Analysis of the twin deficits of the world's economies

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Abstract. *This article examines the theoretical foundations of the "twin deficits" phenomenon. The approaches of economics schools are highlighted, as well as the types of twin deficits and the impact they have. Further, the author draws a sample of countries to analyze for the presence of twin deficits in the economy. Among the selected countries, a correlation analysis of the relationship between the two deficits is carried out. Methods of dealing with twin deficits and their effectiveness are indicated.*

Keywords: *twin deficits, government budget deficit, current account deficit, correlation analysis.*

Introduction

The phenomenon of "twin deficits" is a relatively young in economics; first actively began to be considered in the United States in the 1960s-1980s [1]. Despite the fact that the theoretical support and refutation of the phenomenon was highlighted by Keynesians and Ricardians years earlier, the twin deficits are not particularly widely covered in the scientific literature. Nevertheless, the available macroeconomic data and current economic news provide an exhaustive amount of information for studying both the concept of the phenomenon and its practical component on the example of a number of countries.

Main part

1. Theoretical foundations of the "twin deficits" phenomenon

Twin deficits is a state in the country's economy when the state budget deficit is accompanied by a deficit in the current account of the balance of payments [1, p. 265-267].

This is proved by representatives of the Keynesian school of economics. They believe that with an increase in the budget deficit as part of an increase in government purchases and tax cuts, aggregate demand also grows, which leads to an imbalance in the export-import flows of the trade balance [7]. On the basis of Keynes's thesis, the Mundell-Fleming model was developed (Fig. 1) [13].

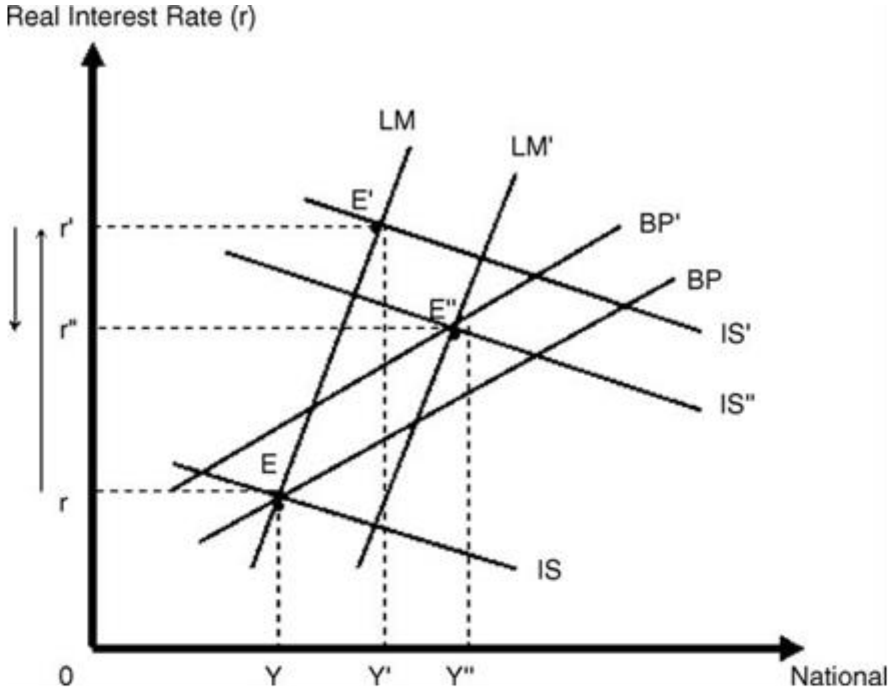

Fig. 1. The government budget and current account deficits of the Mundell-Fleming model.
Source: [13, p. 706].

When the budget deficit grows, the government raises the domestic interest rate (r - rate) in order to curb inflation. The increase in the rate increases the investment attractiveness of the country (IS - investments-savings), as a result of which the inflow of foreign capital increases (Y). The inflow of investments and capital, in turn, leads to the strengthening of the national currency (LM - liquidity-money). In this case, simultaneously with an increase in domestic consumption, imports that have fallen in price are growing in volumes, and exports that have risen in prices in volumes are falling [6, p. 233-236]. The excess of imports over exports (in transactions with goods, services) leads to a deficit in the trade balance, or a deficit in the current account (BP - balance of payments) [1, p. 261-267; 13, p. 701-712; 16, p. 31-41].

However, scientific opponents of Keynesians led by Ricardo (Friedman [3, p. 20-37], Modigliani and Ando [9, p. 99-124]) argue that the budget deficit cannot play the role of a trigger for economic growth and that there is no link between the two deficits [2, p. 1-10].

In general, two types of twin deficits can be distinguished (Table 1).

Table 1. Types of twin deficits

Type of twin deficits	Occurrence	Characteristics	Impact on the current account
Cyclical/passive	Arose as a result of the use of cyclical mechanisms in an economic downturn, i.e. due to a drop in income	Characterized by a decrease in income with a drop in business activity	Reduction of export-import flows; does not always lead to twin deficits
Structural/active	Occurred with full employment and constant taxes, i.e. due to growth in government spending	Characterized by an increase in consumer demand, strengthening of the national currency	Increase in imports and fall in exports; leads to twin deficits

Source: compiled by the author based on [4, p. 8-14; 15, p. 22; 17].

Thus, summarizing the above causal relationships of the occurrence of two deficits, it should be concluded that negative consequences prevail rather than positive ones. The growing budget deficit is accompanied by an increase in public debt. Managing the current account deficit is more difficult because it is less flexible in control and management. The role of cyclical twin deficits is insignificant because it does not lead to profound economic shifts, in contrast to the structural one. Active deficit is a problem for the country and require a fight against it because it is complex along the chain of occurrence and affects many areas of the country's economy.

2. Revealing twin deficits in the worlds' countries

This phenomenon is a frequent occurrence both in the previous century and now, which determines the relevance of identifying states that have experienced twin deficits in recent years. Countries with significant GDP are of the greatest interest. In 2019, the 60 largest economies had a gross domestic product of more than USD 100 billion [14]. For further observation, the sample includes countries with a government budget deficit for a period of 11-13 years: 10 years for the deficit itself, 1-3 years - a time lag for the emergence of a current account deficit.

It is noteworthy that 48 out of 60 countries experienced government budget deficits for at least 11 consecutive years from 2000 to 2019. However, only 28 countries had a current account deficit for more than 11 consecutive years in the same period [5; 11].

Figure 2 provides a summary table of deficits in the 28 selected economies. It illustrates that in many countries the combined duration of deficits in the budget and the current account is more than 11 years. However, a closer examination reveals that in some of them these gaps are fragmented, which makes the study of the deficit in them impractical (Chile, Kazakhstan, Colombia, South Africa, Spain, Ukraine, Vietnam, Uruguay).

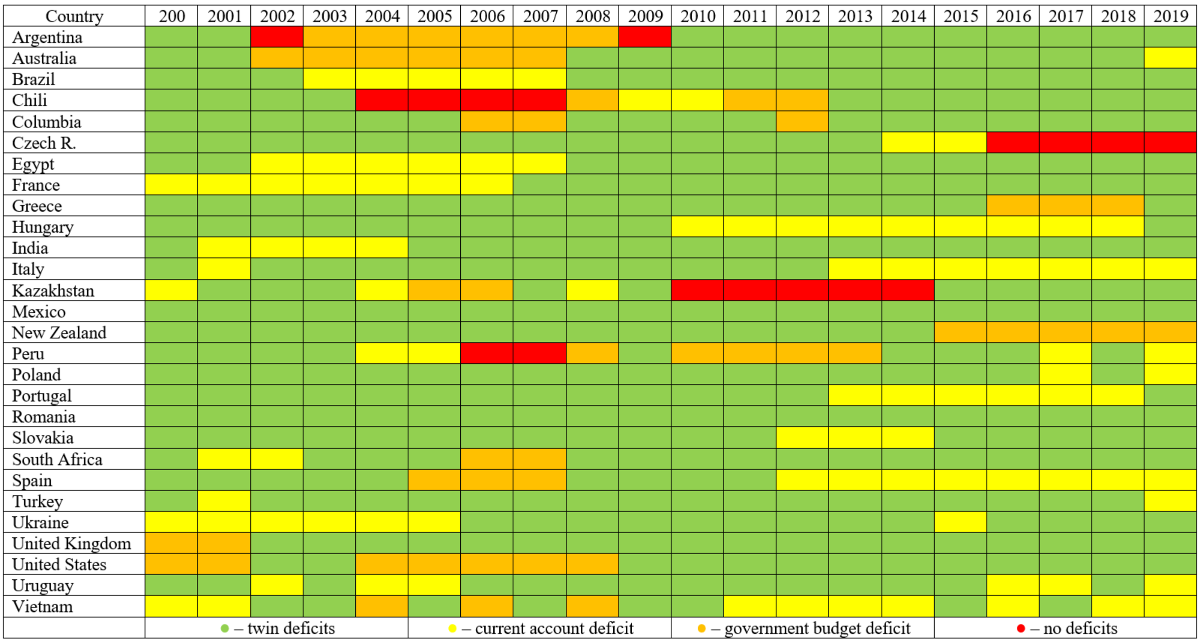

Figure 2. Government budget deficit, Current account deficit and twin deficits, 2000-2019.

Source: compiled by the author [5; 11; 14].

Based on data from the 20 remaining countries in the sample, where potential twin deficits in the economy have been present for more than 10 consecutive years, a correlation analysis was carried out between the two deficits. It was found that twin deficits as a phenomenon are absent in 12 countries, in which the relationship between the government budget deficit and the current account deficit for identical time periods is either direct, noticeable, weak, or reversed (Table 2).

Table 2. Characteristics of the simultaneous presence of two deficits in the economy

Country	Period, years	Duration, years	Spearman's correlation coefficient for the period	Strength and direction of association between the two deficits
Argentina	2010-2019	10	0.80	Direct strong
Australia	2008-2018	11	0.73	Direct strong
Brazil	2008-2019	12	-0.28	Inverse weak
Czech Republic	2000-2013	14	0.54	Direct noticeable
Egypt	2008-2019	12	0.45	Direct moderate
France	2007-2019	13	0.40	Direct moderate
Greece	2000-2015	16	0.62	Direct noticeable
Hungary	2000-2009	10	0.22	Direct weak
India	2005-2019	15	0.53	Direct noticeable
Italy	2002-2012	11	0.23	Direct weak
Mexico	2000-2019	20	0.11	Direct weak
New Zealand	2000-2014	15	-0.34	Inverse moderate
Poland	2000-2016	17	0.19	Direct weak
Portugal	2000-2012	13	-0.08	Inverse weak
Romania	2000-2019	20	0.06	Inverse weak
Slovakia	2000-2011	12	-0.45	Inverse moderate
South Africa	2008-2019	12	-0.49	Inverse moderate
Turkey	2002-2018	17	-0.71	Inverse strong
United Kingdom	2002-2019	18	-0.01	Inverse weak
United States	2009-2019	11	0.84	Direct strong

Source: calculated by the author [5; 11; 14].

As a result, 6 countries were included in the sample for the further twin deficits analysis:

- with a direct noticeable connection - Czech Republic, Greece, India;
- with direct strong connection - Argentina, Australia, USA.

3. *Methods for dealing with twin deficits*

In 2002-2003 in the United States, they used such an instrument as the issuance of government bonds. With the economy in those years declining in net savings rates, rising house prices and increasing household debt, reducing capital inflows from foreign investors (including foreign central banks) was a key challenge in combating twin deficits. It is worth noting that these actions of the state government helped the country to cope with the deficit in a short time [11; 12; 14]. However, the experience of 2002-2003 was not applicable to current conditions due to the fact that the twin deficits are still inherent in the US economy.

Argentina's economy has had twin deficits since 2010, but the authorities began to worry only in 2016 when the phenomenon brought its consequences in the form of a sharp jump in inflation and a large-scale depreciation of the national currency against the US dollar. For almost ten years, the budget deficit increased and exports fell, and then it was decided to attract external borrowings ($ 16.5 billion in 2016, 2.75 in 2017). They have been helpful in dealing with deficits because their values in% of GDP decreased, although the final disposal of it has not yet come [11; 14; 18].

The situation with the twin deficits in Australia is somewhat different. The phenomenon has been observed in the country since 2008, and only in 2019, the budget was in surplus. One of Australia's most important export items in recent years, iron ore, accounts for over 20%. In 2016, prices for this product reached a minimum of $ 40 per tonne, but then began to rise. In 2019-2020 Australia's exports are on the rise due to growing demand for iron ore from China. This provides the economy with a reduction in the current account deficit in terms of the trade balance. Together with this change, the state budget is also trying to balance. Keep in mind that a positive current account is almost impossible to control. it directly depends on the price of the ore [8; 14; 18].

India's twin deficits 2008-2020 combined the features of both Argentine and American, and Australian. The Government of India is now actively issuing government bonds to support capital inflows into the country. India is attractive for foreign investment; therefore, it is directly interested in the effective use of funds: investing them in production, business development, projects, infrastructure development [11; 14; 18].

Conclusion

The phenomenon of "twin deficits" is not a separately existing category, but a generalizing term for the simultaneous presence of state budget and current account deficits in the economy, and the former is the reason for the emergence of the latter. This thesis is confirmed by Keynes and his followers but denied by Ricardo and other opponents. Nevertheless, using the Mundell-Fleming model, it was proved that an increase in aggregate demand leads to an increase in the budget, and then to a negative trade balance.

Based on data from 60 economies with a GDP of more than USD 100 billion (for 2019), at the first stage of the analysis, it was determined that 6 of them (the Czech Republic, Greece, India, Argentina, Australia and the United States) had twin deficits over the past 20 years.

The practice of some of the selected six countries shows that the most effective way to deal with twin deficits is to issue government bonds and maintain an inflow of foreign direct investment. However, these methods do not always lead to getting rid of the deficit, because each economy is characterized by specific features (export/import orientation, dependence on prices for certain groups of goods).

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