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Analyzing the Sources of Financing the State's General Budget Deficit - A Case Study of Yemen

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Abstract:

The present study aimed to know the sources of financing the general budget deficit in the Yemeni economy. Moreover, it tried to know the percentage of the contribution of each source of financing to covering the general budget deficit. The study relied on the descriptive analytical method as well as the historical method. The results of the analysis showed that Yemen relies heavily on local funding sources to cover the public budget deficit. The average contribution of local funding sources to cover the general budget deficit reached 96.07% during the study period, while the contribution of external sources of funding recorded 3.39% for the same period, and this number reflects a very small percentage compared to local financing. The results of the study also showed that the local funding sources that contributed to covering the budget deficit were represented in treasury bills, at a rate of 69.85%, followed by cash issuance at a rate of 17%, then government bonds at a rate of 11.37%, and then Islamic financial instruments (sukuk) with a rate of 1.79%. Thus, the study recommends limiting the cash issuance process and searching for non-inflationary funding sources to cover the budget deficit. The study also recommends rationalizing public expenditures and improving public revenues to curb the growing budget deficit.

Keywords: Budget deficit, local sources of financing, external sources of financing, Yemen.

Introduction:

A state budget deficit is defined as the state in which public expenditures exceed public revenues. The budget deficit is considered one of the economic problems facing developed and developing countries alike, especially with the outstanding and large role of public spending in them despite the multiple attempts to reduce its role on the pretext that the private sector is more efficient than the government in employing resources **(Gherghina, Duca & Postole, 2010)**. The phenomenon of budget deficit cannot be traced back to a single cause because it is a complex phenomenon whose causes are due to a number of factors that contribute to its occurrence. Certainly, any deficit in the state's general budget needs financing **(Afanas'ev, & Shash, 2021).** And there are multiple sources of financing the public budget deficit, which can be divided in general into traditional and non-traditional sources of financing **(Sadekin, Alam & Saha, 2020) (Al-Afandi, 2016).**

■Conventional financing: It is represented by:

- External financing (borrowing from abroad): External borrowing is one of the most important means that the state can resort to in order to cover part of its general budget deficit, through international institutions and organizations.

- Local funding (internal loans): If a country does not have an outlet for external financing, the budget deficit can be financed locally, in the following forms: **(Dardouri, 2014).**

1- Borrowing from the public: by issuing government bonds and selling them to individuals. This is considered non-inflationary financing, as the phenomenon of crowding out the private sector resulting from the sale of government bonds to individuals transfers part of the income available for spending by individuals to the government. Thus, the consumer spending of individuals, including investment spending, decreases, causing a decrease in the aggregate demand of individuals by an amount equal to the volume of individuals purchasing bonds.

2- Bank borrowing: This is done either by expanding government borrowing from the central bank or by borrowing from commercial banks. It leads to an increase in the monetary mass, which is reflected in the increase in inflation. **(Saad, 2015).**

■ Non-traditional financing (inflationary financing): It is represented in the issuance of new cash by creating an additional amount of money without coverage to finance development or move production activities. The new cash issuance is the last resort for the state to finance the public budget deficit **(Al Saedi, 2020).** With this method, countries can address the deficit in the public budget, by mobilizing resources in a forced manner. It seems at first glance that it is the easiest way, but at the same time it is considered the most dangerous way since it results in inflation and its consequences that may destroy the national economy of the state, as indicated by many studies, such as: **(Barbouche Bujumah, 2019), (Butnikov, & Normatova, 2016) (Barakat, 2019), (Hanachi, 2019), (Mandarin, 2016), (Saad, 2015), (SURKHAEV, 2017) (Grakova, Tarakanova & Lubozheva , 2018), (Apetri, Bostan,**

Socoliuc & Hlaciuc, 2014). These studies agreed that the state's general budget deficit is an inherent characteristic of all countries, whether they are developing or developed countries. Thus, this deficit is covered by local or external funding sources. The percentage of contribution of each source of financing to covering the general budget deficit varies from one country to another. This difference is due to the different fiscal and monetary policy followed in each country, as well as to the different economic conditions from one country to another. The following studies **(Koyuncu, 2014), (Al Saedi, 2020), (Agha & Khan, 2006, (Ezeabasili, Mojekwu & Herbert, 2012), (Waqqosh, Hasibuan, Muda & Soemitra, 2021)** also indicate that the money supply is linked to a direct relationship with the exchange rate. These studies also confirm that financing the public budget deficit through cash issuance without a cover of gold or foreign exchange (overdraft from the central bank) leads to a collapse of the exchange rate and a decrease in the purchasing value of the national currency.

Sources of financing the public budget deficit:

Table (1): Sources of financing the general budget deficit and its percentage of the total deficit for the period (2001-2013) "one million riyals"

Period	Year	General budget deficit	Foreign funding	Local funding	Ratio of foreign funding to the budget deficit%	Ratio of local funding to budget deficit %
First Period	2001	(46323)	-6611	-39712	14.27	85.73
	2002	9120	-5165	14285	-56.63	156.63
	2003	90473	1655	88818	1.83	98.17
	2004	55345	3663	51682	6.62	93.38
	2005	58401	20407	37994	34.94	65.06
Average (2001-2005)		___	2789.80	30613.40	0.21	99.79
Second Period	2006	(45712)	18824	-64536	-41.18	141.18
	2007	309217	14935	294282	4.83	95.17
	2008	233017	12640	220377	5.42	94.58
	2009	517702	10800	506902	2.09	97.91
	2010	273889	2920	270969	1.07	98.93
Average (2006-2010)		___	12023.80	245598.80	-5.55	105.55
Third period	2011	311119	-24592	335711	-7.90	107.90
	2012	370691	47052	323639	12.69	87.31
	2013	618855	11689	607166	1.89	98.11
Average (2011-2013)		___	11383.00	422172.00	2.23	97.77
Average (2001-2013)		211984.15	8324.38	203659.77	3.93	96.07

Source-:

-Ministry of Planning and International Cooperation, Central Statistical Organization, Statistical Yearbook, Sana'a, for the years 2004, 2009, 2013, separate pages.

- Percentages (%) of the researcher's calculation.

When talking about the path of the general budget deficit, it is necessary to address the sources of financing this deficit. Through Table (1), it becomes clear that the state relied on two sources to finance the deficit, the local source and the foreign source. It is noted that during the first period (2001-2005), the state relied heavily on local financing, as the amount of local funding in 2003 amounted to about (88,818) million riyals, representing 98.17% of the total deficit, while the amount of foreign funding amounted to (1655) million riyals, which represented 1.83% of the total deficit during the same year, while the lowest value of local funding was in 2005, reaching (37,994) million riyals, or 65.06% of the total budget deficit. The rest of the ratio is 34.94%, representing external financing of the total deficit for the same year. Therefore, the annual average amount of domestic financing was (30613.40) million riyals for the period (2001-2005), representing 99.79% of the total deficit, while the annual average amount of external financing was (2789.80) million riyals, which represented 0.21% of the total general budget deficit for the same period (2001-2005). This shows that the state relied almost entirely on local sources of funding to cover the general budget deficit, while external financing constituted only a small and very limited percentage of the total deficit. Moreover, during the second time period (2006-2010), the state relied heavily on local financing sources, as the ratio of local financing to the total deficit during this period ranged between 141.18% as its highest value in 2006 and 94.58% as its lowest value in 2008. In 2010, local financing amounted to about (270,969) million riyals, representing 98.93% of the total public budget deficit, while the remaining percentage represented 1.07% of external financing of the total deficit during the same year. Thus, the average annual amount of local financing during the period (2006-2010) was (245598.80) million riyals, while the annual average amount of external financing was (12,023.80) million riyals for the same period. As for the period (2011-2013), the annual average of domestic financing amounted to about (422172) million riyals, representing 97.77% of the total public budget deficit, while the annual average of external financing amounted to (11383) million riyals, representing 2.23% of the total budget deficit. The deficit for the same period (2011-2013).

In sum, it can be said that the state relied heavily on local financing to cover the public budget deficit throughout the studied period (2001-2013). The average annual amount of local financing was (203659.77) million riyals, representing 96.07% of the total deficit during the same studied period, while the annual average amount of foreign financing amounted to (8324.38) million riyals, representing 3.93% of the total budget deficit for the same studied period (2001-2013).

Figure No. (1) Local and foreign funding as a percentage of the general budget deficit for period (2001-2013) %

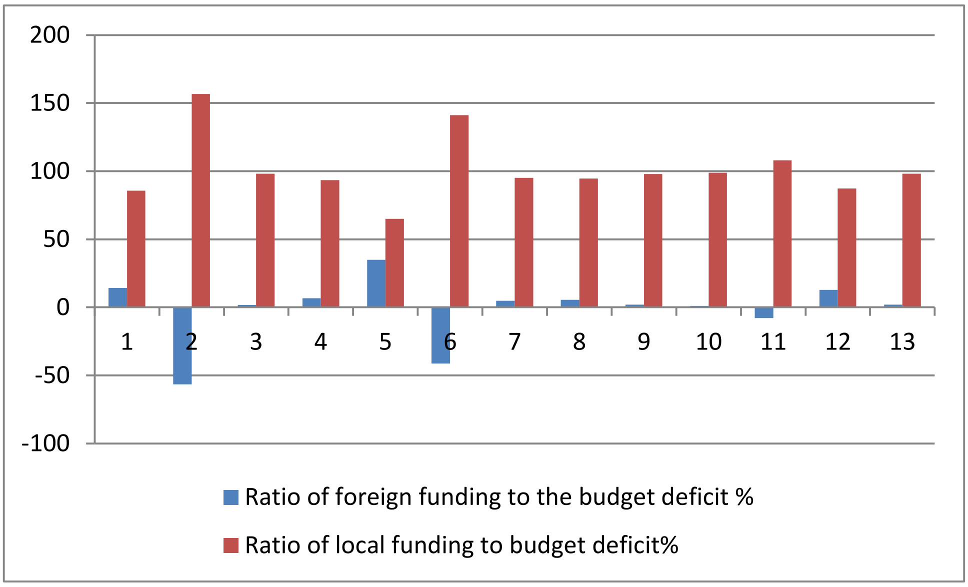
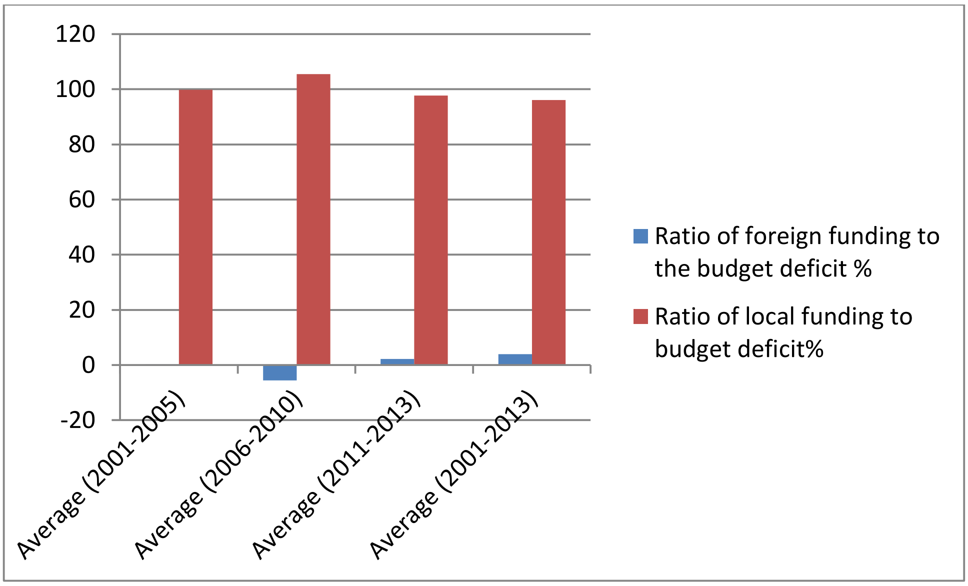


Figure No. (2) The relative importance of the average funding domestic and foreign for the period (2001-2013) %



Source: Prepared by the researcher based on the data in Table (1) and Excel

Relative Importance of Domestic Funding Sources:

Table (2): The relative importance of local funding sources during the period (2001-2013)

Period	Year	Treasury bills	Cash issue	Government bonds	Islamic financial certificates 'Sukuk'
First Period	2001	%100	_	_	_
	2002	%100	_	_	_
	2003	%100	_	_	_
	2004	%100	_	_	_
	2005	%100	_	_	_
Average (2001-2005)		%100	_	_	_
Second Period	2006	%90.85	_	%9.15	_
	2007	%100	_	_	_
	2008	%46.85	%53.15	_	_
	2009	(%14.4)	%41.44	%72.96	_
	2010	%24.31	%60.25	%15.44	_
Average (2006-2010)		%49.49	%30.99	%19.52	_
Third Period	2011	%14.75	%69.03	%15.34	%0.88
	2012	%75.07	(%0.28)	%11.05	%14.16
	2013	%70.62	(%2.67)	%23.87	%8.18
Average (2011-2013)		%53.48	%22.03	%16.75	%7.74
Average (2001-2013)		%69.84	%17	%11.37	%1.79

Source:

-Percentages (%) are calculated by the researcher based on the annual reports of the Central Bank of Yemen, for the years 2000, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, Sana'a, the General Administration of Research and Statistics, separate pages.

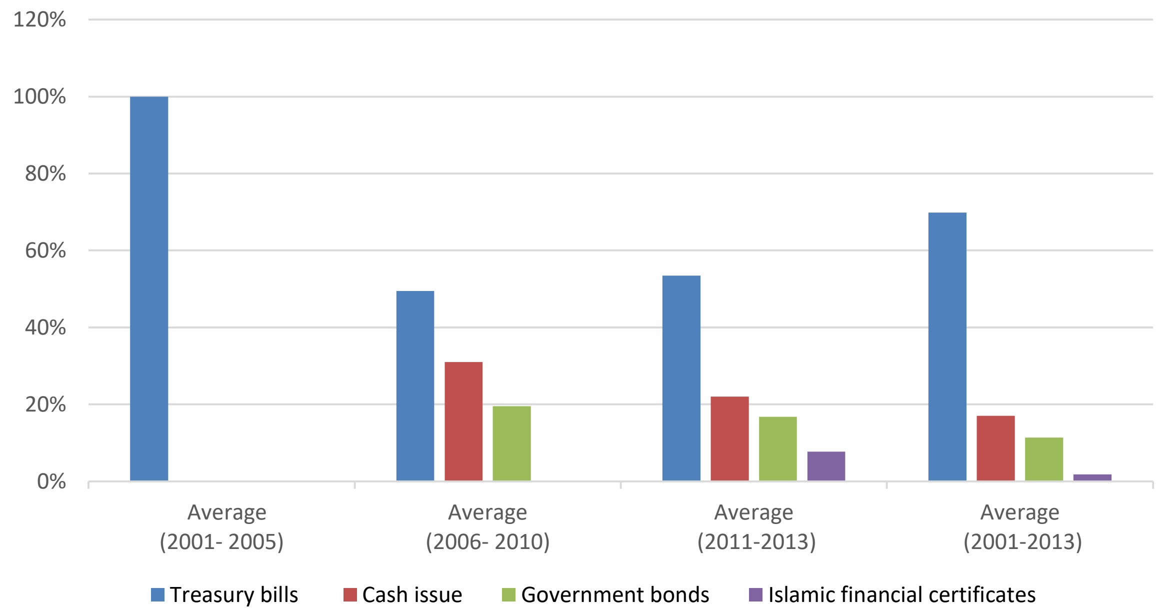
-Ministry of Planning and International Cooperation, Economic Studies and Outlook Sector, Economic and Social Developments in Yemen, Fifteenth Issue, June 2016, p. 3.

When talking about the sources of financing the public budget deficit, both domestic and foreign, this calls for addressing the local sources of funding that the government uses to cover the budget deficit. These local sources include selling treasury bills, issuing cash (inflationary financing) or issuing government bonds **(Al Saedi, 2020)**. Recently, the Yemeni government has also resorted to a new source that it has not known before, which is financing through Islamic financial certificates.

Through Table No. (2) it is obviously noted that during the first time period (2001_2005), the government relied entirely on treasury bills in domestic financing to cover the deficit, whose actual value amounted to 219 billion riyals during the period (2001_2005) in financing the entire public budget deficit of about 201 billion riyals. This means that the issuance exceeded its purpose of covering the general budget deficit by a non-inflationary means, and the use of the differential issuance to absorb the excess liquidity, reduce inflation as well as speculation on foreign currencies in the local market. Although treasury bills are considered one of the non-inflationary domestic sources of funding, this did not prevent the role of treasury bills from the negative impact, and their issuance at a time when the economy is suffering from stagnation and the continuation of their issuance for a long period contributes to the continuation of this stagnation and the weak economic growth and the slow restructuring of the economic structure and diversification. The government's expansion in issuing treasury bills also led to absorbing the surpluses of pension funds and deposits of the banking sector, thus freezing these funds and not benefiting from them in funding investment projects that contribute to stimulating economic growth or encouraging aspects of private sector activity. This is especially since most of the treasury bills issues were purchased by pension funds by 50.6%, and commercial banks by 34.6%, compared to a modest share of the private sector and individuals at 3.3%. Treasury bills also placed additional burdens on the budget due to the interests of the internal public debt. The annual average of domestic debt payments amounted to 36.3 billion riyals for the period (2001-2005), with an average growth of 15.5%, which represented an increasing burden on the public budget (Yemen, Ministry of Planning and International Cooperation, 2006). Thus, the relative importance of treasury bills in their annual average reached 100% of the total domestic financing for the same period. On the other hand, during the second time period (2006-2010), three sources of domestic financing used to cover the public budget deficit were relied on: treasury bills, cash issuance, and government bonds. The relative importance of treasury bills in its last year 2010 of the second time period amounted to 24.15% of the total domestic financing, while the highest percentage of domestic financing sources used to cover the budget deficit was the cash issuance (overdraft from the central bank). Its relative importance reached 60.38% of the total domestic financing during the same year, while government bonds represented the lowest percentage of local financing sources. Its relative importance in financing the public budget deficit reached 15.47% for the same year 2010. Thus, the annual average of treasury bills out of total domestic financing amounted to 49.49% for the period (2006-2010). The relative importance of the cash issuance amounted to 30.99% and the rest of the ratio 19.52% represented the annual average of government bonds out of the total domestic financing for the same period (2006_2010). As for the period (2011-2013), four sources of local funding were relied upon. These sources were (Treasury Bills, Cash Issues, Government Bonds, and Islamic Sukuk 'Islamic financial certificates'). Treasury bills in 2011 constituted 14.75% of the total domestic financing. The largest percentage of domestic financing was focused on cash issuance, which represented 69.03% of the total domestic financing to cover the budget deficit. As for government bonds, they accounted for 15.34%. On the other hand, Islamic bonds, which were used for the first time to cover the public budget deficit, represented 0.88% of the total domestic financing for the same year 2011. Thus, the annual average of: treasury bills, cash issuance, government bonds , Islamic financial certificates, out of the total domestic financing for the period (2011-2013), accounted for 53.48%, 22.03%, 16.75% and 7.74%, respectively, for the same period.

In sum, it can be said that during the studied period (2001-2013), treasury bills were largely relied upon as a major source of domestic financing used to cover the public budget deficit. Thus, its annual average amounted to 69.84% of the total domestic financing for the studied period (2001-2013). The annual average of cash issuance was 17%, and government bonds amounted to 11.37% of the total domestic financing for the same period. As for Islamic financial certificates, which were used by the Yemeni government for the first time in 2011 as a source of domestic financing to cover the public budget deficit, their annual average amounted to 1.79% of the total domestic financing for the same period (2001-2013).

Figure (3) shows the annual averages of the contribution of the budget deficit financing sources to the total domestic financing for the period (2001-2013)



Source: Prepared by the researcher based on the data in Table (2) and the Excel Software.

Conclusion:

The government's general budget deficit is an essential and inherent characteristic of developing and developed countries alike. Consequently, governments must search for funding sources to cover the public budget deficit. Yemen is one of the developing countries that suffer from a public budget deficit. And by relying on the descriptive analytical approach when analyzing the sources of financing the general budget deficit in Yemen, we note that the government relied very heavily on local sources of financing to cover the public budget deficit.

The average contribution rate of local funding sources in covering the public budget deficit reached 96.07% during the studied period 2001-2013. The contribution of external sources of financing to cover the public budget deficit reached 3.93% during the study period, which constitutes a very small percentage compared to domestic financing. The study also showed the multiplicity of local funding sources that contributed to covering the government's general budget deficit, which were represented in: treasury bills, cash issuance, government bonds, and Islamic sukuk. Its contribution to the total local funding sources amounted to 69.84%, 17%, 11.37%, and 1.79, respectively, during the studied period. Thus, the study recommends limiting the cash issuance process because of its negative effects on the national economy and on the general level of prices and a decrease in the purchasing value of the national currency. Therefore, the fiscal and monetary authority in Yemen must search for non-inflationary sources of financing. The study also recommended rationalizing public expenditures, improving public revenues, and working to diversify their sources to limit the growing public budget deficit.

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