



The macro- and microeconomic approach of subsidies

ZSUZSANNA SZÉLES *,
ERZSÉBET TÓTH-SZABÓ **, GÁBOR TÓTH ***

Abstract

Subsidies can come from domestic and EU sources, and they aim to cover costs and serve development goals. We have examined subsidies from two aspects: from the micro- and the macroeconomic approach. On the one hand, regarding the macroeconomic impact, we look at how their extent and components changed between 2004 and 2017, and also whether the impact of developments within the framework of cohesion subsidies on the budget was significant. Hungary has been among the net beneficiary Member States since its accession to the EU. The positive balance between 2004 and 2017 was more than 40 billion EUR. In 2017, Poland (10.68%) and France (12.1%) were given the most significant subsidies, while Hungary received 3.68% of the total budget expenditure. On the other hand, from the microeconomic approach, the paper examines accounting and accountancy options and managing emerging issues. The analysis includes a conceptual approach to dealing with the problem in terms of the single accounting principles, the principle of comparability, and the principle of accruals. Two procedures can be applied to state support in the principle capital and income approach. It is an important difference that, in the net method, a subsidy becomes part of the equity immediately in the year of disbursement, while in the case of the gross method, only the life of the asset will be included in the equity in the current year by deducting the deferred income.

Keywords: subsidies, budget, department asset, accounting statement.

Streszczenie

Makro- i mikroekonomiczne podejście do dotacji

Dotacje mogą pochodzić ze źródeł krajowych i unijnych, a ich celem jest pokrycie kosztów i służyć celom rozwojowym. Autorzy zbadali dotacje pod dwoma względami: z jednej strony ich wpływ makroekonomiczny oraz to, jak zmieniał się ich zakres i składniki w latach 2004–2017, a także czy wpływ zmian w ramach dotacji spójności na budżet był znaczący. Węgry znajdują się wśród państw członkowskich Unii Europejskiej będących beneficjentami netto od momentu przystąpienia do niej. Saldo dodatnie w latach 2004–2017 wyniosło ponad 40 billion EURO. Polska (10,68%) i Francja (12,1%) otrzymały

* Zsuzsanna Széles, dr. hab., associate professor, Budapest Metropolitan University Institute of Business Sciences, ORCID: 0000-0001-7912-2008, zszeles@metropolitan.hu

** Erzsébet Tóth-Szabó, PhD, associate professor, University of Sopron Institute of Finance and Accounting, ORCID: 0000-0002-2025-1849, tothne@kassza-audit.t-online.hu

*** Gábor Tóth, PhD student, Szent István University, Doctoral School of Management and Business Administration, ORCID: 0000-0002-5094-9439, toth.gabor.17@gmail.com



w 2017 roku najbardziej znaczące dotacje, podczas gdy Węgry otrzymały 3,68% całkowitych wydatków budżetowych. Z drugiej strony w artykule analizuje się, na podstawie podejścia mikroekonomicznego, opcje księgowości i rachunkowości oraz zarządzanie pojawiającymi się problemami. Analiza obejmuje koncepcyjne podejście do rozwiązania problemu z uwzględnieniem zasady porównywalności i zasady memoriałowej. Do wsparcia ze strony państwa można zastosować dwie procedury w podejściu kapitałowym i dochodowym. Istotną różnicą jest to, że dotacja stanie się częścią kapitału własnego bezpośrednio w roku, w którym została wypłacona w przypadku metody netto, podczas gdy w metodzie brutto tylko okres użytkowania składnika aktywów zostanie włączony do kapitału własnego w bieżącym roku przez pomniejszenie przychodów przyszłych okresów.

Słowa kluczowe: dotacje, budżet, aktywa działu, sprawozdanie finansowe.

Introduction

Subsidies from different sources and for different purposes play a decisive role in improving the competitiveness of individual regions as well as companies. From this point of view, the problem with subsidies is what happens if we do not make the right decision in a given situation. The purpose of a subsidy is to provide direct or indirect benefits, but it can also be understood as “compensation” for eliminating a disadvantage. Most subsidies come from the state, so they are state subsidies. Subsidies are examined from two aspects in the present study: from a macroeconomic aspect and also from a microeconomic one. Hungary accessed the European Union in 2004, so the system of subsidies has been transformed, and pre-accession funding was also available before the accession. Between 2004 and 2017, the extent, components, and priorities of subsidies were examined together with the impact of certain subsidies on the budget at Visegrad Group (also known as the “Visegrad Four” or simply “V4”).

According to Williams et al. (2006, p. 784), accounting is “a practice, a human activity constructed from human values and intentions”. In the USA, social sciences have come to be regarded as a primary means for providing a deeper, more reliable, and more rigorous understanding of accounting. The operation of the financial reporting system is not cheap (Tóth-Széles, 2018). In all areas where expenditures arise, it is important to examine whether the benefits exceed the expenditures or not. The aim of financial reporting in Hungary is specified by the Hungarian Act C of 2000 on Accounting. In this paper, we show both the goals and the defined accounting principles. Accounting statements for economic players act as highlighted important sources of information that underpin their economic decisions. In Hungary, published financial statements are available free of charge to anyone, but producing them and the operation of information systems for this purpose involve significant societal expenditures. It can be concluded from the aforementioned issues that the quality of the accounts used by market players, and the changes in the factors that affect them, are a priority (Dunk, 2011). The report presents the impact of economic events that occur during the financial

year on the assets, finances and income situation, thus giving a real picture of the business activity of the enterprise (Sztano, 2015). The information obtained can provide basic information for financial and investment decisions. In our research, we did not examine the data content of the entire report; instead, we have chosen a narrower area, i.e., the importance of the accountability of subsidies.

The main objective of the paper explores the possibilities and effects of accounting solutions on subsidies by describing laws and standards. It presents possible accounting solutions and guides their impact on the property and income situation. The issues discussed in the Hungarian regulations are ones that arise as a problem in practice while trying to find solutions. Subsidies can be provided in a complex system based on national and EU regulations, and they are subject to strict control over their legitimate use. In addition to the regulation of the Hungarian Accounting Act, the study presents similarities and differences in the regulation of international accounting standards.

The paper presents the accounting aspect of the problem, the appearance of subsidies in the financial statements, and the accounting treatment of the accounting of economic events related to the disbursement and use of subsidies. Based on the rules for accounting subsidies, solutions vary, but accounting practices have different effects on companies' assets and profits.

In this study, we deal with the accounting of non-refundable subsidies. Non-refundable subsidies can be divided into two categories:

- support for covering costs,
- support for development purposes.

The problem of receiving support for costs has become an interesting accounting and tax problem in terms of the principle of comparability. The issue is problematic in practice, especially in the accounting of agricultural subsidies, due to the problem of the cost and coverage of the subsidies received in due time. In the case of development subsidies, problems arise with the presentation of a supported asset: should the subsidy be accounted for in a capital-efficient or result-efficient manner? Is the settlement based on the gross or net method?

The effects of accounting on results and assets differ depending on the method, which violates the clarity and comparability of accounting information. By taking the above-mentioned objectives into consideration, the following research hypotheses were formulated.

Hypothesis 1 (H1): Hungary received a significant amount of Union subsidies of the Visegrad Group between 2004 and 2017.

Hypothesis 2 (H2): The effect of net and gross settlement methods on assets and profits is different in the case of procedures for the recognition of state subsidies.

1. Literature review

State support means redistributing income within the economy. Nowadays, the question of how state subsidies affect the economic situation and behavior of enterprises, and how we approach the question of subsidies from a theoretical or apractical point of view, is unclear.

According to E. Voszka (2009), the role of the state in the operation of the economy, and thus in maintaining and strengthening competition, has included competition and market regulation and state aids, and thus a variety of means of stimulating and restricting competition. R. Csoma (2008, p. 8) is of the opinion that “decision-makers in the economy can conflict with the contradiction between competition and competitiveness. On the one hand, support restricts competition, and on the other hand, competitiveness can improve in the long run if companies are able to stay on the markets even without aid, and competition can be restored”.

European Union member states, including Hungary, also provide direct state support to companies that make improvements from this source, generate revenue, and consequently generate additional profits, which increases social utility (Vas, 2019). Many economists deal with the examination of individual forms of support, looking for the most optimal form of support, for example, to be refunded or non-refundable. There is a consensus among researchers that the presence of the state in financing undermines incentives. There is already a divergence of views on whether the effects of state aid on the impact of external effects are positive or not (Berlinger et al., 2015).

L. Kállay (2014) examined whether the impact of subsidies on the investment, employment, income generation, and competitiveness of the Hungarian economy is apparent. Kállay concluded that there is no better situation in any area than in countries with significantly lower support rates. According to Csoma (2017), despite being one of the leaders in the absorption of EU grants, the catch-up performance of Hungary has been poorer than that of the other Member States joining the EU in the same year.

Analyzing the impact of subsidies from a microeconomic point of view, according to Gy. Vas (2019), the grant of non-refundable aid results in the firm being relieved of its revenue because it may permanently release the amount of aid previously recognized as accrued and accountable as other income. Compared to a competitor who has not received a non-refundable grant and is implementing a similar project, its profits will also increase. The microeconomic approach has a positive impact on non-refundable grants, as it can implement a development project where the production assets appear at their real cost, but actually pay the subsidy amount less. The micro-level analysis conducted by Kállay (2014) does not support the assumption that state aids significantly improve economic performance. According to Vas (2019), enterprises receiving non-refundable subsidy payments increased the total social surplus, but for individual enterprises, we can get different results.

The efficiency of the use of subsidies may vary from one target area to another. Agriculture is the biggest winner of subsidies; almost 50% of EU grants went to the agricultural sector in recent years. According to the results of Z. Sipitzki et al. (2019), profitability improves with the growth of the crop production direction, and with the increase of plant size in the case of agricultural subsidies and profitability adjusted by alternative costs. In the case of a higher sales subsidy, the cost per unit of revenue decreases. The current support system (with no change in sales) does not encourage farmers to rationalize their costs.

The next part shows how the subsidy system affected the Hungarian budget in recent years, and we compare the Hungarian subsidies to the other EU member states.

2. The effect of subsidies on the Hungarian budget

The subsidy scheme has undergone a major transformation in recent years. Hungary joined the European Union on 1 May 2004, which affected subsidies from several aspects. Prior to accession, as in other countries, Hungary benefited from pre-accession programs, and according to the different economic and social objectives in line with the EU's 7-year budget appropriations, EU funds were distributed. The EU also prioritizes the preservation of culture, including Hungary's historical heritage. A number of important monuments across the country have been restored with EU support. According to the European Commission data, in the previous budget period, between 2007 and 2013, nearly 63,000 development issues were resolved in Hungary from the EU subsidy of 8200 billion HUF e.g. € 25 billion¹ (e.g. Metro Line 4 in Budapest).

According to Gy. Pulay and J. Simon (2017), the proportion of EU subsidies rose from 7.8% of the total Hungarian budget in 2012 to 12.9% in 2017, reaching a maximum of 15.4% in 2015. Expenditures related to EU funds were paid in connection with three main functions: state operational functions, welfare functions, and economic functions.

Table 1 shows the proportion of EU subsidies within the functional expenditure of the budget in Hungary. We can observe a correlation between the welfare and the economic functions, while the proportion of EU aids were decreased at the welfare expenditures. In this period the economic functions were increased between 2012 and 2017.

¹ 1 EUR = 334.34 HUF (11 November 2019).

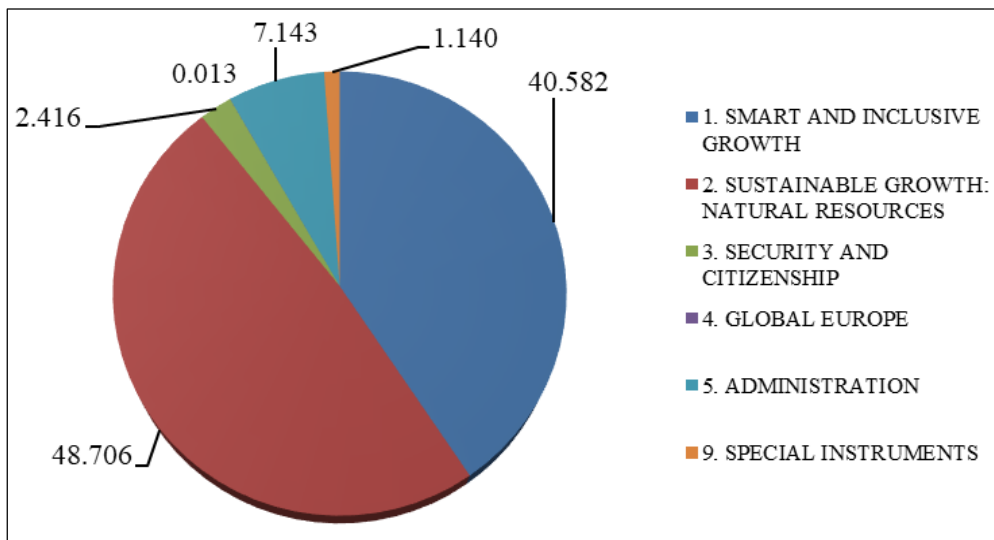
Table 1. The proportion of EU funds within the functional expenditure of the Hungarian budget for the period 2012–2017 (in percentage)

Main functions	2012	2013	2014	2015	2016	2017
State Operational Functions	3.5	4.6	2.7	4.3	2.5	4.7
Welfare functions	2.5	3.3	3.4	4.5	2.1	1.2
Economic functions	37.8	42.8	45.9	51.0	48.2	55.0
Total EU resources within the total Hungarian budget expenditure	7.8	10.5	12.4	15.4	11.2	12.9

Source: <https://www.penzugyiszemle.hu/world-of-sais-szamvevoszek-vilaga/asz-elemzes-a-maradvanyok-es-az-unios-forrasok-hatasarol-a-koltsegvetes-szerkezeterre>.

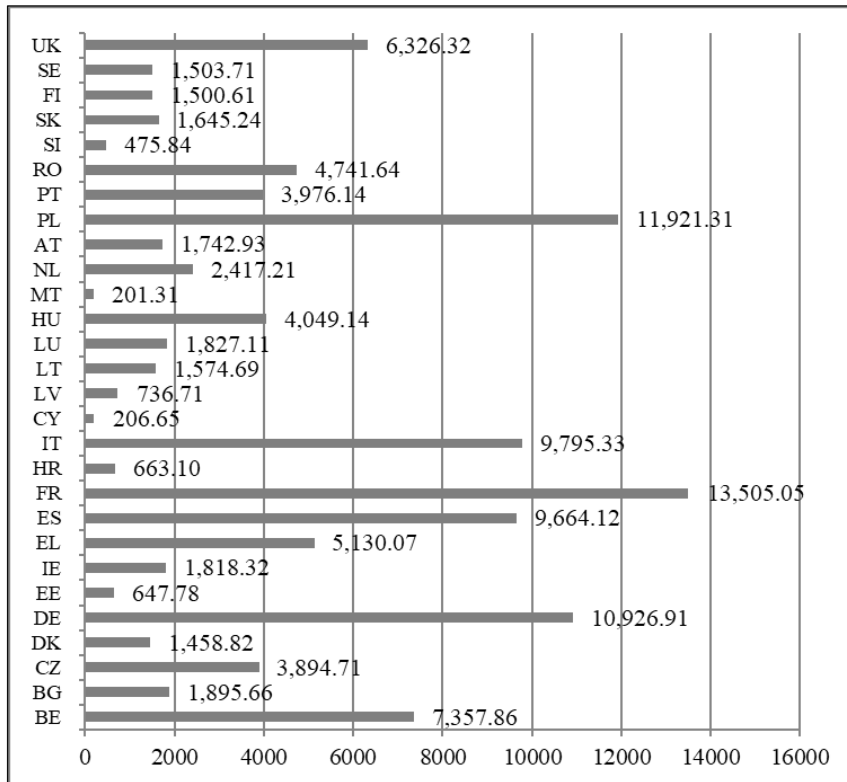
The expenditure of the European Union budget in 2017 is shown in Figure 1, where each item of expenditure is illustrated below. The two most significant areas of expenditure are Sustainable growth: natural resources (48.706%) and Smart and inclusive growth with a 40.582% share, respectively.

Figure 1. The expenditure side of the EU budget in 2017 per category



Source: http://ec.europa.eu/budget/graphs/revenue_expenditure.html

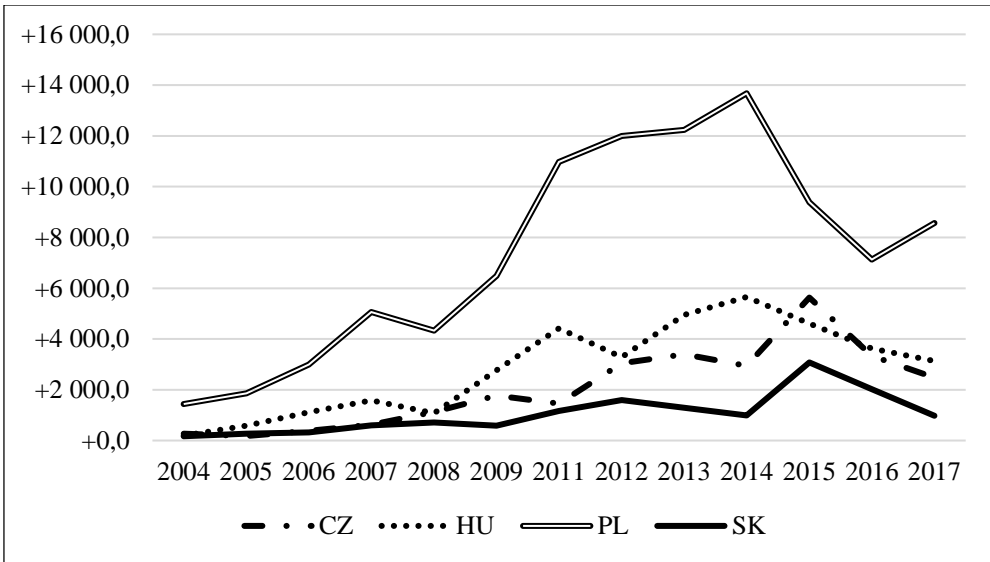
Figure 2 shows the size of the Member States' spending in the EU budget in 2017. From this it can be seen that Poland was given the most significant subsidies in the year under consideration after France, with a share of nearly 11%, while Hungary received only 3.68 %, i.e. 4.05 billion EUR of the total budget expenditure.

Figure 2. Expenditure of the EU budget by Member State in 2017 (EUR million)

Source: http://ec.europa.eu/budget/graphs/revenue_expenditure.html

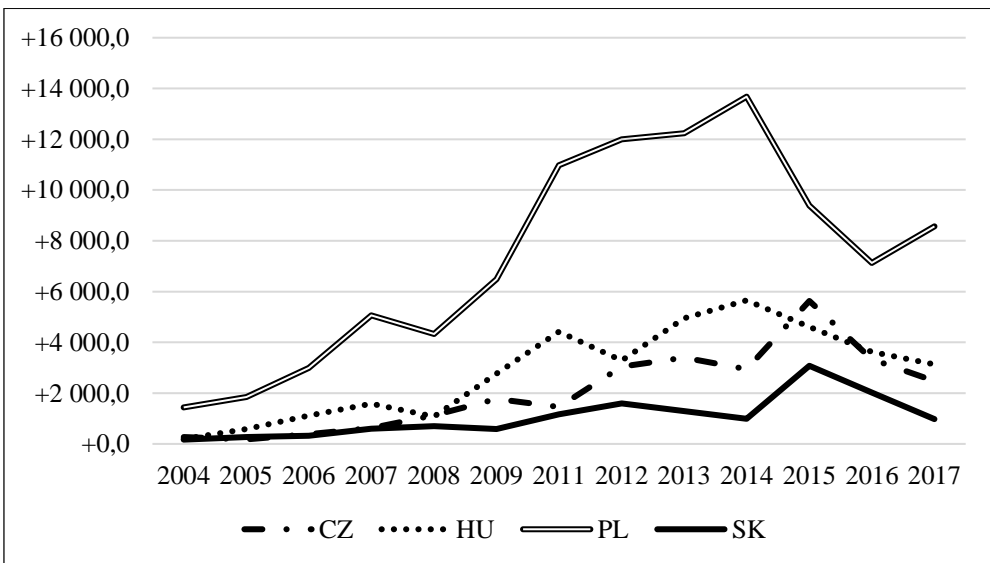
Figures 3 and 4 show the operating budgetary balance of the Visegrad Group countries. Our first hypothesis (H1) is that Hungary received a significant amount of Union subsidies of the V4 countries between 2004 and 2017. We used the European Commission database to calculate and compare the subsidy level in EUR million (Figure 3) and % GNI (Figure 4) at Visegrad Group countries. Poland received the largest amount (in EUR Million) between 2004 and 2017, so it is the number one country in this group. Then we compared the operating budgetary balance to the GNI. As you can see in Figure 4, Hungary obtained the highest level of the EU subsidies between 2004 and 2017. The average operating budgetary balance (% GNI) is 2.87% in Hungary, which is the highest average ratio during the period under review. Poland (2.17%) is in second place, and Slovakia (1.57%) is third. The ratio is the lowest (1.37%) for the Czech Republic. We made descriptive statistics for these countries, and the results show the maximum of the operating budgetary balance (% GNI) was in 2014 and 2015 for each of the V4 countries, and the minimum was in 2004 and 2005. We reject hypothesis 1 if we examine the data rows by EUR, but it can be accepted if we calculate the GNI ratio. In our opinion, using the GNI ratio is a better solution than the natural unit of measure, so H1 is accepted.

Figure 3. Operating budgetary balance (EUR Million) of the Visegrad Group between 2004 and 2017 (%)



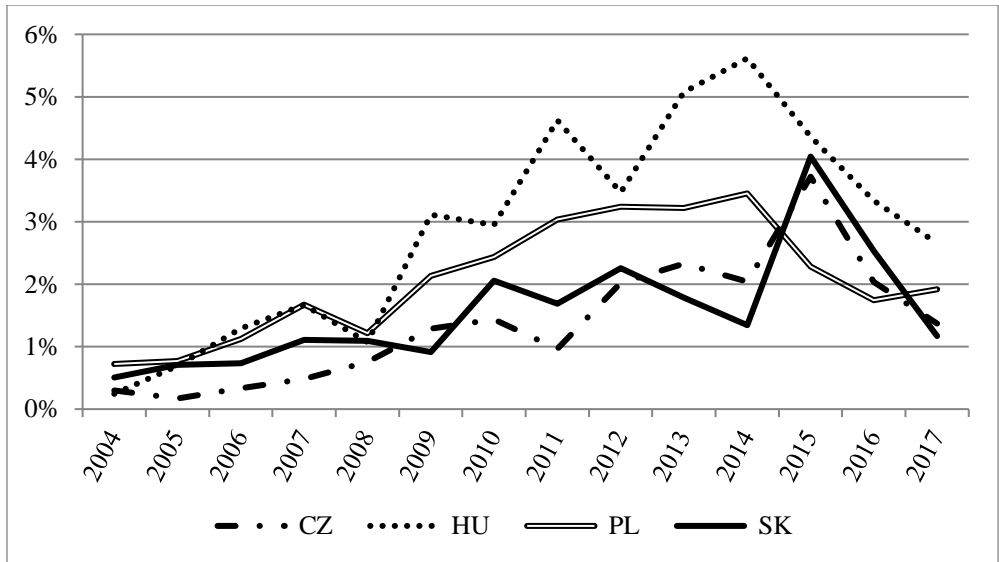
Source: based on European Commission database,
http://ec.europa.eu/budget/graphs/revenue_expenditure.html

Figure 3. Operating budgetary balance (EUR Million) of the Visegrad Group between 2004 and 2017 (%)



Source: based on European Commission database,
http://ec.europa.eu/budget/graphs/revenue_expenditure.html

Figure 4. Operating budgetary balance (% GNI) of the Visegrad Group between 2004 and 2017 (%)



Source: based on European Commission database,
http://ec.europa.eu/budget/graphs/revenue_expenditure.html

According to the European Commission (2018) Hungary has received € 4.049 billion subsidies in 2017.

Hungary has paid this money for these aims:

- agriculture 36.67%,
- rural development 60.27%,
- research and development 2.16%,
- citizenship, freedom, security, and justice 0.6%,
- administration 0.33%.

Table 2 shows the annual contribution from EU funds and national contributions annually from 2004 on. Hungary has been among the net beneficiary Member States since its accession, meaning that it receives more funding from the EU budget than it pays. The positive balance between 2004 and 2017 was more than e.g. € 33 billion (11,000 billion HUF).

As the statistical data also show, a significant amount of support is given to each Member State. The effectiveness of the use of aid is one of the primary considerations when examining the economic impact of these subsidies, but it is not negligible where and how the accounting records show them. Of course, the reliability of the data of the annual accounts to be prepared by enterprises for the financial year is the most important, but due to their volume, the subsidies are of decisive importance in the life of each business. In the following part, we present the structure of subsidies, their types, and how they are accounted.

Table 2. EU subsidies and size of national contribution between 2004 and 2017

Year	Revenue from the EU	National contribution	Balance
	(Million EUR)		
2017	4049	821	3228
2016	4546	924	3622
2015	5629	958	4671
2014	6620	909	5711
2013	5910	920	4990
2012	4177	832	3346
2011	5331	836	4494
2010	3650	862	2788
2009	3569	758	2810
2008	2003	865	1138
2007	2428	786	1642
2006	1842	678	1164
2005	1357	720	637
2004	713	483	231
Total	51,824	11,352	40,471

Source: https://ec.europa.eu/hungary/about-us/eu-and-your-money_hu

3. The system of subsidies

The consolidated version of the Treaty on the European Union and the Treaty on the Functioning of the European Union (TFEU), entitled “Common rules on competition, taxation and approximation of laws” Title VI, Section 2, on State Aid, Article 107 (ex-Article 87 TEC), governs the common framework to be incorporated into the legislation of the Member States.

The contract declares that: “any subsidy granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favoring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the internal market” (TFEU).

Despite the strict requirement of the above-mentioned basic principle, it interprets the following subsidies as compatible with the internal market:

- (a) “aid having a social character, granted to individual consumers, provided that such aid is granted without discrimination related to the origin of the products concerned;
- (b) aid to make good the damage caused by natural disasters or exceptional occurrences” (TFEU).

On the basis of the Treaty, the following may be considered to be compatible with the internal market:

- (a) “aid to promote the economic development of areas where the standard of living is abnormally low or where there is serious underemployment, and of the regions referred to in Article 349, in view of their structural, economic and social situation;
- (b) aid to promote the execution of an important project of common European interest or to remedy a serious disturbance in the economy of a Member State;
- (c) aid to facilitate the development of certain economic activities or of certain economic areas, where such aid does not adversely affect trading conditions to an extent contrary to the common interest;
- (d) aid to promote culture and heritage conservation where such aid does not affect trading conditions and competition in the Union to an extent that is contrary to the common interest;
- (e) such other categories of aid as may be specified by decision of the Council on a proposal from the Commission” (TFEU).

A clear assessment of support is a topic that raises many problems. As regards the clarity of the assessment, the Commission of the European Union (2016 / C 262/01) issued a notice on the concept of State aid referred to in Article 107 (1).

There are two more things to note about the concept of state aid:

- On the one hand, according to Article 107 (1) of the TFEU, whether state intervention should be regarded as state aid and assessed on the basis of the effect and not the purpose of the measure or the objectives of the measure, and appropriately recognized and supported by the Union, should solely be examined when considering the compatibility of state aid with EU law.
- On the other hand, according to the TFEU, the concept of “state aid” should be applied to any form of state intervention, both “actually” transferred aid and the obligation to relinquish the enterprise (Ambrusz et al., 2018),

According to Article 107 (1) of the TFEU, measures can be termed state aid measures

- whose beneficiaries are considered as enterprises,
- that give the beneficiary an economic advantage,
- that are financed from state resources, imputable to the state,
- that are selective,
- that (may) affect competition between Member States; as well as,
- (may) distort competition between Member States. (Ambrusz et al., 2018).

Considering the requirements above, state subsidies can be classified into the following types (Ambrus et al., 2018):

- non-refundable support,
- capital investment,
- discount rate,

- interest-free loan,
- debt forgiveness towards the state,
- state guarantee,
- lower tax rates,
- tax base reduction,
- reducing social contributions,
- more favourable transfer pricing agreements within a group,
- discount land sales,
- privatization below market price.

The identification of state aid should start in legal and economic terms in the Treaty on the European Union. The impact on many areas of Community policies is a clear and unified management of aid. These requirements have been incorporated into the highest level of regulation by the European Union. Domestic legislation is based on the mandatory application of EU legislation. In addition, the accounting rules in Hungary also need to analyze the provisions of Act C of 2000 as well as the International Accounting Standards (IAS 20). An overview of the state aid standards is essential for the processing of the topic.

4. The microeconomic approach of subsidies

The accounting of subsidies is based on the International Accounting Standards (IAS² 20). According to the standard, government subsidies and government assistance must be distinguished.

- Government subsidies: handing over specific resources to meet specific past or future conditions associated with the operational activities of the entity;
- Government assistance: with the purpose of providing economic advantage.

Types of government subsidies include (Lakatos et al., 2013):

- subsidies related to assets,
- subsidies related to income,
- forgivable loans,
- favorable government loans.

Government assistance includes (Lakatos et al., 2013):

- subsidies that cannot be reasonably priced (e.g. free advice, warranty),
- providing tax benefits,
- providing indirect benefits, e.g., providing infrastructure.

² IAS International Accounting Standards, standards by IASB (International Accounting Standard Board).

As regards issues related to the presentation of state subsidies, the standard provides clear guidance on the following topics:

- Under what conditions can they be shown?
- Where should they be shown?
- In which period should they be accounted for?
- What technique is used to account them?

How should possible repayments be dealt with?

According to the standard, state aid can only be detected if the following two conditions are met at the same time:

- the entity meets the conditions for the subsidy and,
- they receive the support (reasonable assurance).

Two procedures can be applied to state aid in principle:

- the capital approach (not allowed procedure by the standard),
- the income approach (allowed procedure).

There are two methods for accounting for state aid (income approach) for development aid:

– *The gross settlement method:*

- the amount received should be recognized as deferred income when the subsidy is disbursed,
- the amount is recognized as income over the useful life in proportion to the recognized expense.

– *The net settlement method:*

- the amount of the subsidy should be deducted from the cost of the asset and subsequently amortized on the basis of the reduced value.

The difference between the two accounts is presented on the basis of the following example: the purchase price of a purchased asset: 100, received subsidy (with 60% aid intensity) 60, amortization: 20%, assuming that purchase and subsidy occurred on the first day of the business year.

Table 3. Development Assistance I: in Gross Settlement

No.	Economic event	Value	Effect on assets		Effect on profit	
			Assets	Liabilities	Revenue	Cost
1	Investment	100	100	100		
2	Aid received	60	60		60	
3	Support demarkation	60		60	-60	
4	Amortisation (20%)	20	-20			20
5	End of demarkation	12		-12	12	

Source: own calculation.

As a result of the settlement, the effect of the example on the profit for year 1 is:

$$-20 + 12 = -8$$

The value of the asset included in the balance sheet of the 1st annual report:

$$100 - 20 = 80$$

Table 4. Development Assistance II: in Net Settlement

No.	Economic event	Value	Effect on assets		Effect on costs	
			Assets	Liabilities	Revenue	Cost
1	Investment	100	100	100		
2a	<i>Disbursement of aid</i>	60	60			
2b	<i>Disbursed aid, devaluation</i>	60	-60			
3	Amortisation (20%)	8	-8			8

Source: own calculation.

The two sides of economic event 2: a) increase in cash and at the same time b) decrease in the cost of the purchased asset.

As a result of the settlement, the effect on the profit for Year 1 by using the numbers of the example is -8.

The value of the asset in the balance sheet of the first year: $40 - 8 = 32$

There is no difference in the result between the two accounts, but there is an asset difference of $80 - 32$, i.e., 48 units. The net settlement value does not reflect the real value of the asset, but the distorting effect of the aid is reflected in the asset's valuation.

By using the equity method not allowed by the standards, the asset and income situation would be as follows:

Table 5. Development Assistance III: in Capital Settlement

No.	Economic event	Value	Effect on assets		Effect on profit	
			Assets	Liabilities	Revenue	Cost
1	Investment	100	100	100		
2	Disbursement of aid	60	60	60		
3	Amortisation (20%)	20	-20			20

Source: own calculation.

As a result of the settlement, the effect on the profit for Year 1 by using the numbers of the example is -20.

The value of the asset in the balance sheet of the first year: $100 - 20 = 80$.

In the case of accounting for equity, the effect on the profit is different from the gross and net method. The assets are the same as in the gross method regarding the presentation of the development asset. However, an important difference is that the subsidy will become part of the equity immediately in the year of disbursement, while in the case of the gross method, only the life of the asset (amortization period) will be included in the equity in the current year, by deducting the deferred income. Hypothesis 2 is the effect of net and gross settlement methods on assets and profits is different in the case of procedures for the recognition of state subsidies. In this case, H2 accepted, so we have differences between the two methods.

There are also 2 methods for income-related (expenditure-compensating) subsidies:

- *The method of gross accounting:*
 - When the subsidy is paid, the amount received must be recognized as revenue.
- *The method of net accounting:*
 - When the subsidy is disbursed, the amount received must be deducted from the amount of the related expense.

By way of example, the effect on the profit is as follows: we assume that there is a cost of 1000 units associated with the supported activity and that the company receives 700 units of support for this activity.

Table 6. Support for covering costs I: Gross method

No.	Economic event	Value	Effect on asset		Effect on profit	
			Assets	Liabilities	Revenue	Cost
1	Cost incurred	1,000	-1,000			1,000
2	Aid disimbursed	700	700		700	

Source: own calculation.

The result is $700 - 1000 = -300$ loss, but the cost of 1000 units will be the basis for pricing and cost management.

Table 7. Support for covering costs II: Net method

No.	Economic event	Value	Effect on asset		Effect on profit	
			Assets	Liabilities	Revenue	Cost
1	Cost incurred	1,000	-1,000			1,000
2	Aid disimbursed	700	700			-700

Source: own calculation.

Based on the net method, only 300 value expenditures are shown in the profit, which does not constitute a correct basis for determining the cost of the activity.

The procedures to be followed in the event of any repayment of subsidies are also governed by the International Accounting Standard. Accounting can be done in the following way:

- In the case of aid related to assets that becomes repayable:
 - for gross settlement: deferred income should be reduced,
 - in the case of a net settlement, the cost of the asset should be increased.
- In the case of income support:
 - if you have accrued income,
 - dissolve accrued income for support and
 - demonstrate it as a liability
- if there is no accrued income or it does not cover the total amount to be repaid:
 - it is recognized as an expense.

5. Approaches to State Subsidies based on Hungarian Accounting Standards (HAS)

Development subsidies

The Hungarian Accounting Act stipulates the application of the gross method for development aid as a mandatory accounting method. The procedure permitted under this procedure is the settlement according to the capital approach. Assets received may be accounted for in the event that the subsidy legislation expressly provides for the settlement of capital reserves. Typically, such a provision may be linked to certain agri-subsidies.

Subsidies to cover costs

The gross settlement is the permitted accounting method for the accounting of subsidies received to cover expenses.

The relevant provision of the Accounting Act raised several practical problems until 31 December 2018:

- the disbursement of the aid and the costs incurred did not occur in the same business year, so the enforcement of the principle of comparability could not be realized
- the deferral of revenue and expenses for the relevant period could not be achieved under strict law, i.e., the principle of accruals did not apply properly.

The above problem particularly affected the agricultural sector with regard to land-based subsidies. Costs incurred should be deducted from the business year, but the requirements of accounting the related aid were quite fixed. The amount of the subsidy could be accounted for at the same time as the cash flow for other income, or it could be deferred and accounted for in the event that the competent authority/institution made the decision on the subsidy after the reporting date but before the balance sheet date.

In the absence of a decision, the revenue could not appear in the business year in which the related costs were accounted for. The resulting profit could not reflect the real income position of the company.

From 2019 onwards, the legislator allowed the provision of the Accounting Act to be used to treat this problem, including the previous (2018) application. According to the new regulation, the aid income can be distinguished even if the entrepreneur can prove that he will fulfill the conditions attached to the support and is likely to receive the aid (AA – the Act on Accounting 33.§ (7)).

Conclusion

State subsidies play a crucial role in the life of economic players. European Union members, including Hungary, also provide direct state support to companies that make improvements from this source, generate revenue, and consequently generate additional profits, which increases social utility. Poland was given the most significant subsidies (in EUR million) between 2004 and 2017 while Hungary realized the highest level of EU subsidies (% GNI) between 2004 and 2017. The average operating budgetary balance (% GNI) is 2.87% in Hungary, which is the highest average ratio during the period under review. Poland (2.17%) is in second place, and Slovakia (1.57%) is in third.

Implementing accounting for subsidies may also affect the financial and income positions of businesses, so making others adhere to the strict regulations is important for all market participants to produce bias-free accounting information. In the case of accounting for equity, the effect on the profit is different from the gross and net method. The assets are the same as in the gross method regarding the presentation of the development asset. However, an important difference is that the subsidy becomes part of the equity immediately in the year of disbursement, while in the case of the gross method, only the life of the asset is included in the equity in the current year, by deducting the deferred income.

The recipients' lawful use of the subsidies is of particular importance, as state aid also means the use of public funds.

References

- Ambrusz Á., Bartucz Z., Gyürkés A., Hargita E., Kulin-Pintér V., Nyikos Gy., Staviczyk P. (2018), *State subsidies* [Államitámogatások], Dialóg Campus Kiadó, Budapest.
- Berlinger E., Juhász P., Lovas A. (2015), *The impact of state subsidy on project financing under moral hazard and positive externalities*, "Economic Review – monthly of the Hungarian Academy of Sciences", 62, pp. 139–171.
- Commission Notice on the notion of State aid as referred to in Article 107(1) of the Treaty on the Functioning of the European Union C/2016/2946, "Official Journal of the European Union", C262 (19 July 2016), 59, pp. 1–3 (C262, 19 July).

- Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union 2016/C 202/01, “Official Journal of the European Union” 2016, 59, pp. 1–3 (C202, 7 June).
- Csoma R. (2018), *Some characteristics of the absorption of EU development funds* (doctoral thesis), University of Szeged, Doctoral School in Economics, Szeged.
- Csoma R. (2017), *The Correlations of Corporate Investments, European Union Grants and Competitiveness*, “Public Finance Quarterly”, 62, pp. 339–49.
- Dunk A.S. (2011), *Behavioral research in management accounting: The past, present, and future*, “Advances in Accounting Behavioral Research”, 4, pp.25–45.
- European Commission (2018), *EU Budget 2017 Financial Report*, Luxembourg: Publications Office of the European Union, Luxembourg.
- Kállay L. (2014), *An overdose of state aid in the Hungarian economy*, “Economic Review – monthly of the Hungarian Academy of Sciences”, 61 (3), pp. 279–298.
- Lakatos L.P., Kovács D.M., Mohl G., Rózsa I., Szirmai A. (2013), *Theory and Practice of International Financial Reporting Standards* [Nemzetközi pénzügyi beszámolósi standardok elmélete és gyakorlata], Chamber of Hungarian Auditors [Magyar Könyvvizsgálói Kamara], Budapest.
- Sipitzki Z., Bareith T., Varga J. (2019), *Changes in the profitability of individual agricultural holdings between 2013 and 2015 in Hungary* [A magyarországi agrárszektor egyéni gazdaságai jövedelmességének alakulása 2013 és 2015 között], “Hungarian Statistical Review”, 97, pp. 72–89.
- Sztanó I. (2015), *Accounting Basics* [A számvitel alapjai], BGE & Perfect, Budapest.
- Toth G., Szeles Zs. (2018), *Research on the accounting quality of public listed companies at the Budapest Stock Exchange*, “Zeszyty Teoretyczne Rachunkowości”, 99 (155), pp. 165–186.
- Vas Gy. (2019), *The type of moral hazard of state subsidies* [Az állami támogatások kettes típusú erkölcsi kockázata], “Budapest Management Review/Vezetéstudomány”, 50 (6), pp. 63–70.
- Voszka E. (2009), *The pro-competition and a competition-restricting state – before and during the crisis*, “Economic Review – monthly of the Hungarian Academy of Sciences”, 56 (10), pp 913–932.
- Williams P.F., Jenkins J.G., Ingraham L. (2006), *The winnowing away of behavioral accounting research in the US: The process for anointing academic elites*, “Accounting, Organizations and Society”, 31, pp. 783–818.

Internet sources

- Pulay Gy., Simon J. (2019), *State of Audit Office of Hungary analysis on the impact of residues and EU funds on the structure of the Hungarian budget* [ÁSZ-elemzés a maradványok és az uniós források hatásáról a költségvetés szerkezetére], Financial Review Online (Pénzügyi Szemle Online) 12 July 217, <https://www.penzugyiszemle.hu/world-of-sais-szamvevoszek-vilaga/asz-elemzes-a-maradvanyok-es-az-unios-forrasok-hatarasrol-a-koltsegvetes-szerkezetere> (accessed 31.05.2019).
- European Commission webpage https://ec.europa.eu/hungary/about-us/eu-and-your-money_hu (accessed 26.02.2019).
- European Commission webpage, EU expenditure and revenue 2014–2020, http://ec.europa.eu/budget/graphs/revenue_expenditure.html (accessed 20.02. 2019).
- European Parliament webpage: The EU budget at a glance https://www.europarl.europa.eu/external/html/budgetataglance/default_hu.html#hungary (accessed 30.05.2019).
- European Union: How the EU budget is spent, https://europa.eu/european-union/about-eu/eu-budget/expenditure_en (accessed 28.05.2019).