KAMU AÇIĞININ MEVZUAT FAİZLERİ KANALIYLA DIŞLAMA ETKİSİ

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ÖZET

Çalışmanın temel amacı Türkiye'de kamu açığının özel sektörü dışlayıcı etkisinin var olup olmadığını araştırmaktır. Metodolojik olarak Cebula (1997, 2000) ve Darrat (2000) takip edilmektedir; ki onlar Amerika'ya ait data kullanarak kamu açığının mevduat faizleri kanalıyla özel sektörü anlamlı bir dışlama etkisinin var olup olmadığını test ediyorlar. Kamu açığının Türkiye ekonomisi üzerindeki muhtemel ekonomik etkileri yoğun olarak tartışılmasına rağmen, konuya bu perspektiften yaklaşan bir çalışma şu ana kadar gerçekleşmedi. Araştırmada, Türkiye'nin 1985-2003 yıllarını kapsayan verileri kullanılarak mevduatlara uygulanan reel faiz oranları ile kamu açığı arasındaki ilişki incelendi. Sonuçlar, kamu açığındaki değişmenin mevduat için bankalar tarafından ödenen reel faizi pozitif olarak anlamlı derecede etkilediğini göstermektedir. Bu da, kısmen de olsa kamu açığının dışlayıcı etkisinin varlığına işaret eder.

Anahtar Kelimeler: Kamu açığı, dışlama etkisi, Türkiye

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The Crowding Out Effects of Public Deficit through Interest Rates on Saving Deposits

ABSTRACT

The primary objective of this study is to examine the potential crowding out effect of public deficit through interest rates paid for saving deposits (the cost of deposits). We follow Cebula (1997, 2000) and Darrat (2000) that have investigated such an effect of public deficit in the US. Even though the economic effects of public deficits in Turkey are widely deliberated by many researchers, none of them has directed his/her study through this way yet. By using Turkish data, we estimate the relationship between real interest rates and public deficit over the 1985–2003 period. The results suggest that changes in public deficit positively and significantly affect the real interest rate paid for saving deposits at the Turkish banks.

Key words: Crowding out, public deficit, Turkey

I. INTRODUCTION

Government involvement in financing economic activity has been experienced almost all over the world for centuries. Such a government intervention became more intense as of the mid 20th century for the sake of economic development particularly in developing nations. Those countries have needed high expenditure levels to finance development policies. Because of available resource shortages, most of them have had to rely on deficit financing. In this respect, budget deficit represents a phenomena that has plagued the economies of most developing nations in the world. The International Monetary Fund Government Finance Statistics Yearbook (1990) displays that ninety-eight of one hundred twenty countries were running budget deficits. According to data, budget deficits are features throughout the world, but the average rate is much higher in developing countries than in industrial ones. Meanwhile, countries have launched different methods of deficit financing. Various methods of financing impact macroeconomic aggregates in a different way, and naturally, yield different consequences. In the early 1980s, many developing nations, like Turkey, started to believe that fiscal illnesses carried by public deficits deteriorate their economies, and even spark crisis.

During the last decade, Turkish economy was hit by two remarkable economic crises. The first one occurred in the March of 1994; and it was, basically, in the form of currency crises. The second

crisis preceded by a financial turmoil that hit the economy once in the second half of November 2000 and the final wave came on the February 22, 2001. After careful elaboration of the last two crises, it is quite reasonable to argue that public sector deficit was the principal triggering factor for both of them even though crisis showed up within different format. According to Sachs et. al. (1996), better fiscal performance could make countries capable to escape from any crisis. It could be argued that if Turkey had constructed better fiscal health after 1977-1979 crisis, it would have had clear chance to escape from those last two crises, as well to reach higher prosperity level.

After the mid 1980s, Turkey faced a drastic deterioration of its fiscal balances; thus public sector barrowing requirement (PSBR) has persistently stayed at high level. Average of PSBR/GNP ratio was 5 percent during the 1980s in Turkey. The PSBR/GNP ratio gained momentum at the early 1990s, and PSBR reached to10.2 percent of the GNP in 1991, and 15.5 percent of the GNP in 1999. Then, average ratio was 9.4 percent over 1990-1999 period (SPO). Meanwhile, TCA Report (2000) asserts that Turkey's deficit and debt numbers are larger than shown by data[8]. Thus, a high level of PSBR/GNP ratio has crucial potential to generate serious consequences not only for current generation but also for future generation in the manner of resource allocation.

[8] The Turkish Court of Accounts (TCA) Report (2000), pp IV.

A primary reason behind the serious fiscal deterioration in last decades is the sudden boost up in the interest payments for government debts. Because of heavy borrowing with high interest rates[9], a rising portion of tax revenues has gone directly to interest payments. Thus, in recent years, we have witnessed a sharp increase in the ratio of interest payments to tax revenues. For instance, it has risen from 30% in 1991 to 103% in 2001 (SPO).

In this context, it is essential to look at financing methods of the PSBR, and figure out the major changes. During the 1970's and the early 1980's, the Turkish government financed deficits heavily through central bank advances (monetization). On the other hand, in the late 1980s, the Turkish government replaced domestic barrowing as a primary way of deficit financing. Domestic borrowing had risen year by year during the 1990s[10]. It is noteworthy to mention that the central bank lending has been nil since 1997. In the last decade, the PSBR financed exclusively by issuing government papers to the internal market, in particular to the banking sector. Thus, in recent years, proportion of securities originated from the public

[9] For instance, according to TCA Report (2000), average real interest rate was about 35 percent between 1995 and 2000 (pp.xi). Report also emphasizes that lending market is controlled by limited number of agencies. Therefore, since market has oligopolistic structure, government has been barrowing mostly without concerning its cost (pp.71).

[10] It could be argued that the new method enabled the Turkish government to by-pass the formal constraints on its fiscal operations. In this sense, inflation targeting policies (either implicit or explicit) contributed the policy shift from monetization to domestic borrowing. Furthermore, foreign sources are limited for the countries, like Turkey, with high debt accumulation and poor economic performance. Thus, domestic borrowing could be interpreted as a policy choice of the Turkish government to overcome both credit restraints and monetary constraints.

sector debt has been rising in the financial market. As it was shown previously, tax income to interest payment ratio was 103 percent in 2001. While 9 percent of that amount was paid to foreign lender, 94 percent of it was paid to domestic lenders. Table 1 displays the size of new issued securities for both public and private sectors from 1990 to 2002[11]. While, new issued public securities were about one and half of privately new issued securities in 1990, public sector issued new securities were equal eleven and half times of privately issued securities in 2002. According to table, while the ratio of private securities to GNP does not provide significant change, public securities to GNP ratio increased almost ten times during the thirteen years period.

Table 1: Securities by Issuing Sectors (% of GNP)

Year	Public Sector	Private Sector
1990	6.4	4
1991	7	5.4
1992	12.2	5.5
1993	13.6	5.6
1994	14.6	3.4
1995	15.3	3.8
1996	19	2.9
1997	20.7	3.2
1998	22	3.5
1999	29.8	4.8
2000	29.3	5.5
2001	69.7	6.0
2002	55.2	4.8

Source: SPO. (www.dpt.gov.tr)

[11] In fact, this outcome contradicts with the emphasis put on the financial market. Since the early 1980s, liberation of financial market has always kept its priority in the political agenda.

Such high level of PSBR and domestic borrowing caused national financial system shaped entirely by the needs of public sector. As a result, the financial side of economy has heavily dominated to the real side. Apparently, the unprecedented levels of domestic government borrowing makes government the major demander for loanable funds. Public deficit would possibly raise the cost of capital and absorb private saving, which in turn adversely affect capital accumulation and productivity. There have been numerous academic studies dealing with the crowding out impact of government deficit in Turkey. However, no one has yet given attention on the crowding out effects of public deficit through interest rates at bank (the cost of deposits). Therefore, this paper empirically investigates the effect of public deficit on interest rates paid for saving accounts.

The paper is organized as follows. The following part introduces the methodology, defines variables, and describes the data set used for estimation. Section 3 presents the results of empirical analysis. Finally, in section 4, concluding remarks will be provided.

II. METHODOLOGY and DATA

Economists have been debating on the dual questions of whether or not government bonds represent net wealth, and whether government deficits affect national savings. The deliberation over the economic effects of public deficit did not just recently come out;

indeed, it is an ancient issue and has long been a central concern of economists. Even though the theoretical works dates back to Ricardo, empirical studies began to appear after the mid 20th century (e.g. Tobin, 1952; Modigliani, 1961; Diamond 1965; Barro, 1974; Auerbach and Kotlikoff, 1986)[12]. Even though there is much concern over the possible adverse effects of deficits on the economy in recent decades, the results provided by literature are inconclusive (Seater, 1993; Elmendorf and Mankiw, 1999; Ricciuti, 2003). For instance, the Ricardian approach asserts that both deficits and taxation have the same effect on the economy; and therefore, deficits do not produce any threats. Barro (1989) provides empirical results on interest rates, consumption, savings, and the current account balance that support the Ricardian viewpoint. According to many Keynesians, deficits need not crowd out private investment. Eisner (1989) emphasizes that increased aggregate demand through budget deficits enhances the profitability of private investment and leads to a higher level of investment at any given rate of interest. His empirical results show that deficits have not crowded out investment, rather there has been crowding in. In contrast, deficits, particularly permanent ones, produce crowding out effects in the Neoclassical framework (Bernheim, 1989).

[12] Fischer and Easterly (1990) emphasize that the Keynesian revolution boosted up studies concerning public deficit.

Crowding out could be basically defined as the distortion of private sector by the governmental activities (Buiter, 1990). The deficit financing of public expenditures may "crowd out" private investment that significantly reduces the rate of capital formation in the economy over time. The expansion in public borrowing to finance deficits generates an increased demand for loanable funds. Thus, utilization of savings by governments to finance deficits will crowd out utilization of savings for private investments.

The impact of government deficits on interest rates has been the subject of a considerable amount of empirical research (e.g. Evans 1985; Darrat 1990). These studies have used variety of interest rates, such as the 3 month treasury bill rate. At fist time, Cebula (1997) investigated the impact of the federal budget deficits on interest rates at commercial banks in the US. Following the earlier studies, like Barth, Iden, and Russek (1984, 1985), Cebula (1988), and Hoelscher (1986), Cebula (1997) has adopted the open-economy loanable funds model. He runs the equation of

$$R = r(P, EARTBR, DEF, CHY) \quad (1)$$

with the US data from1963 to 1994. Where,

R: the yearly nominal average rate of interest on saving accounts (the cost of deposits to commercial banks)

P: the expected inflation rate (used the actual CPI_{t-1} as an instrument)

EARTBR: real average interest rate yield on 6 month Treasury Bills, expressed as percentage per annum

DEF: the structural budget deficit, expressed as a percentage of GDP

CHY: the change in per capita real GDP.

Cebula (1997) found statistically significant coefficients with positive signs for all independent variables. According to his results, the structural budget deficit has raised the cost of deposits to banks. However, Darrat (2000) questioned Cebula (1997)'s both methodology and results. Cebula (1997) used the levels of variables for the estimation. Darrat (2000) claims that those results are unwarranted since Cebula (1997) ignores to test whether or not variables are stationary. Indeed, it is the fact that most economic time series in levels tend to violate stationarity (Stock and Watson, 1988). Darrat (2000) demonstrates that all variables, except the change in per capita GDP, in Cebula's study are non-stationary in levels. He also shows that those variables are stationary with first difference. In order to test the validity of Cebula (1997)'s conclusion, Darrat reestimated the equation by using the first differences of those nonstationary variables. Darrat found that, contrary to Cebula (1997), budget deficit does not affect the interest rate at commercial bank. In short, once the

non-stationarity of data removed, the evidence for crowding out disappeared.

Cebula (2000) reestimated his equation according to Darrat (2000)'s critiques. Cebula (2000) brought two major changes with in the new study: (i) considered the nonstationarity of level variables, and (ii) replaced the real cost of deposits at banks (instead of nominal values), and then exclude inflation variable from the equation. The new results reaffirmed the crowding out effect: the structural budget deficit significantly affects the real cost of deposits at bank.

Model used in this study bases on Cebula (2000), and takes into account the earlier Cebula & Darrat discussion. Equation of

$$R = a_0 + a_1 PD + a_2 RDB + a_3 CPY + e \quad (2)$$

will be estimated in section three with the Turkish data from 1985 to 2003. Where,

R: yearly real average interest rate on saving accounts

PD: PSBR/GNP

RDB: yearly average real interest rate for domestic borrowing

CPY: the change in per capita income

According to the conventional wisdom, the yearly real average interest rate on saving accounts is an increasing function of yearly average interest rate for domestic borrowing, and the percentage

growth rate of real GDP. Also, it is an increasing function of the public deficit because interest rate would increase as a result of additional competition in the capital markets.

Data for nominal rates of R, PD, and CPY gathered from the State Planning Organization. Nominal values of RDB, for the period of 1989-2003, is available at the State Planning Organization. RDB, for the period of 1985-1988, is calculated from the Treasury Department's auctions. All nominal values are normalized by the consumer price index (CPI).

III. ESTIMATION RESULTS

Most time series in levels tend to be non-stationary (Stock and Watson, 1988). Therefore, first of all, I applied unit root test to figure out whether or not variables satisfy the stationarity condition. Table 2 reports the unit root test results.

Table 2: Unit Root Test (ADF) of Variables

ADF for Levels		First Difference	
R	-3.75**		
PD	-2.16	ΔPD	-4.74*
RDB	-3.62**		
CPY	-5.75*		

*Significant at 1 percent level

**Significant at 5 percent level

According to Table 2, R, RDB and CPY satisfy the stationarity condition, but PD is stationary only with first difference. Hence, I used first difference of PD (ΔPD) for the estimation. The regression results are the following:

$$R = 3.29 + 1.93\ \Delta PD + 0.24\ RDB + 0.00008\ CPY \quad (3)$$

(3.42) (3.01) (3.86)

$R^2 = 0.60$

$DW = 2.30$

Where, terms in parentheses are t values and Δ is the first difference operator. Estimated coefficients of all three independent variables are statistically significant at the 1 % level, and show signs that are consistent with the expectations. The coefficient of public deficit is subject to receive noble attention, since it was the motivator for this research project. This coefficient is positive and significant at the 1 % level, implying that the public deficit has a positive and significant effect on the real interest rate paid by banks for saving deposits. In other words, the higher the change in PD, the higher real interest rate paid for saving deposits. Consequently, the results confirm the existence of crowding out effect, at least for some degree.

IV. CONCLUSION

The primary intention of this study is to seek the potential crowding out effect of public deficit through interest rates paid for saving deposits. Specifically, by using Turkish data, this study is expected to provide new empirical evidence for whether or not public deficit significantly affect the cost of saving deposits at banks. The results suggest that public deficit positively affect real interest rates at bank paid for saving deposits.

Besides general implications, the results are likely to have policy suggestions for the Turkish government. Current economic sate of Turkey indicates evidently that economic growth is not a choice; indeed it is an indispensable issue. Likely crowding out of public deficit can damage the efficiency of financial market which in turn put serious strains on economic growth.

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