank (JDB) are the two major examples. Although they originally intended to channel external funds for reconstruction, these institutions later evolved to long-term financial institutions (Aghion, 1999). After the World War II, many less developed countries also adopted development bank scheme to administer and channel World Bank loans and to provide long term finance to newly created industrial enterprises (Diamond, 1957; Boskey, 1961). Unlike their predecessors, the majority of the post-World War II institutions were entirely state-owned and in this period, state acted as a catalyst and a coordinator and directed many economic activities via development banks (Bhatt, 1993; Aghion, 1999). These banks played a crucial role in the dissemination of financial expertise in the new industries in periods of scarcity of capital and skill. The loans provided by these development banks were small in quantity but its importance vis-á-vis qualitative contributions were praiseworthy (Diamond, 1957: 38-39). Their distinctive feature that separates them from other banks was their strategic decision-making in when and whom to support.

Even in the post-1980 period, development banks continued to be highly involved in development. The Japanese and South Korean cases are the strong evidences of this claim. Although the neo-liberal orientation since the 1980s has affected the aforementioned countries, the development banks in those counties have survived and provided policy-based finance to real sector. The South Korean experience is a unique case; she has supported many industrial sectors with protectionist polices and utilized development banks in order to channel the directed credits to specific sectors. Apart from very succesful Asian experiences, Latin American countries have used the development banking scheme to bolster their industrial sectors and social projects even after the 1980s. Currently, there are 550 development bank worldwide with 152 of them located in Latin America and the Caribbean (Yeyati, Micco and Panizza, 2004).

Development banking activities have remained crucial in many countries, yet, their functionality has developed under different forms since the 1980s. Nowadays, development banks have been seeking opportunities to diversify their resources and in parallel they are actively tapping capital markets to use international capital. They are mainly funding small-to-medium enterprises (SMEs) in developed countries, but their traditional role of bolstering heavy industries still goes on in developing/emerging countries. For the sake of risk diversification, development banks are operating co-lending activities. By doing so, they transfer monitoring-cost to a partner commercial bank and share credit risk. Besides their funding operations, they concentrate on consulting services like feasibilty reports, technological consultancy etc.

In sum, development banks did not only provide financial support to the newly industrialized society, but also contributed to the well shaped distribution of capital in the societies by channeling their funds to the underdeveloped parts of the countries where commercial banks and other financial institutions were not eager to work. Their main objective by acting so was to promote productive investment in needy areas through technical assistance. The activities of development banks target those that have difficulty in gaining access to private financial markets, namely SMEs, agricultural sector, environmental projects and activities related to technological innovation. That is because they have higher intermediation costs and less diversified risks than those of large corporations. Within this streamline, development banks have been influential in balanced distribution of capital and have provided technical support to the less developed parts of the countries. So the effectiveness of development banks is also an indicator of the balanced distribution of capital and poverty reduction endeavor in that country.

4. The Turkish Experience in Development Banking

Development banking in Turkey has been initiated to settle a banking system that supports the development of entrepreneurship and alleviates poverty within the country like many others.

In Turkey, the formation of national banking gathered momentum after the foundation of the Republic in 1923. Given the insignificant level of private capital accumulation in Turkey and the dominance by foreign banks in financial market the state itself took the initiative to develop a national banking system to support capital accumulation. To further Turkey's economic development, new national banks were established between 1923-1932, either directly by the state or under significant influence of the state (Gültekin-Karakas 2008).

In the 1930s and 1940s, industrial development plans were fulfilled through the creation of a number of state banks. Because of the insufficient level of private capital accumulation and the negative effects of the Great Depression on the economy, the government abandoned its policy of privately driven industrialization. Consequently, from the 1930s onwards, the state became the driving force in the industrialization: 'most industrial plants were set up as state enterprises or, if in private hands, owed their existence to official support and protection' (Vorhoff 2000, 145). In order to provide credit and to facilitate infrastructural and industrial investments stipulated by economic development plans, state banks were established in specialized sectors such as Sümerbank (1933), Belediyeler Bank

(1933), Etibank (1935), Denizbank (1938) and Halk Bank (1938). These new banks can be evaluated under development bank scheme because of the sectoral credits that they allocated. For example, Etibank and Sumerbank directly got involved in the establishment and functioning of new state economic enterprises in various industries. It is argued that these banks were not able to act as development banks in the real sense due to the fact that they had to meet the urgent needs of Turkey then. They had been transformed to a quasi-holding structure (Diamond, 1957; Boskey, 1961; Eroğuz 1982). However, even if they did not function as separate banks that financed industry as development banks do, it would not be wrong to cover these banks under development banking given the functions they fulfilled.

Due to the state-led industrialization policy, Turkey entered in the 1950s with a remarkable progress in its industrial and commercial base. Altogether, the state-owned industries led by the great investment twins, Sumerbank and Etibank, gave the public sector a superior position in the overall economy. On the basis of the private capital accumulation achieved, the integration of the Turkish capitalism into world capitalism accelerated after the World War II. In the process, economic policy became more liberal. Accompanying this change was an increase in credit opportunities from Western capitalist countries, especially under the Marshall Plan.

The very notion of development banking has flourished since the early 1950s together with the establishment of Turkish Industrial Development Bank (TSKB) under the auspices of the World Bank (Basu, 1965). Excluding the not-so-successful experience of Turkish Industry and Mining Bank (Türkiye Sanayi ve Maadin Bankası) in 1925 and the above-mentioned state banks of the 1930s, this bank is the first development bank in Turkey. The TSKB was established at a time when liberal policies took effect after aforementioned policy shift. Shareholders of the bank consisted of the leading commercial banks of Turkey in addition to the government who also provided a profit guarantee for the bank's shares to support involvement (Akıncı, 2000). The main objectives of the bank were determined as follows: to provide assistance to private sector enterprises in all sectors of the economy primarily in the industrial sector; to encourage and assist the participation of private and foreign capital incorporations established and to be established in Turkey; and to assist to the development of capital markets in Turkey (Diamond, 1957; Boskey, 1961). As being the only institution in Turkey which provided long-term finance and technical assistance to the private sector in the 1950s, the bank made significant contributions to the private capital formation within the country.

Development banking gained further momentum during the ISI period between the late 1950s and 1979 as many other development banks were established. During this period, the notion of planning became a central element of economic policymaking with the help of the establishment of State Planning Organization. In conformity with the ISI strategy, great importance were attached to the allocation and mobilization of resources through directed credits and incentive programs including subsidized lending to priority sectors/regions. Broadly speaking, the measures taken during this period transformed the whole financial system, and development banking in particular, as an instrumental part of the industrialization in Turkey. On the private commercial banks front, an important outcome of the planned period, especially during the 1970s, was the evolution of private banks into “holding banks”, which indicated the ownership of private commercial banks by conglomerates that have been controlled by wealthy families and active in various sectors. Subsidized credits were transferred to those conglomerates via the banking system in order to stimulate investments in prioritized sectors stipulated by the development plans.

On the public side, the public sector investments were financed by monetizing budget deficits, issuing low yield bonds mostly purchased by public contractual savings and bank deposits as well as foreign debts and aids.

Regarding development banking, four new non-deposit-collecting banks have been established[3] in accordance with the development plans (Akıncı, 2000). The state banks especially the State Investment Bank (DYB) and the Central Bank, which then operated as a semi-development bank, were an important part of this financing mechanism as they allocated the funds that were created in accordance with the plan imperatives.

Yet this period did not last too long. The 1980s gave a new direction to development banking accompanying the neo-liberal restructuring of the economy as the ISI strategy could not last due to the foreign exchange scarcity and the associated supply bottleneck. The 1980s brought about structural changes in productive investments which were previously held under the control of the state. In other words, the mode of development shifted from an inward-oriented accumulation regime with extensive state regulation and intervention to a stance that was export-oriented.[4] The export-led accumulation regime after 1980 provided the needed

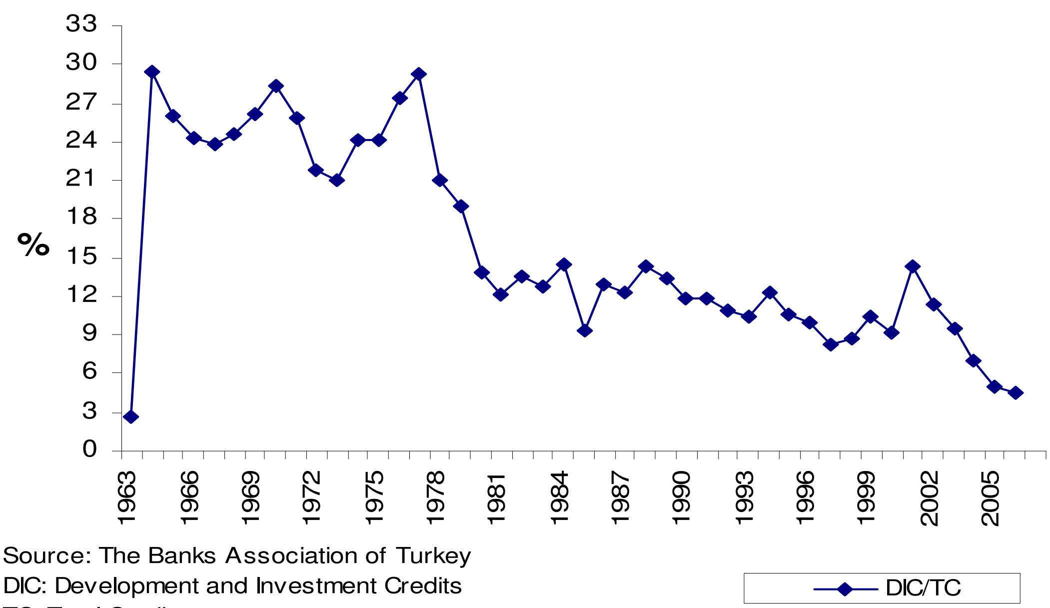
[3] These are Tourism Bank of the Republic of Turkey (TC Turizm Bankası), Industrial Investment and Credit Bank (Sınai Yatırım ve Kredi Bankası), State Investment Bank (Devlet Yatırım Bankası) and State Industry and Labourers' Investment Bank (Devlet Sanayi ve İşçi Yatirim Bankasi, transformed to Development Bank of Turkey)

[4] State Investment Bank (DYB) was transformed to the currently active Turkish Eximbank in accordance with this policy change in economic development.

environment for Turkish capital to expand into the rising foreign exchange-earning sectors of the 1980s such as tourism, finance, international transportation and foreign trade.

As the export-led development strategy reached its limits towards the end of the 1980s, inflows of short-term capital flows have been utilized in order to overcome the problem of capital scarcity in Turkey. Since the mid-1980s, especially the 1989 external financial liberalization, the banking sector became the main beneficiary of state borrowing policy. The sector heavily purchased high-yielding government securities by raising funds from abroad. Since almost all of the Turkish private commercial banks have been part of corporate conglomerates with some industrial-trade bases, the banks channeled money capital derived from state debt finance to expand their conglomerates. Therefore, while mainly small-to-medium scale productive capitalists were increasingly excluded from the credit system, banks provided a kind of protection for their holdings' activities. The state indebtness channeled money capital to those large scale industrial/commercial capitals in a period when they sought to internationalize their accumulation. In addition to industrial firms belonging to large holdings incorporating banks, other industrial firms with better liquid positions have also benefited by purchasing lucrative government paper (Gultekin-Karakas 2008). Therefore, the bulk of firms' revenues and profits started to come from such off-field operations rather than the firms' principal production and sales activities (Akıncı, 2001).

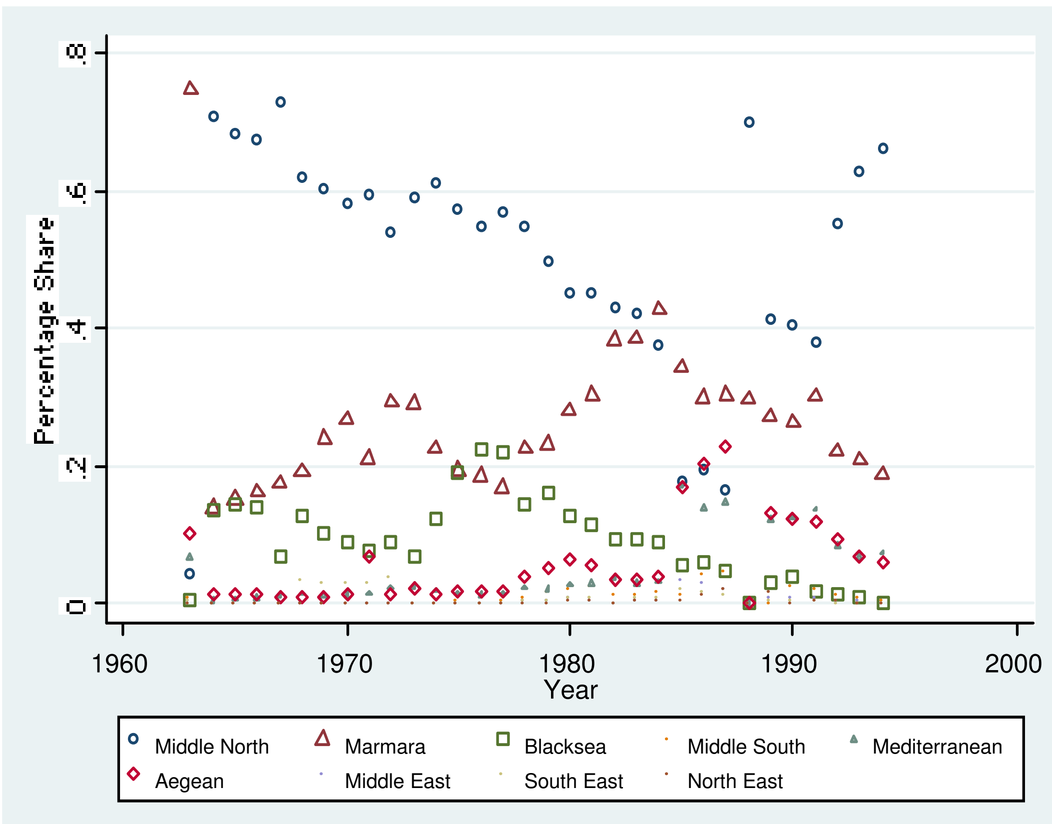
Graph 1. Change of DIC/TC (1963-2005)



Source: The Banks Association of Turkey
DIC: Development and Investment Credits
TC: Total Credits

The liberalization and deregulation period of the 1980s and 1990s has negatively affected development banking in Turkey. This policy change has showed itself in the declining share of development banking credits in total banking credits. As can be seen from Graph 1 the share of development and investment credits (DIC) in total credits (TC) plummeted from 25-30% to 10-15% between the 1960s and the early 1980s, afterwards it posed standstill movement. The structural change in state-dominant policymaking towards liberal policies directly reflected itself on development banking during this period. Moreover, the share of DIC in TC has kept on declining gradually and decreased to 4% in recent years.

Graph 2. Distribution of DIC among Turkey's Regions (1963-1993)



Data Source: The Banks Association of Turkey

Another point that is worth mentioning is that the allocation of credits among regions was not rational even in the 1970s (See Graph 2) when development banking was effective in supporting industry to some extent. That is, the disproportionate distribution of the DICs is obvious. The criteria for the distribution of these credits among geographical regions[5] were ambiguous. The Middle North took quite high amount of DICs, albeit the region's financing needs were comparably low taking into consideration of its demographic and industrial prospects. For instance, 73% of total DICs were placed to this region in the 1960s. However, the Marmara region, as the engine of Turkey's industrialization process, was scarcely able to reach the Middle North region in 1983. Moreover, if the Karadeniz, Middle North and Marmara regions are left aside, the total share of remaining regions is trivial. There has occurred a little increase, however, after government incentive scheme to priority development regions has been carried out. Generally speaking, neither the least developed regions nor the more industrialized regions have been able to use the DICs. The distribution among regions is quite disproportionate and there are no distribution criteria regarding either poverty alleviation or industry booster characteristics of development banks as the stylized fact assumes. If the DICs had been provided to the regions on the basis of their levels of development or financing needs of local investment projects, it would have been a rational choice. Development banking credit facilities, even at times when the share of DIC in total banking credits was quite high, were not rationally distributed among regions for a well balanced distribution of wealth. In sum, there has been a failure of development banking to a point that development banking has not been successful in utilizing idiosyncratic features to alleviate poverty and shore up local industrialization instrumentally. The next section will examine the effectiveness of development banks in well-balanced channeling of their funds to the regions of Turkey and will analyze the role of development banks in financial intermediation for the development of industry.

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[5] The regional classification given by the Banks Association of Turkey for this data does not in fact reflect the currently used classification in Turkey. For example, some provinces that are in the Central Anatolia are reported to be in the Middle or North East. Ankara, which is also located at the Central Anatolia is classified under Middle North. The regions and provinces according to the classification of the Banks Association of Turkey are as follows:

1) Middle North: Ankara, Bilecik, Bolu, Çankırı, Çorum, Eskişehir, Kırşehir, Kütahya, Uşak, Yozgat
2) Aegean: Aydın, Balıkesir, Burdur, Çanakkale, Denizli, Isparta, İzmir, Manisa, Muğla
3) Mediterranean: Adana, Antalya, Gaziantep, Hatay, İçel, Kahramanmaraş
4) North East: Ağrı, Artvin, Erzincan, Erzurum, Kars
5) South East: Muş, Hakkari, Mardin, Bingöl, Bitlis, Diyarbakır, Siirt, Şanlıurfa, Van
6) Middle East: Adıyaman, Amasya, Elazığ, Malatya, Sivas, Tokat, Tunceli
7) Middle South: Afyon, Kayseri, Konya, Nevşehir, Niğde
8) Marmara: Bursa, Edirne, Kocaeli, Kırklareli, İstanbul, Sakarya, Tekirdağ
9) Black Sea: Giresun, Gümüşhane, Kastamonu, Ordu, Rize, Samsun, Sinop, Trabzon, Zonguldak

5. Data

This study examines the relationship between development banking and industrialization in Turkey over the period of 1963-2005 by utilizing the deflated DIC and gross fixed investment (FI) variables as proxies.[6] By doing so, the extent of the contribution of the development banking facilities to local industrialization is explored. It has been further examined that whether the total banking credits (TCs) or credits other than those of DICs (OTHERCRs) have a relationship with FI variables. Under the assumption that local industrialization increases the level of employment and reduces poverty, the result of the analysis will shed light on the performance of Turkish development banking regarding local industrialization and hence poverty alleviation.[7] The analysis has been realized on examining the existence of a co-integrating relationship for the variables at hand and utilizing Vector Error Correction (VEC) Models. The existence of a co-integrating relationship between FI and DIC will signal that there is a long-term/equilibrium relationship between DIC and FI.

Graph 3 shows the change in total credits and fixed investments over time. The two series follow a similar pattern suggesting a co-integrating relationship. Graph 4 depicts the relationship among investments, development investment credits and total credits other than development investment credits. It is interesting to observe that while the OTHERCRs have shown a significant increase through time, the DICs could not catch up. FI and OTHERCR also seem to follow a similar pattern, signaling that FI are mainly influenced by commercial credits rather than DIC. The level of DIC stays very low in comparison to the other two series examined. Graph 5 rescales the vertical axis for DIC in order to have a closer look at the changes in FI with the changing levels of DIC. As Graph 5 shows although the level of DIC is low compared to TC, DIC still has a similar pattern with FI. That is to say FI increases together with DIC.

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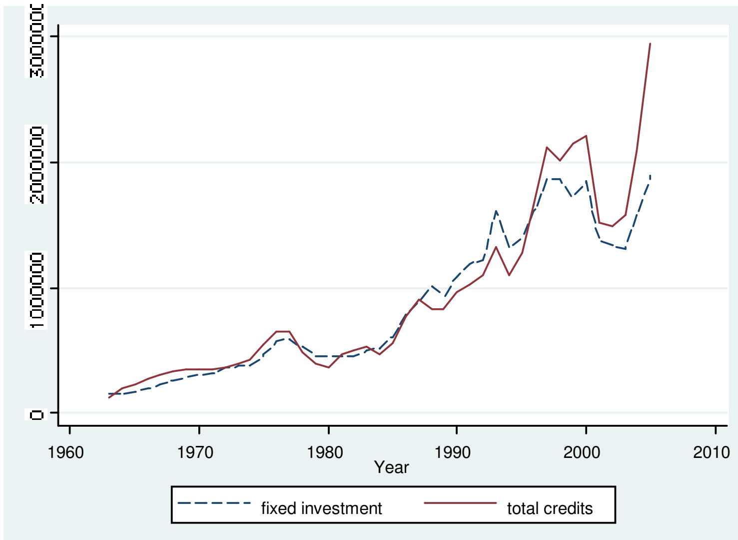
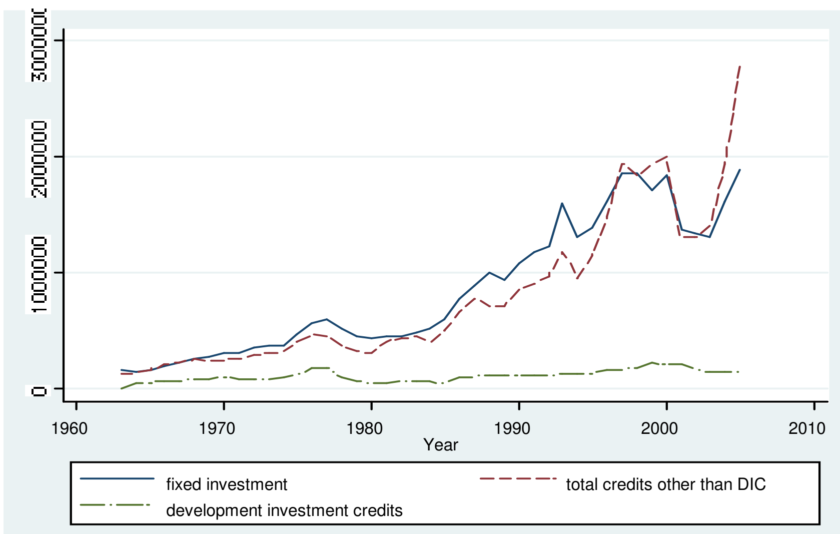
[6] All the data used in the analyses were deflated by PPI in order to remove the effects of price changes.

[7] We aimed to make the analysis on a regional basis, however, the regional ‘gross fixed investment’ data were not available. This situation constrained the analysis to a countrywide range.

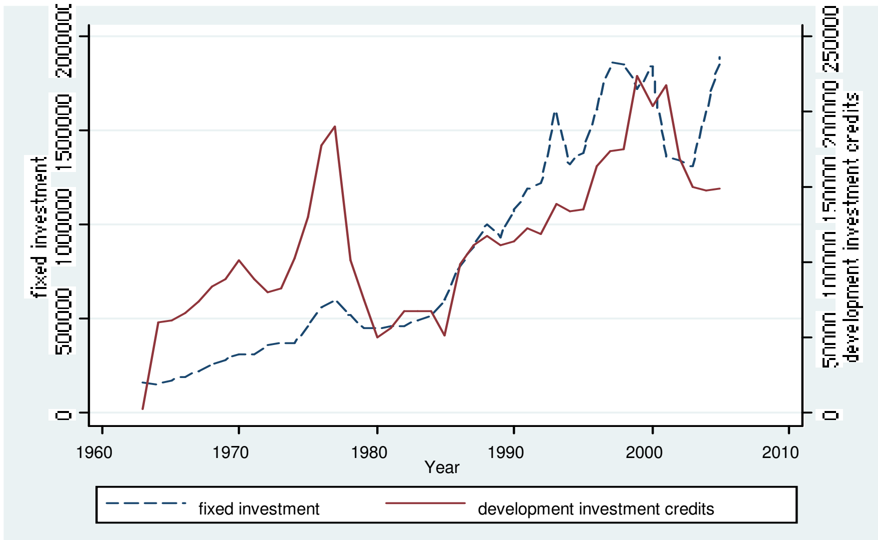
Graph 3. Change in Total Credits and Fixed Investments over Time



Graph 4. Fixed Investments, Development Investment Credits and Other Credits



Graph 5. Fixed Investments and Development Investment Credits



6. Relationship between Fixed Investments and Credits

Considering that one of the main issues of time series analysis is the non-stationarity of the data, Augmented Dickey-Fuller unit root tests are applied to the mentioned economic variables as a first step. The test statistics are calculated by running regressions for constant only and constant with trend specifications. Schwarz Information Criterion (SIC) is used to select for the lags in the estimated test regressions. As it could be seen from Table 1, all the variables examined are first difference stationary, *i.e.* I(1). For although these time series are individually I(1), their bilateral linear combination may be I(0). In this case, it could be said that the two variables are co-integrated, *i.e.* they have a long-term/equilibrium relationship with each other.

Table 1. Augmented Dickey-Fuller Unit Root Test Results

Variable	Constant Only		Constant and Trend	
Level	*Lag*	*Test Statistic*	*Lag*	*Test Statistic*
RFI	0	-0.2253	0	-2.3922
RDIC	0	-2.4399	0	-2.5937
RTC	5	2.0666	1	-2.0861
ROTHERCR	5	2.2412	5	-0.3965
	Constant Only		**Constant and Trend**	
First Difference	*Lag*	*Test Statistic*	*Lag*	*Test Statistic*
D(RFI)	0	-6.2152***	0	-6.1787***
D(RDIC)	0	-5.8847***	0	-5.7859***
D(RTC)	3	-4.4823***	4	-5.0322***
D(ROTHERCR)	3	-4.5956***	5	-5.3996***

*** Null hypothesis of non-stationarity is rejected at 1% significance level

Observing that all the varibles are I(1), we have examined the existence of a co-integrating relationship between FI and the credit variables of DIC, TC, and OTHERCR as a second step. The results would signal whether there is a long-term relationship between the two series regardless of to what extent it is influential on one another. We have employed Engle and Granger's co-integration testing approach and tested for the stationarity of the error terms after estimating the three models given below.[8]

$$RFI_t = \beta_1 + \beta_2 RDIC_t + \varepsilon_t \quad (5.1)$$

$$RFI_t = \beta_1 + \beta_2 RTC_t + \varepsilon_t \quad (5.2)$$

$$RFI_t = \beta_1 + \beta_2 ROTHERCR_t + \varepsilon_t \quad (5.3)$$

where

RFI: Real Fixed Investments

RDIC: Real Development-Investment Credits

RTC: Real Total Credits

ROTHERCR: Real Credits Other than Development-Investment Credits

The test results (Table 2) reveal a co-integrating relationship between FI and DIC, but none between FI and TC and/or OTHERCR. However, examining the structure in Graphs 3 and 4, it is observed that fixed investments follow a similar pattern with total credits or credits other than development and investment credits. The FI series mimic the pattern of these two series following from one lag behind. Therefore, the co-integration tests are replicated to examine the relationship between FI at time *t* and the credit variables at time *t-1*. As it could be observed from the test results (Table 3), these series are in fact co-integrated.

Table 2. Co-integration Test Results

	Constant Only		**Constant and Trend**	
Variables	*Lag*	*Test Statistic*	*Lag*	*Test Statistic*
RFI_t and $RDCI_t$	0	-1.9346	0	-3.5283**
RFI_t and RTC_t	0	-0.3373	0	0.7283
RFI_t and $OTHERCR_t$	0	-0.2045	0	1.1606

** Null hypothesis of no co-integrating relationship is rejected at 5% significance level

[8] The lag length for these test regressions are also determined by Schwartz Information Criterion

Table 3. Co-integration Test Results Using Lagged Values of Credits

	Constant Only		Constant and Trend	
Variables	*Lag*	*Test Statistic*	*Lag*	*Test Statistic*
RFI_t and $RDCI_{t-1}$	0	-1.6329	1	-3.0632
RFI_t and RTC_{t-1}	0	-3.2921**	0	-3.3522*
RFI_t and $OTHERCR_{t-1}$	0	-3.5192**	0	-3.5385**

** Null hypothesis of no co-integrating relationship is rejected at 5% significance level
* Null hypothesis of no co-integrating relationship is rejected at 10% significance level

According to the test results, there is a long-term/equilibrium relationship between the simultaneous values of RFI and RDCI. However, for OTHERCR, it takes a one-year period for the credits to funnel into a project and result in a tangible investment.

Observing co-integrating relationships for the variables examined, an error-correction mechanism is employed to characterize the long- and short-term relationship between investment and credits. The following regressions are estimated for this purpose:

$$\Delta RFI_t = \alpha + \beta_1 \Delta RFI_{t-1} + \beta_2 \Delta RDIC_t + \beta_3 \Delta RDIC_{t-1} + \beta_4 \varepsilon_{t-1} + u_t$$
$$\Delta RFI_t = \alpha + \beta_1 \Delta RFI_{t-1} + \beta_2 \Delta RTC_{t-1} + \beta_3 \Delta RTC_{t-2} + \beta_4 \varepsilon_{t-1} + u_t$$
$$\Delta RFI_t = \alpha + \beta_1 \Delta RFI_{t-1} + \beta_2 \Delta ROTHERCR_{t-1} + \beta_3 \Delta ROTHERCR_{t-2} + \beta_4 \varepsilon_{t-1} + u_t$$

The ε term in the above specifications show the error terms that are obtained from the related Engle-Granger test regressions. Parameter estimates for this term will signal the speed of adjustment for short-term deviations from the long-run equilibrium.

Table 4. Error Correction Model Estimation Results

Variable	Coefficient (Std. Error)	Variable	Coefficient (Std. Error)	Variable	Coefficient (Std. Error)
ΔRFI_{t-1}	-0.167	ΔRFI_{t-1}	-1.185***	ΔRFI_{t-1}	-1.145***
	(0.187)		(0.286)		(0.299)
$\Delta RDIC_t$	1.061	ΔRTC_{t-1}	0.793***	$\Delta ROTHERCR_{t-1}$	0.798***
	(1.074)		(0.204)		(0.218)
$\Delta RDIC_{t-1}$	0.924	ΔRTC_{t-2}	-0.069	$\Delta ROTHERCR_{t-2}$	0.004
	(0.973)		(0.114)		(0.124)
ε_{t-1}	0.059	ε_{t-1}	0.253	ε_{t-1}	0.225
	(0.079)		(0.151)		(0.159)
Constant	44211.39	Constant	50386.22**	Constant	47309.66**
	(24047.74)		(20684.44)		(21280.29)
R-squared	0.08	R-squared	0.40	R-squared	0.36
F-Statistic	0.75	F-Statistic	5.88***	F-Statistic	4.83***

Note: Standard errors are reported in parenthesis
*** Significant at 1% significance level

** Significant at 5% significance level

Although co-integrated, FI and DIC variables do not have a causal relationship (Table 4). This may be an indicator of a potential external factor that affects both variables in the same way. All the parameter estimates are statistically insignificant and hence the error correction model estimated for these two variables is also insignificant as a whole. Turning to the results for the TC and other credit regression results, both these variables have a significant positive impact on FI. A positive change in these variables increases the change in fixed investments in the next period. A change in FI that is observed one-period back decreases the change in FI observed at this period. None of the parameter estimates for the error-correction terms is significant.

As statistically verified, the development banking activities have not been so influential on fixed capital investments unlike commercial credits do. Total fixed capital investments were mainly financed by commercial loans and the development banking activities have not been decisive in financing development in Turkey.

7. In the Era of the Current Financial Crisis the Role of Development Banking Reconsidered

Within the course of economic development, deregulation and deepening of financial markets and the emergence of private markets for long term debt may undermine the need for development banks. Yet, the processes of dismantlement and/or privatizationhave not been the sole reactions to development banking around the world in the post-1980 period. Indeed, the prominent role of development banks continues to exist in many countries as these banks have gained new functions to fulfill.

While the challenges of new economic and financial order threaten the functionality of development banks, they seek out a new rationale for their existence in order to serve equality and development within local borders. Financial crises present new opportunities for development banks in many countries to demonstrate their continued public utility.

The recent financial crisis, despite being originated in developed countries, has affected the whole world economy. The initial impact stemmed from the direct exposure of the emerging market financial institutions to sub-prime related securities. Such impact was relatively small compared to developed countries and emerging countries appeared resilient to this direct effect. However, some secondary effects have hit the emerging markets severely.

The squeeze in international liquidity along with capital outflows and shrinking world trade have sharply affected the emerging market economies. During this process, many countries have been developing diversified policies to alleviate the repercussions of the crisis and to support real sector. Besides the global effects, domestic credit crunch have led governments to intervene in financial markets. Against this backdrop, many countries in the first hand utilized development banks in many ways. In the process of an unfolding financial crisis, these banks have been called on for many reasons: to stabilize domestic financial markets; to eliminate credit shortages caused by sharp reductions in private lending; to restructure corporates' debts; and to attract capital inflows by creating new financial instruments. Development banks have engaged with the stabilization of domestic financial markets during financial crises by restoring adequate market liquidity via credit allocation. Korea Development Bank (KDB), for instance, played an important role in this respect. In 2003, the bank also provided capital support to credit card market. To counteract the 1997 crisis, an amendment to the KDB Act has been realized. By doing so, a capital injection has been made to the Bank without any parliamentary approval so that the bank could be utilized to mitigate the adverse effects of the crisis (Amyx and Toyoda, 2006: 5).

The governments have boosted credit facilities to the real sector via development banks in order to tackle the indirect effects of financial crisis. Corporate lending by development banks also helped to eliminate credit shortages led by private banks amid their efforts to clean up non-performing loans and strengthen their capital ratios during crises. The emerging countries that have excessive reserves, such as Brazil, South Korea etc., are the countries whose development banks have taken the broadest actions. Moreover, the countries that have limited financial resources also spurred lending activity via development banks. The role played by Development Bank of Japan has been also very crucial during and after the Asian crisis. The co-financing activity for corporate lending between larger Japanese banks and regional banks halted during the Asian crisis. Today, Development Bank of Japan has shouldered this task. Also, most of the borrowers of Development Bank of Japan today are the medium-scale companies who are deprived of long term finance (Amyx and Toyoda, 2006).

As well, many development banks are active in facilitating corporate restructuring via various methods like debt-equity swaps, debt re-adjustments etc. Table 5 shows the examples of the utilization of development banks during the recent crisis.

Table 5. State Actions on Development Banking During the Recent Crisis

Countries	Actions
Bulgaria	- The cabinet has announced increases in the capital of the Bulgarian Development Bank twice since the collapse of Lehman Brothers (Nov 4, 2008 and Feb 18, 2009 respectively).
Canada	- Capital injection to Business Development Bank of Canada (BDC) in order to support asset-backed-securities market under Canadian Secured Credit Facility (Feb 09, 2009) - BDC is going to extend CD13 billion to businesses (Apr 20, 2009-Bloomberg quoting from the website *financialpost.com*). - BDC will provide additional loans and credit support to businesses with viable business models (Feb 13, 2009).
Japan	- to purchase corporate commercial paper/short term debt (Dec 12, 2008) - to enter market for equities and preferred shares (Dec 12, 2008)[9]
Russia	- $50 billion deposit of VEB, the state development bank, will be dispersed to other banks and companies to pay off foreign debt (http://business.timesonline.co.uk/tol/business/markets/russia/article4981200.ece dated Oct 20, 2008)
South Korea	- to purchase 100% of stake, including management control, of Dongbu Metal whose value has diminished considerably after the global recession (Apr 8, 2009). - Corporate restructuring fund that has been set up by Korea Asset Management Corp and Korea Development Bank would be used up to buy office buildings that are put on sale (Mar 12, 2009). - The government has set up Recapitalization Fund that will be pooled by the central bank, the development bank and private investors to be used for buying banks' preferred shares and subordinated debt (Feb 26, 2009). - Credit line to automakers worth USD2 billion (Feb 19, 2009).
Brazil	- Brazil eased rules on reserves banks must keep at the central bank in a bid to increase funding for the country's development lender (BNDES) by as much as USD2.6 billion (Nov 25, 2009). - The government may use USD6 billion from its sovereign wealth fund to finance the investments of SMEs (Mar 12, 2009). - BNDES plans to boost lending as much as 41% (Jan 26, 2009). - BNDES will lend as much as USD2.56 billion in working capital for companies facing difficulties because of the credit crunch (Dec 01, 2008). - Parliament will access USD6,35 billion of its yet to be approved sovereign

[9] Development Bank of Japan has contributed to many actions under quantitative easing policies. The date may be understood as a starting date.

	wealth fund to enable the BNDES to boost lending to local companies as external credit opportunities become scarce (Dec 1, 2008) - Credit line to the biggest food maker company Sadia (Apr 6, 2009). - The government will spend USD15.1 billion on anti-crisis Housing Plan. The fund will be allocated from the budged, BNDES and insurance fund (Mar 25, 2009) - BNDES, will boost loans to small companies by as much as 50% to about USD6 billion, also will help farmers to refinance debt (Mar 13, 2009). - Brazil's national development bank (BNDES) plans to lend as much as 500 million reais (USD200 million) to farmers (Nov 25, 2009).
Slovenia	- The government will inject USD205 million to the state-owned Export and Development Bank (Feb 5, 2009). - The government will guarantee up to USD1.65 billion of loans to the economy to ease the credit squeeze and spur banks' lending. The funds will be available via the Export and Development Bank (Mar 19, 2009).
Mexico	- State-owned development bank, Nacional Financiera will offer credit lines worth about USD197 million to auto lenders (Mar 5, 2009).
Hungaria	- SBI Holdings Inc, a Japanese venture capital company, has set up its first eastern European fund with Hungarian state-owned development bank (Dec 15, 2008).
Kazakhistan	- To refinance bank loans for industrial projects as part of the government's economic rescue efforts (Jan 13, 2009).

Source: Bloomberg, Reuters, banks' web sites

In Turkey, many measures related to the real sector, including tax cuts, incentive schemes, loan facilities etc., have been taken by the governmental authorities since the collapse of Lehman Brothers. However, there is no place for development banks to get involved in such economic measures. The industrial sector, particularly SMEs, have been severely affected: In February 2009, the Industrial Production Index decreased by 23.7% and the unemployment rate has risen to its peak (15.5%) in the history of the republic and among the highest in the world today. Development banking activities, if a responsibility has been given, will be very influential in severely affected sectors and regions. Such a step could be socially and economically effective especially in the poor regions of the country.

One clear outcome of the recent financial crisis in Turkey is that there has appeared an urgent need for an institutional mechanism in order to alleviate social and economic effects of the crisis. Although development banking notion has lost its importance in banking quantitatively, the demand for development banking will surely continue as long as the country holds special development targets and social projects which cannot be effectively handled by commercial banks. Many current issues on Turkey's agenda such as the South-Eastern Anatolia Project (GAP), the promotion of SMEs, relations with the Republics of Former Soviet Union especially Turkish speaking Commonwealth of Independent State countries and development projects to be undertaken as part of the European Union integration process will likely involve development banking activities.

From a regional development point of view, Turkey has significant regional disparities regarding development indicators. Government endeavors especially in the East and South East Anatolia to promote development and adopt special policies to eliminate barriers against regional development. Development banks may play a significant role in channeling funds provided under various government incentive schemes to the priority development regions. As the private sector's production and investment tendency towards the region increases with the added stimulus of ongoing government support schemes, development banks will have a clear advantage of pioneering the development process and providing the private sector with unique consultation on those regions. Looking from an international perspective and in light of the recent financial crises, there are more to say about the functions, capabilities and future prospects of development banks. The financial crises forced to seriously re-question the general perception that project financing and other unique tasks held by development banks could also be efficiently performed by commercial banks. Yet, the crises were followed by an almost complete withdrawal of commercial banks in many countries from medium and long-term investment financing thereby causing considerable slow-downs in the recovery process. These events obviously ask for a refreshed emphasis on the importance of project financing and its management by financial institutions that are equipped with necessary skills and expertise. Against this backdrop, development banks are the most advantageous institutions that can acquire the necessary skill in order to overcome the social and economic repercussions of the recent financial crisis.

8. Concluding Remarks

This paper has provided a framework for the evaluation of the contribution of Turkey’s development banking to industrialization and hence reducing regional imbalances and poverty.

As discussed, development banking has lost position together with the rise of the neo-liberal policies since the 1980s. Yet even though this power loss was related to the traditional functions fulfilled by development banks, they appeared to gain new roles in national financial systems. That is to say that the role that development banking plays not only in the development process of developing countries but also in the strategic policies adopted by developed economies have been reconsidered. On this ground, the theoretical analysis claims that the ideology of statism in general and development banking in particular are gainig new functions but never end.

The Turkish experience of development banking interestingly differs from many other peer country experiences. Although the seeds of development banking existed in the early stages of the Republic, the very notion of development banking has started to function in real sense after the World War II. However, despite having a special place in banking system during the ISI period, development-investment credits have not been successfully utilized to alleviate regional imbalances and poverty. That is because the funds have been distributed quite disproportionately and irrationally.

Moreover, fixed capital investments, which are the main rationale for the existence of development banks, have been financed notably with commercial credits all across the country. The results of the analyses held in Section 5 revealed that a long-term relationship only exists between the commercial credits and the fixed capital investments. Such a relationship has not been found when development and investment credits are employed. Yet in order to maintain equality and industrialization, development banks could have been good instruments for fixed capital investments in less developed regions thereby creating new job opportunities. Such a result would also have relieved the social tension in those regions.

Since the break out of the recent financial crisis, the function of development banking in poverty reduction and development has regained popularity in many developing countries. These countries are employing their banks for strategically important tasks; however, its importance is yet to be grasped in Turkey. Although many financial packages have been announced by the Turkish state, there is no role assigned to development banking in the implementation of these economic measures. Development banks, if has been given priority and responsibility, can be influential instruments in alleviating the adverse effects of the recent financial crisis and the ongoing recession.

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APPENDIX

1) The Regional Distribution of DICs (1963-1994)

(Deflated current prices*, national curreny)

Year	Middle North	Aegean	Marmara	Mediterranean	North East	South East	Black Sea	MiddleEast	Middle South
1963	15607	35882	257045	23636	951	2441	2424	1913	4046
1964	4210102	73027	826697	30148	1475	2372	804527	1774	4655
1965	4341889	86836	963613	35699	1176	1994	928729	1470	6250
1966	5045430	89946	1221990	72593	850	1489	1040174	1885	5634
1967	6419804	103089	1537499	108345	645	890	592597	1963	6674
1968	6368380	106264	1976469	147325	228	339088	1318990	1593	9651
1969	7142450	125374	2844932	163402	130	355476	1215325	1800	12541
1970	8501693	202968	3936633	186882	0	454299	1334019	1654	14775
1971	9008184	1047154	3204145	217476	0	447546	1195347	4016	15424
1972	8437376	238624	4597887	366330	0	614115	1383661	15528	17573
1973	11634840	421046	5734794	506872	3500	676	1351793	46266	41483
1974	18778478	429221	6898684	568571	3500	2048	3857815	86837	99262
1975	25065822	765339	8537251	691135	10546	29636	8361425	134368	215727
1976	38247642	1179929	12945036	953543	25079	126967	15742403	188036	240672
1977	54691944	1829866	16147043	1354094	88049	214361	21035762	226744	464832
1978	42862539	3079122	17599736	1786728	205436	375273	11232543	415485	749096
1979	51358890	5335337	23800668	2240077	349383	720484	16735489	680014	1670239
1980	59317272	8596373	36696973	3627620	482952	1206980	16691938	1047207	3054224
1981	89547000	10683000	59962000	6018000	718000	1566000	22672000	1418000	4852000
1982	130012000	10717000	115624000	10607000	913000	913000	28434000	923000	3887000
1983	162187000	13327000	147476000	11724000	1456000	2961000	35439000	1814000	5895000
1984	212182000	22982000	241232000	17836000	2222000	4681000	51354000	2946000	9388000
1985	102170000	95425000	194835000	97501000	3124000	13740000	32728000	18959000	8911000
1986	203215000	212041000	313767000	145270000	14361000	20927000	63550000	30806000	44475000
1987	244306000	336525000	445074000	215559000	35551000	23559000	67052000	30070000	67620000
1988	1920235000	0	816458000	0	0	0	0	0	0
1989	1849597000	589072000	1217131000	550909000	86102000	23883000	128934000	36287000	116807
1990	2840939000	849194000	1832215000	863499000	21928000	43522000	267319000	62104000	196092000
1991	3471113000	1093405000	2755732000	1250154000	67007000	69246000	171987000	73038000	197672000
1992	9941813000	1680185000	3967717000	1525755000	101610000	51871000	255705000	130100000	268450000
1993	21323856000	2288465000	7065938000	2268160000	109509000	59831000	292166000	149481000	331575000
1994	41145322000	3690509000	11670284000	4579532000	195062000	50847000	191515000	141808000	429365000

Source: The Banks Association of Turkey

2) RDIC, RTC, RFI, PPI

(Deflated current prices*, national curreny)

Year	PPI[1]	RDIC	RFI[2]	RTC
1963	100	3439.45	160000	130308.46
1964	99	60149.2626	151515.152	204876.414
1965	104	61051.3519	172579.099	234606.462
1966	112	66965.4521	196956.132	275910.036
1967	119	73648.2452	226700.252	309215.374
1968	122	84094.9058	262080.262	341817.977
1969	132	89723.3737	287443.268	343478.828
1970	145	101056.098	310773.481	356026.333
1971	169	89370.0826	312868.949	346535.354
1972	196	80118.0675	357873.211	367868.093
1973	237	83402.0701	376003.38	396944.542
1974	300	102278.349	372836.218	424024.604
1975	335	130936.189	466228.332	544221.336
1976	393	177405.265	568008.151	648865.874
1977	504	190467.371	596866.944	649484.067
1978	775	101066.027	522715.539	479544.334
1979	1,357	75822.0936	456890.199	399368.62
1980	2,582	50629.9775	447732.29	365328.06
1981	3,463	57009.702	458824.209	466641.257
1982	4,411	68485.2058	461172.203	505466.047
1983	5,649	67672.632	495459.614	528396.616
1984	8,273	68276.3581	517854.121	473642.386
1985	11,724	51922.7587	606859.258	554992.452
1986	14,953	99748.8197	780491.393	770204.502
1987	20,827	111043.625	887820.851	898312.031
1988	33,495	118447.58	1007260.83	828508.007
1989	55,266	112017.201	937959.711	833186.515
1990	82,666	114180.343	1087415.94	968166.688
1991	126,114	122372.633	1190637.99	1030606.45
1992	210,791	118834.713	1225887.25	1098396.51
1993	327,227	139209.781	1605937.16	1325400.57
1994	721,481	134204.359	1319954.01	1094766.16
1995	1,356,313	135453.227	1387751	1285606.62
1996	2,327,287	164332.096	1614674.73	1658612.58
1997	4,152,226	174032.185	1861259.87	2122209.29
1998	7,008,547	175729.287	1858047.27	2015018.89
1999	10,070,036	224138.237	1720831.97	2156394.98
2000	15,478,184	204019.35	1846075.32	2210432.47
2001	24,409,563	218291.251	1371199.94	1519313
2002	35,392,319	169546.534	1341598.81	1487087.92
2003	43,804,855	150414.446	1310886.29	1575216.35
2004	48,860,194	148220.166	1612391.86	2097449.51
2005	51,681,301	149071.787	1889411.38	2946802

1) Retrieved from Turkstat
2) Retrieved from State Planning Organization (SPO)