Nierówności Społeczne a Wzrost Gospodarczy, nr 55 (3/2018)
DOI: 10.15584/nsawg.2018.3.6 **ISSN 1898-5084**

Grzegorz Górniewicz, Ph.D.[1]
Chair of Finance
WSB University in Gdańsk

General government debt in European Union countries and economic growth

Introduction

A crisis in the subprime mortgage market, caused by the collapse of a speculation bubble in the housing market in the United States in August 2007 was a starting point for the global economic crisis. It has been commonly considered as the deepest recession since the time of the Great Crisis in 1929–1933. As a result of the crisis, economies of most countries in the world have suffered severely, including the countries of the European Union. A visible manifestation of that unfavourable situation has been the worsening conditions of public finance and an increase in general government debt in all the EU countries. Furthermore, the excessive debt has resulted in a decrease in the rate of economic growth.

The aim of this article is to find confirmation for a well-known thesis by Carmen Reinhard and Kenneth Rogoff, claiming that public debt after exceeding 90% GDP has a negative impact on the rate of economic growth. The research was carried out on all countries of the European Union. The applied research methods include: comparative descriptive analysis, statistical data analysis and own calculations.

The merits of general government debt

In expert literature, there are multiple definitions of general government debt to be found (public or national debt), also known as government or national debt. According to the most succinct student-book definitions, general government debt refers to financial liabilities of public authorities related to the loans taken. Other sources claim that public debt encompasses all the liabilities incurred by the Tre-

[1] Correspondence address: Wyższa Szkoła Bankowa w Gdańsku, Wydział Finansów i Zarządzania, Katedra Finansów, Al. Grunwaldzka 238A, 80-266 Gdańsk; e-mail: ggorniewicz@wsb.gda.pl.

asury, national earmarked funds having legal personality and all the liabilities incurred by municipalities [Górniewicz, 2016, p. 354].

The definition of general government debt *sensu largo* is to be found in supplementary documents to the Treaty of Maastricht. According to the aforementioned definition, public debt means "the totality of liabilities of the Treasury to national and foreign entities related to loans taken in financial institutions and directly from the governments of member countries of the Paris Club or these which were guaranteed or insured by the governments or their agendas, as well as remaining-to-be-purchased treasury securities issued onto the foreign and national market and other registered liabilities of the Treasury" [Górniewicz, 2012, p. 10].

Generally, economical literature, particularly that on public finances, distinguishes a large variety of general government debt. However, using the term "classification" does not appear entirely justifiable. Perhaps from the point of view of methodology, it is at least equally proper is to use the term "debt structures" at that point.

Assuming the criterion of the place of origin of creditors, it is possible to distinguish national and foreign debt. The former, also referred to as internal debt, encompasses debt in relation to local entities, resulting mainly from treasury bonds still due to be redeemed. On the other hand, foreign debt (external debt) stems from the loans taken from international organizations, governments, banks and from the treasury bonds sold abroad.

Furthermore, professional literature also distiguishes the following kinds of debt:
1. gross and net (gross net – receivables),
2. short-term debt also referred to as liquid debt (up to one year) and long-term debt also referred to as funded debt (more than one year),
3. nominal and real (taking inflation into consideration),
4. central (national) and local (local-governmental),
5. voluntary and compulsory debt [Owsiak, 2005, pp. 331–335].

In developed and moderately developed countries, with respect to their economies, public debt is a common phenomenon, and it has been in effect for dozens of years. Despite the fact that the economic situation of these countries is different, it can be said that public debt has become the constant constituent of their public finances. The accumulation of public debt has been the reason for much criticism expressed not only by economists but also by politicians. For these reasons, it is worth becoming acquainted with the fundamental causes of indebtedness of particular countries.

Expert literature generally distinguishes the causes of the emergence of general government debt:
1. long-standing budget deficit;
2. the period of increased public spendings (particularly periods of wars and deep economic crises);
3. the implemented economic doctrine which can consciously assume the long-standing budget deficit and public debt as tools of state interventionism;

4. the implementation of political goals of the ruling elite which neither decides on increasing taxes and nor cuts spendings (the theoretical justification of such a policy is public debt-neutrality thesis for both the economy and the society as such. If one assumes that thesis is correct, then it is more advantageous for the government to take new loans than to impose new taxes).
5. public authorities falling into the so-called debt trap (losing the ability of the due repayment of debt [Górniewicz, 2012, pp. 22–23].

A particularly important reason for the emergence of public general government debt seems to be budget deficit, being mentioned at the beginning. The elementary relation between debt and the condition of budget is reflected in the following formula:

$$d = d_0 + r \cdot b$$

where:

d – the balance of government budget –conventionally conceived- in relation to national gross product.

d_0 – primary deficit or budget surplus (without the expenses for debt service) in relation to national gross product,

r – average interest rate in the public debt service

b – the level of public debt in relations to national gross product [Gotz-Kozierkiewicz, 1994, p. 57].

The analysis of primary balance in the government budget has become the issue of utmost importance, the analysis of which sheds some light on its balancing. Primary balance provides an answer to the question how the equilibrium in the government budget would be shaped if there were no public debt, and thus there would not be any necessity for its service. It also serves as a basis for determining if the amount of debt does not threaten the budget solvency.

The emergence of negative primary balance means exceeding the safety threshold with respect to debt. On the other hand, the increasing primary surplus under the condition of total deficit means approaching balancing budget, which takes place at the moment of the equilibrium between the primary surplus and the expenses for debt service. It is to be emphasized that a relatively high public debt does not directly threaten the solvency of the government budget, if there is primary surplus in the budget [Ciak, Górniewicz, 2002, pp. 97–98].

The acceptable limits of debt

The appearing critical opinion concerning the accumulation of public debt and the problems with its payment give rise to the issues related to the limits of debt. The most widely accepted criterion is the claim that debt should not violate economic equilibrium. However, it seems that it is such a vague and general statement that apart from the general idea it is difficult to relate the statement to any specific amount of general government debt [Górniewicz, 2012, p. 36].

In the analysis of the measurements and the structure of debt, it seems indispensable to relate the amount of debt to basic economic units and to international trade in particular. The whole issue concerns the indicators of debt service (the relation of debt to export and to gross domestic product) and to the average debt per capita [Zabielski, 1994, p. 328–329].

In the professional literature one can find the thesis that if the increase of gross domestic product at a given period is bigger than the debt payment due for the same time, it can be described as situation not detrimental to a given economy.

$$\Delta GDP > OZ, \text{ gdy: } OZ = A + \%Z;$$

where:
ΔGDP – the increase of gross domestic product:
OZ – debt service,
A – debt depreciation for a given period
%Z – interests from the debt

On the other hand, in case the increase of GDP allows only for covering the expenses resulting from debt service, that is

$$\Delta GDP = OZ,$$

that is the beginning of insolvency [Bernaś, 2006, p. 327]. Real insolvency emerges when debt service is bigger than the increase of GDP:

$$\Delta GDP < OZ.$$

In the nineties, Organization for Economic Cooperation and Development, after the analysis of the amount of debt in many countries, assumed the following indicators:
– the relations of debt to export (the critical value is 275%)
– the relation of interests to export (the critical value is 20%)
– the relations of debt service (payment of installments and interests to export (30%),
– the relation of debt to gross domestic product (50%) [Gołębiowski, 2004, p. 175].

Within Maastricht summit, which resulted in signing the Treatise of establishing European Union 7 February 1992, one specified the basis conditions of joining Economic and Monetary Union also called convergence criteria. In one of these criterion [Budnikowski, 2001, p. 369], it was assumed that base value for public debt in relations to gross domestic product in market prices amounts to

60% (the data presenting the relation of public debt to GDP are demonstrated in the next section of the present paper).

STATISTIC DATA

In accordance with the data provided by Eurostat, at the end of 2016 the general government gross debt of all 28 countries of the European Union was slightly above the level of EUR 12.4 trillions. The largest debtors were, respectively: Italy (EUR 2.21 trillions), France (EUR 2.15 trillions), Germany (EUR 2.14 trillions), United Kingdom (EUR 2.02 trillions) and Spain (EUR 1.10 trillion) – relatively large countries of significant economies. In the years 2007–2016 the debt of all the EU countries was increased (see: Table 1).

Table 1. General government gross debt in EUR billion

Country	2007	2010	2014	2015	2016
1	*2*	*3*	*4*	*5*	*6*
All countries (28)	74718,9	10045,4	12140,6	12494,5	12402,0
Belgium	299,9	363,9	426,6	433,9	447,2
Bulgaria	5,3	5,8	11,5	11,8	13,9
Czech Republic	40,0	60,1	65,6	67,9	64,9
Denmark	63,7	103,5	116,8	107,4	104,7
Germany	1599,8	2088,7	2188,7	2157,9	2140,0
Estonia	0,5	0,9	2,1	2,0	1,9
Ireland	47,1	144,2	203,3	201,1	200,6
Greece	239,9	330,5	319,7	311,6	315,0
Spain	383,8	649,2	1040,8	1073,2	1107,2
France	1252,0	1631,7	2038,4	2097,6	2150,9
Croatia	16,6	25,9	37,1	37,2	38,2
Italy	1605,9	1851,5	2137,3	2172,6	2218,5
Cyprus	9,3	10,7	18,8	18,9	19,4
Latvia	1,9	8,4	9,6	8,8	10,1
Lithuania	4,6	10,1	14,8	15,9	15,5
Luxembourg	2,8	7,9	11,2	11,3	11,0
Hungary	66,0	78,4	77,7	80,4	84,4
Malta	3,5	4,5	5,4	5,6	5,7
Netherlands	262,0	374,7	450,5	440,5	434,2
Austria	183,8	243,8	278,9	290,7	295,2
Poland	145,9	193,2	202,1	215,7	228,2
Portugal	120,6	173,1	226,0	231,6	240,9

1	*2*	*3*	*4*	*5*	*6*
Romania	14,7	37,4	58,7	59,7	63,1
Slovenia	8,0	13,9	30,2	32,1	31,7
Slovakia	17,0	27,8	40,7	41,3	42,1
Finland	63,4	88,1	123,7	133,1	135,9
Sweden	136,0	150,3	189,6	199,9	194,6
United Kingdom	877,4	1387,5	2060,3	2269,8	2022,2

Source: Eurostat.

The real measure of the state being burdened by general government debt is not the debt in absolute terms but its relation to gross domestic product. According to Maastricht Treaty, this ratio should not exceed 60%. In all the years under scrutiny, the states met that condition. In 2007, the number of the states in which the general government debt to gross domestic product ratio did not exceed 60% was 19. In 2010, there were 16 such countries, in 2015 – 11 and in 2016 – also 11. The greatest results were then recorded by Greece (180%), Italy (132%) and Portugal (130%), that is: by the countries subsumed under the informal group PIIGS. The least share of debt in their respective GDP was recorded by: Estonia (9%), Luxembourg (21%) and Bulgaria (29%). In the whole analysed period, the condition stipulated in Maastricht Treaty was not met by 9 states, including such significant economies as France or Germany (see: Table 2).

Table 2. General government debt in % GDP

Country	2007	2010	2014	2015	2016
1	*2*	*3*	*4*	*5*	*6*
All countries (28)	57,5	78,4	86,7	85,4	83,2
Belgium	87,0	99,7	106,5	105,8	105,7
Bulgaria	16,3	15,3	27,0	26,0	29,0
Czech Republic	27,8	38,2	42,2	40,3	36,8
Denmark	27,3	38,2	44,8	40,4	37,7
Germany	63,7	81,0	74,9	72,2	68,1
Estonia	3,7	6,6	10,3	10,1	9,4
Ireland	23,9	61,7	105,2	78,6	72,8
Greece	103,1	146,2	179,7	177,4	180,8
Spain	35,5	60,1	100,4	99,8	99,0
France	64,3	81,6	95,3	96,2	96,5
Croatia	37,7	58,3	86,6	86,7	82,9
Italy	99,8	115,4	131,9	132,3	132,0
Cyprus	53,5	55,8	107,1	107,5	107,1

1	2	3	4	5	6
Latvia	8,4	47,4	40,7	36,3	40,6
Lithuania	15,9	36,2	40,5	42,7	40,1
Luxembourg	7,8	19,9	22,7	22,1	20,8
Hungary	65,6	80,5	75,7	74,7	73,9
Malta	62,4	67,6	67,0	64,0	57,6
Netherlands	42,7	59,3	67,9	65,1	61,8
Austria	65,1	82,8	84,4	85,5	83,6
Poland	44,2	53,1	50,2	51,1	54,1
Portugal	68,4	96,2	130,6	129,0	130,1
Romania	12,7	29,9	39,4	37,0	37,6
Slovenia	22,8	38,4	80,9	83,1	78,5
Slovakia	30,1	41,2	53,6	52,5	51,8
Finland	34,0	47,1	60,2	63,6	63,1
Sweden	39,0	38,3	45,2	43,9	42,2
United Kingdom	42,0	76,0	88,1	89,1	88,3

Source: Eurostat.

The primary reason for getting into debt is the occurrence of budget deficit. It is to be emphasized that budget deficits have recently been the constant phenomena in the countries of the European Union. The Maastricht Treaty stipulates that the relation of budget deficit to the worth of gross domestic product cannot surpass 3%. In the analysed period, these criteria were met only by Estonia, Luxembourg and Sweden. In 2007, before the global crisis reached Europe, 23 countries met the criterion defined by the Maastricht Treaty. During the peak of the crisis in 2010 there were only 5 such countries (Denmark, Estonia, Luxembourg, Finland and Sweden). In the last analysed year 26 countries met the aforementioned criterion. The excessive budget deficit was recorded only by Spain and France (see: Table 3).

Table 3. Budget deficit in % GDP

Country	2007	2010	2014	2015	2016
1	*2*	*3*	*4*	*5*	*6*
All countries (28)	-0,9	-6,4	-3,0	-2,4	-1,7
Belgium	0,1	-4,0	-3,1	-2,5	-2,5
Bulgaria	1,1	-3,1	-5,5	-1,7	0,0
Czech Republic	-0,7	-4,4	-1,9	-0,6	0,7
Denmark	5,0	-2,7	1,5	-1,7	-0,6
Germany	0,2	-4,2	0,3	0,7	0,8

1	*2*	*3*	*4*	*5*	*6*
Estonia	2,7	0,2	0,7	0,1	-0,3
Ireland	0,3	-32,1	-3,7	-1,9	-0,7
Greece	-6,7	-11,2	-3,6	-5,7	0,5
Spain	2,0	-9,4	-6,0	-5,1	-4,5
France	-2,5	-6,8	-4,0	-3,5	-3,4
Croatia	-2,4	-6,2	-5,4	-3,3	-0,9
Italy	-1,5	-4,2	-3,0	-2,6	-2,5
Cyprus	3,2	-4,7	-8,8	-1,1	0,5
Latvia	-0,7	-8,5	-1,6	-1,3	0,0
Lithuania	-0,8	-6,9	-0,7	-0,2	0,3
Luxembourg	4,2	-0,7	1,5	1,6	1,6
Hungary	-5,1	-4,5	-2,1	-1,6	-1,9
Malta	-2,3	-3,2	-2,1	-1,4	1,1
Netherlands	0,2	-5,0	-2,3	-1,9	0,4
Austria	-1,4	-4,5	-2,7	-1,0	-1,6
Poland	-1,9	-7,3	-3,4	-2,6	-2,5
Portugal	-3,0	-11,2	-7,2	-4,4	-2,0
Romania	-2,8	-6,9	-0,8	-0,8	-3,0
Slovenia	-0,1	-5,6	-5,0	-2,7	-1,9
Slovakia	-1,9	-7,5	-2,7	-2,7	-2,2
Finland	5,1	-2,6	-3,2	-2,8	-1,7
Sweden	3,3	-0,1	-1,6	0,2	1,1
United Kingdom	-2,9	-9,6	-4,7	-4,3	-2,9

Source: Eurostat.

It must be noted that during the analysed period, the biggest budget deficit was recorded in Ireland. In 2010, it exceeded 32% of GDP. After the collapse of the real estate market (the demand for real estates decreased by about 50%), the government in Dublin started to bail out banking system, being burdened with misfired loans to developers. It coincided with the collapse of the income to the budget, the latter relying too heavily on the taxes from new real estate and on returns on capital. The fiscal catastrophe was complemented with the rise in unemployment rate, which decreased tax revenue and increased spendings for social causes [Górniewicz, 2012, p. 121].

While analysing the data for all 28 member states of European Union, it must be noted that the financial crisis made the budget deficit leap from the moderate level, amounting to -0,9% in 2007, to as much as -6,4% in 2010. Generally, it is possible to state that in the later period, the situation definitely improved, although these were not all the member states whose situations improved.

General government debt and economic growth

General government debt may have both a negative and a positive impact on the economic growth. Economists hold long-standing debates on whether the debt is an obstacle to economic growth. In their research, Carmen Reinhard and Kenneth Rogoff try to prove that general government debt is not a big issue until it exceeds 90% of GDP [Reinhart, Rogoff, 2010, p. 577]. This opinion has been often cited in the disputes over the direction in economic policies in the world.

Some economists do not agree with the thesis presented above, and they prove that the above-mentioned research has slowed down the rate of economic growth in the most indebted states. The main cause has been the deficient method of weighing the samples. The problem is that what has been the subject to calculation has been the means which has been in turn calculated on the basis of the different number of factors. For instance, 19 years during which Great Britain recorded the debt to GDP ratio over 90% and the average rate of economic growth of 2,4% was calculated the same as the 4-year period when the U.S.A. had the proportions of debt over 90% of GDP and the average rate of growth amounted to about 2%. What is more, what has been excluded as a factor in calculations is the part of data refuting the main thesis of Reinhart and Rogoff (for example, New Zealand being a counterexample) [Ash, Herndon, Pollin, 2013, p. 321].

The above-mentioned authors divide the states into four groups:

1. the ones in which the debt to GDP ratio does not exceed 30%,
2. the ones in which the debt to GDP ratio ranges from 30 to 60%,
3. the ones in which the debt to GDP ratio ranges from 60 to 90%,
4. the ones in which the debt to GDP ratio exceeds 90%.

Table 4. Gross Domestic Product in %

Country	2007	2010	2014	2015	2016
1	*2*	*3*	*4*	*5*	*6*
Belgium	2,4	2,7	1,6	1,5	1,2
Bulgaria	7,3	1,3	1,3	2,6	2,4
Czech Republic	5,5	2,3	2,7	4,5	2,4
Denmark	0,9	1,9	1,7	1,6	1,3
Germany	3,3	4,1	1,6	1,7	1,9
Estonia	7,7	2,3	2,8	1,4	1,6
Ireland	3,8	2,0	8,5	26,3	5,2
Greece	3,3	-5,5	0,4	-0,2	0,0
Spain	3,8	0,0	1,4	3,2	2,2

1	*2*	*3*	*4*	*5*	*6*
France	2,4	2,0	0,9	1,1	1,2
Croatia	5,2	-1,7	-0,5	1,5	2,9
Italy	1,5	1,7	0,1	0,8	0,9
Cyprus	4,8	1,3	-1,5	1,7	2,8
Latvia	9,9	-3,8	2,1	2,7	2,0
Lithuania	11,1	1,6	3,5	1,6	2,3
Luxembourg	8,4	4,9	5,6	4,0	4,2
Hungary	0,4	0,7	4,0	3,1	2,0
Malta	4,0	3,5	8,3	7,4	5,0
Netherlands	3,7	1,4	1,4	2,0	2,2
Austria	3,6	1,9	0,5	1,0	1,5
Poland	7,0	3,5	3,3	3,8	2,7
Portugal	2,5	1,9	0,9	1,5	1,4
Romania	6,9	-0,8	3,1	3,9	4,8
Slovenia	6,9	1,2	3,1	2,3	2,5
Slovakia	10,8	5,0	2,6	3,8	3,3
Finland	5,2	3,0	-0,6	0,3	1,4
Sweden	3,4	6,0	2,6	4,1	3,2
United Kingdom	2,5	1,9	3,1	2,2	1,8

Source: Eurostat.

Table 4 presents the rates of the GDP growth in the years 2007, 2010 and 2014–2016. Generally, the best results were recorded in 2007, that is: during the last year before the global crisis. At that time all the EU countries recorded economic growth. The worst results were recorded in 2010 when in four countries a recession was observed, and in Spain it was possible to observe stagnation. The situation was improved later. In 2016 in all the countries, except for Greece, economic growth was recorded, however it should be noticed that generally its rate was not very high.

Table 5 presents the results from calculations related to Carmen Reinhard and Kenneth Rogoff's thesis referring to the abovementioned impact exerted by the excessive government debt on the economic growth rate. The presented results confirm that thesis. The countries where the relation of the public debt to the GDP has exceeded the level of 90% present significantly lower rates of economic growth than the countries with a lower level of debt. In 2010 such countries reported an average decrease in that rate (-0.6%). In other analysed years the growth is not considerable.

Table 5. The number of countries and the average GDP growth

Year	Debt to GDP ratio does not exceed 30%		Debt to GDP ratio ranges from 30 to 60%		Debt to GDP ratio ranges from 60 to 90%		Debt to GDP ratio exceeds 90%
	Number of countries	Average increase in %	Number of countries	Average increase in %	Number of countries	Average increase in %	Number of countries
2007	9	6,6	10	4,9	7	2,6	2
2010	4	3,4	12	1,8	9	2,0	3
2014	3	3,2	8	2,7	10	2,9	7
2015	3	3,0	8	3,1	10	4,6	7
2016	3	2,0	9	3,0	9	2,4	7

Source: own calculations based on Eurostat data.

At this point another negative phenomenon should be also observed. During the analysed period the number of countries where the relation of the public debt to the GDP exceeded the level of 90% was growing. Before the crisis, in 2007 there were only two such countries, but after the global economy had coped with the crisis (2014–2016) that number was increased to seven. The number of the countries where the public debt was less than 30% of the GDP was decreased. In 2007 there were nine such countries, and during the years 2014–2016 – only three.

It should be also noticed that Carmen Reinhard and Kenneth Rogoff's theory is not the only one on the discussed problem. There are other approaches to be found in expert literature, for example: having analysed the debt situation in 59 developing countries and in 24 highly developed countries, Alfredo Schclarek states that considering the first group of countries there is a negative and important relation between debt and the GDP growth. Considering the group of highly developed countries, he does not observe any significant relation between debt and economic growth [Schclarek, 2005, pp. 8–12]. Some similar conclusions can be found in a research study presented by Joanna Siwińska-Gorzelak [Siwińska-Gorzelak, 2015, p. 164].

There are some more general conclusions presented in economics handbooks. Paul Samuelson and William Nordhaus state that a high level of public debt results in a decrease in the rate of potential production growth in a particular country, because in such a case the debt takes place of private capital, and in this way it increases inefficiency related to taxation, and it forces the country to lower consumption in order to service the debt [Samuelson, Nordhaus, 2004, p. 443].

CONCLUSION

General government debt may turn out to be a significant stimulator of economic growth, provided that it is applied to increase investment. If, however, it is incurred in order to cover budget deficits, it will become an obstacle for development in a long-term perspective.

The latest global financial crisis has resulted in a considerable increase in general government debt and budget deficits in most EU countries. The debt of Germany, France, Great Britain and Italy has exceeded the level of EUR 2 trillions. Greece, Ireland, Portugal and – in a way – Spain have already benefitted from some special aid schemes. Despite the implementation of numerous reforms which have mainly consisted in a decrease in expenditures and an increase in budget income, the situation in many countries is still difficult. In some cases (Greece, Italy, Portugal), austerity economic policy has resulted in a situation close to stagnation or even to recession.

Counted nominally and in relation to the GDP, general government debt was lower before the crisis than it was during its period or even after its end. During the analysed period the number of the EU countries where the relation between general government debt and the GDP exceeded the level of 90% was increased by 3.5 times. In accordance with the theory presented by Carmen Reinhard and Kenneth Rogoff, those countries have generally reached a lower level of economic growth than the countries with a lower level of debt.

Stated by the Treaty of Maastricht, the level of 60% has actually ceased to be in force. At the end of 2016 that condition was met only by 11 EU countries out of 28. An average relation of general government debt to the GDP exceeded the level of 80%.

Bibliography

Ash M., Herndon T., Pollin R., 2013, *Does High Public Debt Consistently Stifle Economic Growth?*

A Critique of Reinhart and Rogoff, „PERI Working Papers", No. 322, https://dx.doi.org/10.1093/cje/bet075.

Bernaś B., 2006, *Bilans płatniczy i pozycja inwestycyjna państwa* [in:] *Finanse międzynarodowe*, red. B. Bernaś, PWN, Warszawa.

Budnikowski A., 2001, *Międzynarodowe stosunki gospodarcze*, PWE, Warszawa.

Ciak J., Górniewicz G., 2002, *Dług publiczny w Polsce w drugiej połowie lat dziewięćdziesiątych*, „Firma i Rynek", nr 2/3.

Gołębiowski G., 2004, *Dług publiczny* [in:] *System finansowy w Polsce*, red. B. Pietrzak, Z. Polański, B. Woźniak, PWN, Warszawa.

Gotz-Kozierkiewicz D., 1994, *Dług publiczny a stabilizowanie gospodarki transformowanej – zależność między długiem wewnętrznym a zagranicznym* [in:] *Polityka finansowa, wzrost, dług publiczny*, Instytut Finansów, Warszawa.

Górniewicz G., 2012, *Dług publiczny. Historia, teraźniejszość, przyczyny i perspektywy*, Oficyna Wydawnicza Mirosław Wrocławski, Bydgoszcz.

Górniewicz G., 2016, *General government debt in European Union Countries* [in:] *Medzinárodné vzťahy 2016 Aktuálne otázky svetovej ekonomiky a politiky*, Zborník príspevkov zo 17. medzinárodnej vedeckej konferencie, Ekonóm Publishing, Bratislava 2016.

Owsiak S.,2005, *Finanse publiczne. Teoria a praktyka*, PWN, Warszawa.
Reinhart C. Rogoff K., 2010, *Growth in a time of debt*, „American Economic Review: Papers & Proceedings", Vol. 100, No. 2, https://dx.doi.org/10.3386/w15639.
Samuelson P., Nordhaus W., 2004, *Ekonomia*, PWN, Warszawa.
Schclarek A., 2005, *Debt and economic growth in developing and industrial countries*, „Lund University Working Papers", No. 34.
Siwińska-Gorzelak J.,2015, *Dług publiczny a wzrost gospodarczy*, Wydawnictwo Naukowe Scholar, Warszawa.
Zabielski K., 1994, *Finanse międzynarodowe*, PWN, Warszawa.

Summary

The aim of the article is to confirm a well-known thesis presented by Carmen Reinhard and Kenneth Rogoff, stating as follows: after it has exceeded the level of 90% of GDP, general government debt negatively affects the rate of economic growth. The analysis refers to 28 countries of the European Union. The applied research methodology includes: comparative descriptive analysis, statistical data analysis and the Author's own calculations.

Keywords: general government debt, economic growth, European Union.

Dług publiczny krajów Unii Europejskiej a wzrost gospodarczy

Streszczenie

Celem artykułu jest znalezienie potwierdzenia dla znanej tezy autorstwa Carmen Reinhard i Kenneth Rogoffa, głoszącej iż dług publiczny po przekroczeniu poziomu 90% GDP wpływa negatywnie na tempo wzrostu gospodarczego. Badania zostały przeprowadzone na grupie 28 krajów należących do Unii Europejskiej. Zastosowane metody badawcze to komparatywna analiza opisowa, analiza danych statystycznych oraz obliczenia własne.

Słowa kluczowe: dług publiczny, wzrost gospodarczy, Unia Europejska.

JEL: H63, H68