

An Impact of Business Cycles on Revenues and Expenditures of Communes in Poland

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Abstract

One of the basic functions of the state is mitigation of fluctuations in the business cycle. Increased activity in the period of economic slowdown should be demonstrated both by the state budget and local government units. However, the effectiveness of state intervention depends on the condition of the public finance sector. Therefore, in conditions of economic recovery, the state not only should balance its budget, but also should try to pay off at least part of the previously incurred liabilities. According to the authors, the permanent lack of financial discipline of the state, in the near future, will contribute to the budgetary imbalance of communes and will cause serious disruptions in the functioning of local self-governments.

Keywords: business cycle, budget revenues, budget expenditures, commune, local government

JEL: E32, H72

Introduction

The commune as a basic and independent local self-government unit is obliged by law to carry out tasks for the community that lives in it. However especially in conditions of economic slowdown the self-government's financial condition strongly affects the effectiveness of its meeting the collective needs of the community and performance of delegated tasks. It is not without reason that the Constitution of the Republic of Poland guarantees all local self-government units a share in public revenues according to the tasks assigned to them. The Constitution also states that in the case of a change in the scope of duties of local government units, an appropriate correction in the distribution of public revenues should be made (art. 164–167).¹ The act on commune self-government specifies that: “transferring new own tasks to a commune requires providing the necessary financial resources in the form of increasing the commune's own income or subventions for implementation of this tasks” (art. 7, paragraph 3).

The aim of the article is to analyze the financial economy of communes in recent years and to assess the impact of the business cycle on budgets of local governments. According to the adopted hypothesis, excessive growth of the state's fixed expenditures has a negative impact on the financial condition of communes and, in effect, on the implementation of the tasks commissioned to the communes. The imbalance between the scope of tasks commissioned to the communes by the state and the funds transferred from the central budget for these tasks will be stronger as downturns occur on the market.

1. See: Konstytucja Rzeczypospolitej Polskiej z dnia 2 kwietnia 1997 r. uchwalona przez Zgromadzenie Narodowe w dniu 2 kwietnia 1997 r., przyjęta przez Naród w referendum konstytucyjnym w dniu 25 maja 1997 r., podpisana przez Prezydenta Rzeczypospolitej Polskiej w dniu 16 lipca 1997 r. DzU z 1997 r. nr 78 poz. 483.

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1 Theoretical study of business cycles in a post-industrial economy

The development of the free market economy is cyclical. A search for the causes of adverse changes in the economy was already carried out in the 19th century. William Stanley Jevons (1835–1882) compared economic fluctuations with solar activity. Wheat price fluctuations in the years 1259–1400 were closely related to the level of emitted electromagnetic radiation. Higher solar activity, more or less every 11 years, favors higher wheat yields and disrupts the mid-term equilibrium of cereal processing (Jevons 1878, 1882). In turn, Clément Juglar (1819–1905) argued that the economic downturn in the second half of the 19th century was the result of a shortage of financial capital. Banks in the United States, about every 9 years (1839, 1848, 1857, 1863) were forced to limit access to credit, which strongly influenced the demand and income of the US economy (Juglar 1916, 3).

The findings of Nikolai Kondratiev (1892–1938) are important for understanding the causes of variability in the global economic situation. He was one of the first who observed long economic cycles connected with technological changes and the implementation of inventions. Each of the identified business cycles lasted for about 50 years (tab. 1). Observations of modern socio-economic life indicate that the next Kondratiev cycles will be shorter than those prior. According to some, the fifth cycle began in 1988 and reached its height in 2008–2010 (Korotayev and Tsirel 2010, 2). The correctness of this opinion is confirmed by the collapse of the investment bank Lehman Brothers Holdings on 15 September 2008, which symbolically started the recent financial and economic crisis (Górka and Łuszczczyk 2013, 85–87).

Tab. 1. Nikolai Kondratiev's cycles in the global economy

Cycle	Years	The leading civilizational change
The first cycle	1792–1847	Invention of a steam engine and the development of the textile industry
The second cycle	1847–1893	Development of railways and steel processing
The third cycle	1893–1939	Development of electrotechnics and the chemical industry
The fourth cycle	1939–1990	Development of the petrochemical industry and the automotive industry
The fifth cycle	1990–2040?	Development of modern information and communication technologies
The sixth cycle	2040–?	Ecologicalisation of socio-economic life, striving to improve the quality of life instead of quantitative economic growth measured by gdp per capita

Source: Górka and Łuszczczyk (2013, 87)

2 Business cycles in the modern economy

A careful analysis of the world market situation in the last few decades indicates that there are still difficulties in stabilizing the economy. According to Clément Juglar the unfavorable events are repeated every 9 years. The series of economic shocks after World War II includes, among other things, the energy crisis of the early 1970s caused by a drop in supply and a sharp rise in oil prices. The decisions of the OPEC countries, taken in October 1973, global oil prices to increase from USD 2,90 to 11,65 per barrel from September to December 1973.² Another crisis in the oil market took place in 1979–1981. Prices of oil increased then from USD 13 to 34 per barrel (Yergin 1991, 784).

19 October 1987 is known to stock market investors as “Black Monday.” At that time, there was a sharp drop in the indices on many global exchanges. The Dow Jones Industrial Average fell sharply by 22,6% (508 points), the English FTS dropped by 250 points, which meant a drop in capitalization of listed companies by USD 107 billion. Record declines were noted on the stock exchanges in Canada, Hong Kong and elsewhere. One of the reasons for the unexpected behavior of stock exchanges was the excessive belief of investors in the predictability of financial markets. In the years before the meltdown, international investors were active on US markets, which favored the growth of share prices. Also, options and derivative instruments were implemented, which,

2. [In the journal European practice of number notation is followed — for example, 36 333,33 (European style) = 36 333.33 (Canadian style) = 36,333.33 (US and British style). — Ed.]

unfortunately, led to an even greater markdown of the shares. Suddenly, the stable and predictable market proved to be at high risk and incalculable (Kurz-Kim 2016, 1).

The crisis of the European Rate Exchange Mechanism (ERM) dates back to the early 1990s. At the time, the UK joined the ERM, declaring a stable British pound against the European currencies, including the German mark. Maintaining high interest rates in Germany resulted in the strengthening of the GBP against the US dollar and threatened the decline in the profitability of British exports to the United States. However, the GBP correction against the USD prevented the UK from participating in the ERM. A specific stalemate encouraged currency investors to borrow GBP in order to repay after the expected devaluation of the GBP. The situation was not even stabilized by an increase in interest rates from 10% to 12%. On the “Black Wednesday” 16 September 1992, the United Kingdom was forced to leave the ERM. In the period September—November 1992, the exchange rate of the pound against the US dollar weakened from 2,00 to 1,51. At that time, the Bank of England, which was intervening in the currency markets, lost about GBP 3,3 billion (Tempest 2005). One of the great winners was George Soros, who earned over USD 1 billion (Litterick 2002).

Another economic downturn, the so-called dot-com bubble, occurred in March 2000, and its reason was IT companies listed on the American stock market NASDAQ. The development of the Internet and Information and Communication Technologies (ICT) observed since the early 1990s caused investor interest in companies in the IT industry. Demand for shares of technology companies stimulated low interest rates in the United States and concerns about the stability of computer systems in connection with the approaching new millennium, which allowed computer equipment producers to achieve good sales results. After the years of increase of the share prices, there was a sharp share sell-off.

The NASDAQ Composite index, which on 10 March 2000 was worth 5048 points, mainly due to the shares of technology companies, fell for two consecutive years and on 9 October 2002 it reached 1114 points. CISCO's shares from March 2000 to October 2002 fell from USD 80,06 to 8,60, and Yahoo's shares from USD 100,38 to 4,86. The negative effects of the technological bubble were additionally strengthened by the WTC attack of 11 September 2001.

Once again, the prophecy of Jean Jacques Rousseau: “knowledge as such is not evil, but a man is not good enough to make good use of it” (Piątek and Florek 2009, 30) has come true at the end of the first decade of the 21st century. It is caused by the greed of financiers and the desire to maximize profits in the conditions of falling interest rates. The reason for the global financial crisis was a sharp markdown of real estate on the American market, which after a period of prosperity in the construction industry in the years 2003–2006 reached exceptionally high prices. The fall in demand for real estate led to a reduction in value and the troubles with the owners' repayment of liabilities. The scale of the problem led to the loss of liquidity of financial institutions around the world, increased uncertainty in the markets, interest rate increases and a sharp drop of shares prices on the stock exchanges. On 29 September 2008, the Dow Jones lost 778 points (6,98%). In the fourth quarter of 2008 in the euro area countries GDP fell by an average of 1,6% compared to the previous quarter, and for all EU member states by 1,5% (Adamiec and Russel 2009, 10). In addition, in most EU Member States from the beginning of the crisis to the first quarter of 2010, there was an increase of the unemployment rate between 2 and 4,5% and in Spain by 8% to 19% (Kiiver and Hijman 2010, 6). The Polish economy and the Warsaw Stock Exchange reacted sharply to the financial crisis in the United States. The WSE capitalization decreased from USD 211,6 billion in the end 2007 to USD 90,8 billion in the end 2008 (*PWC: Kryzys na rynkach...* 2009). Drops of indices on the Warsaw Stock Exchange were a response to similar behaviors of global stock exchanges and the result of investors' decisions, which in the face of recession were first of all withdrawing their assets from Central and Eastern European markets. Significant depreciation also affected the zloty (PLN), which from August 2008 to February 2009 weakened against the euro (EUR) from 3,21 to 4,90 (the Swiss franc (CHF) initially cost PLN 1,96 and climbed to PLN 3,32).

3 The global economic situation and the condition of public finances in Poland and selected European countries

In this situation, budgetary discipline at least within the framework of the mid-term cycles is justified. First of all, the recovery of public finances is now supported by the economic recovery, which is a source of additional budget revenues. Secondly, in the future the state's intervention on the market will be more effective if and as the budget will be stronger. In the 1930s, a mild fiscal policy, in accordance with the predictions of John M. Keynes, brought the expected result in the form of a return to the path of economic growth. Reversal of the trend was possible, inter alia, thanks to the orthodox approach to public finances, which dominated until the end of the 1920s. The doctrine in force at that time assumed an absolute budget balance, which gave countries instruments for fiscal intervention in the market. As it was then emphasized, "countries that enter the path of the budget deficit will lead themselves to ruin" (Owsiak 2001, 40–41).

If we assume that the observed crisis events in the economy confirm a certain regularity (cyclical nature of the economy), we should expect the beginning of another medium-term economic slow-down in the near future. The recession will probably be stronger than the crisis that started in 2007, because at that time the global economy was at the very top of the Kondratiev cycle. The end of the second decade of the 21st century is, in turn, a gradual approach to a depression (tab. 1).

In the face of the inevitable economic slowdown, the governments of many countries have decided to balance the budget. Among the EU member states, a budget surplus was generated, among others, by Germany, Luxembourg, the Czech Republic, Malta, the Netherlands, Bulgaria, Denmark, Croatia and Sweden. It should be emphasized that Germany has been consistently complying with financial discipline since 2012, thanks to which, in 2012–2017, public debt was reduced from 79,8% of GDP to 64,1% of GDP.

The premium from investors (Jasińska-Biliczak 2014, 58) for the budgetary discipline is a low yield on treasury bonds, which additionally facilitates repair of the public finance. For example, Switzerland's public debt "pays for itself." The yield on long-term treasury bonds has been there on the negative or close to zero level since January 2015. The yield on German bonds does not exceed 0,5% per year. A similar trend persists in Slovakia, which is often compared to Poland. In Poland, unfortunately, for the lack of the budgetary discipline, we have to pay the high cost of servicing public debt (fig. 1). Entrepreneurs and consumers who have access to cheap credit also benefit from low interest rates. In mid-June 2018, Euribor 3M was $-0,32\%$, Libor 3M reached $-0,73\%$, and Wibor 3M $1,7\%$.

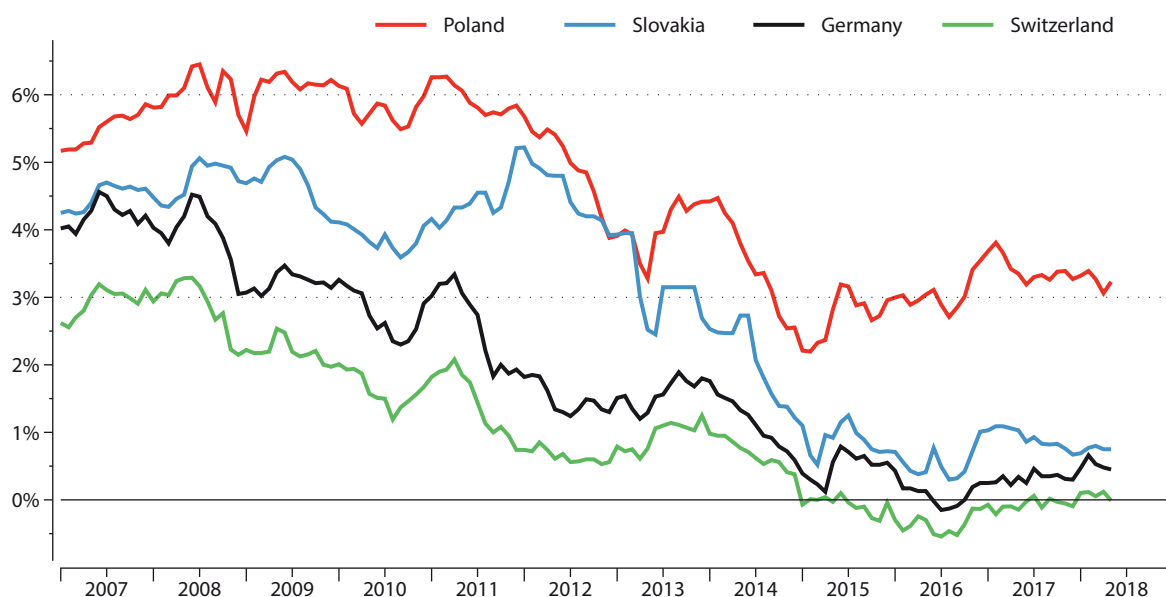


Fig. 1. Yield on long-term treasury bonds in selected European countries

Source: Own calculations based on data published by NBP

4 Revenues and expenditures of local government units

The favorable economic situation in the world and in Poland, which could be observed until 2008, was also reflected in the finances of local self-government (Jasińska-Biliczak 2012, 331). Unfortunately, in 2009–2010 there was a significant increase in the deficit. Since 2011, the condition of local self-government units has been gradually improving. At the end of 2016, local governments generated a budget surplus of PLN 7,6 billion, but at the end of 2017, expenditures again were higher than revenues. The deficit amounted to PLN 287,6 million (fig. 2) (*Gospodarka finansowa...* 2017, 54).³

Similar trends can be observed in the case of communes. During the global economic downturn, Polish communes also noted a budget deficit. In turn, in 2016, the budget surplus amounted to PLN 3,6 billion; unfortunately, 2017 ended with a budget deficit of PLN 795,2 million (fig. 3). A fairly marked deterioration in the financial economy of communes may indicate some difficulties in obtaining revenues from certain sources. In 2017, revenues were lower than planned by PLN 3,2 billion (*Gospodarka finansowa jednostek samorządu terytorialnego 2016 2017*, 12).

The cyclical nature of the communes' budgets also confirms the shaping of tax revenues, especially PIT and CIT. Income from PIT increased in 2010–2017 by PLN 7,0 billion, that is by 61,3%, and income from CIT increased by PLN 104 million, that is by 13,8% (fig. 4). The positive trend

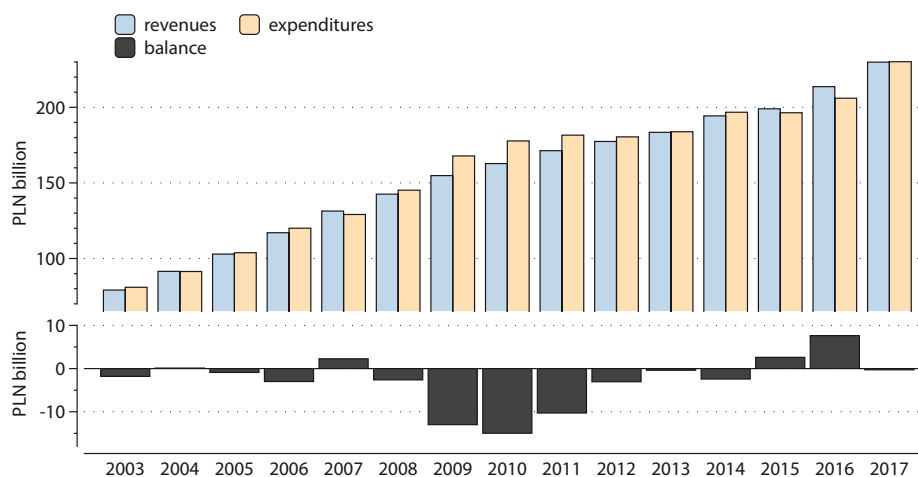


Fig. 2. Budgets of the local self-government units in the years 2003–2017

Data source: (*Gospodarka finansowa...* 2017) and *Sprawozdanie z wykonania...*, op. cit. (see footnote 3)

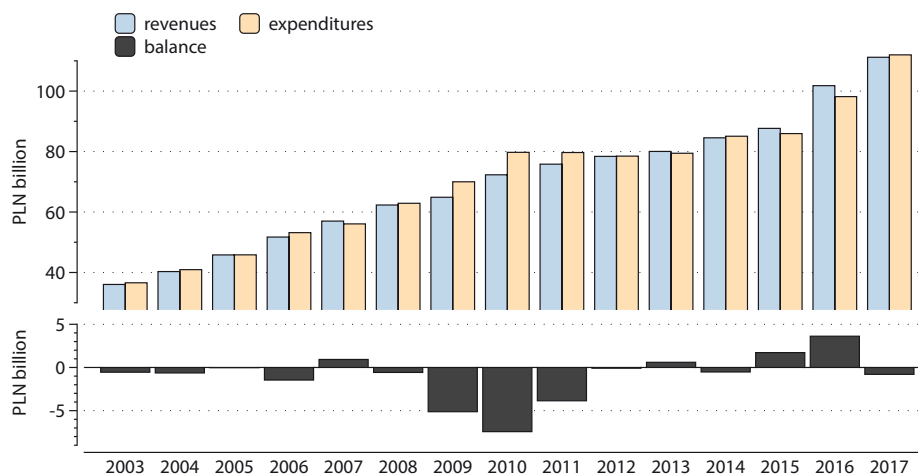


Fig. 3. Budgets of the communes in the years 2003–2017

Data source: (*Gospodarka finansowa...* 2017) and *Sprawozdanie z wykonania...*, op. cit.

3. See also: *Sprawozdanie z wykonania budżetu państwa za okres od 1 stycznia do 31 grudnia 2017 r. Informacja o wykonaniu budżetów jednostek samorządu terytorialnego*. Rada Ministrów, Warszawa, 2018, page 12, [@:] https://www.mf.gov.pl/c/document_library/get_file?uuid=fc17a437-2a92-48c7-a0aa-f5b77cfd8dee&groupId=764034.

has been maintained for several years, despite the fact that no significant changes took place in the area of local self-government participation in income from PIT and CIT.

A significant impact on the improvement of the financial condition of the local government units in total after 2011, apart from the economic recovery, was a decrease in capital expenditures and, initially, a stable level of expenditures on social benefits. Particularly evident changes in the expenditure policy of local governments are visible in 2015–2017, but it should be pointed out that property expenditures in 2017 were lower by about PLN 8 billion than in years 2009–2011 (fig. 5).

A similar tendency also occurred in communes. The property expenditures in 2014 amounted to PLN 16,4 billion but were lower than planned (PLN 19,9 billion),⁴ and comparable to expenditures from years 2009–2010. In return, a more than double increase in expenditures on benefits for natural persons in the years 2016–2017 compared to the period 2010–2015 (fig. 6) can be observed.

The increase in expenditures on benefits for natural persons resulted primarily from the implementation of the government programme “Family 500 Plus.” As a positive note, the increase in communes’ expenditures on benefits for natural persons (by PLN 13,9 billion in 2016 and another PLN 4,7 billion in 2017) was compensated by a higher target grants (Jasińska-Biliczak 2015) from the state budget for tasks within the scope of governmental administration, which amounted to PLN 28,9 billion in 2017 as compared to PLN 23,9 billion in 2016 and PLN 9,5 billion in 2015 (fig. 7) (Gospodarka finansowa jednostek samorządu terytorialnego 2016 2017, 30).

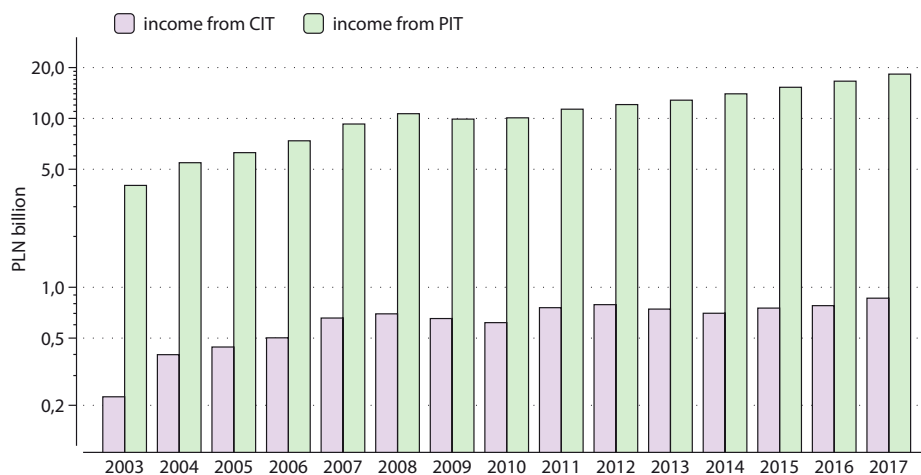


Fig. 4. The selected income of municipalities in the years 2003–2017

Note: Logarithmic scale on vertical axis.

Data source: (Gospodarka finansowa... 2017) and Sprawozdanie z wykonania..., op. cit.

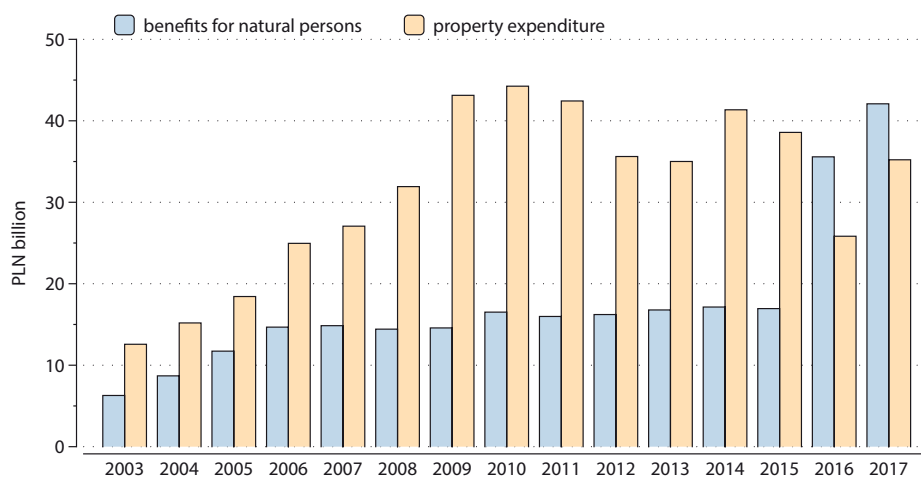


Fig. 5. Selected expenditures of local government units in the years 2003–2017

Data source: (Gospodarka finansowa... 2017) and Sprawozdanie z wykonania..., op. cit.

4. See: Sprawozdanie z wykonania..., op. cit., page 24.

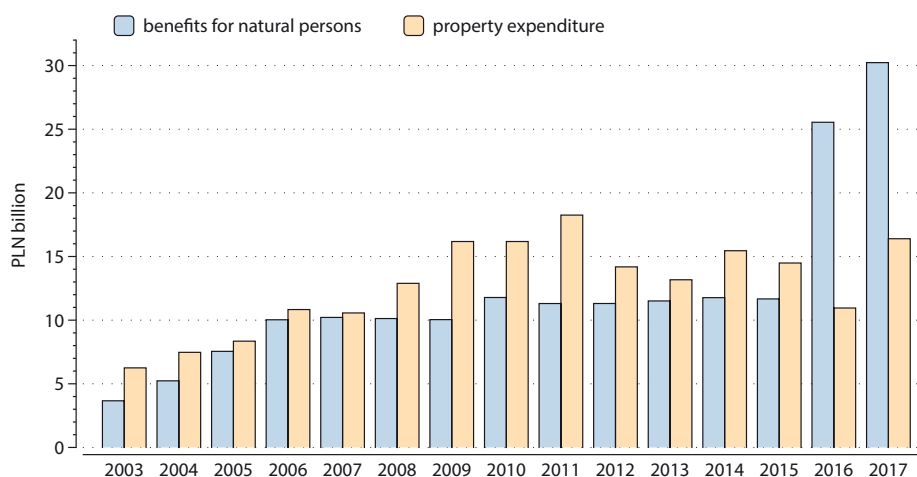


Fig. 6. Selected expenditures of communes in the years 2003–2017

Data source: (*Gospodarka finansowa...* 2017) and *Sprawozdanie z wykonania...*, op. cit.

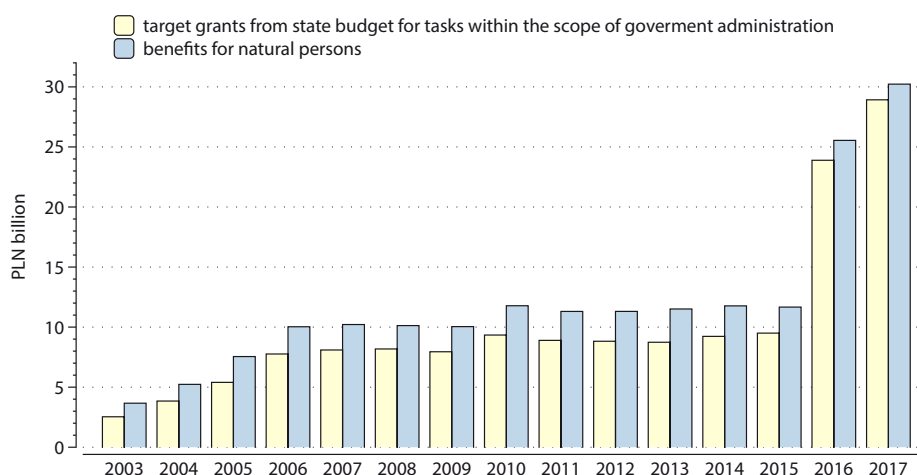


Fig. 7. Comparison of the size of appropriated allocations and benefits for natural persons in communes in the years 2003–2017

Data source: (*Gospodarka finansowa...* 2017) and *Sprawozdanie z wykonania...*, op. cit.

Unfortunately, the analysis of analogous budget items for all local government units shows that in 2017 in comparison with 2015, expenditures on benefits for natural persons increased by PLN 25,1 billion (an increase from PLN 16,9 billion to PLN 42,0 billion), but the total amount of the targeted grant was higher only by PLN 18,2 billion (increase from PLN 44,2 billion to PLN 62,4 billion). This means that the central budget introducing the “Family 500 plus” programme provided funds for the payment of benefits, but at the same time clearly reduced the expenses for other tasks commissioned to local governments. The restrictions concerned mainly counties and voivodships.

Summary

Since the fall of Lehman Brothers, by May 2018, 117 months (9 years and 9 months), have already passed, more than the previous medium-term business cycle—from the beginning of the dot-com crisis until the fall of Lehman Brothers (102 months). If we consider the correct hypothesis of Clément Juglar about the occurrence of 9-year cycles of economic prosperity, one should expect another economic slowdown. The global economic slowdown also has an indirect impact on the budgets of Polish communes, including revenues from PIT and CIT too. It seems that the budget deficit of communes for 2017, which appeared after a few years ended with budget surpluses, may herald the upcoming crisis.

An analysis of selected budget items indicates that both the state and the communes are not sufficiently prepared to counter crisis events. Contrary to the trends observed in Europe in terms of balancing the budget, in Poland the state budget continues to show a deficit every year. This results in the increase in public debt, and also in the high yield on Polish treasury bonds. Communes significantly limited property expenditures, and due to the launch of the “Family 500 plus” programme, benefits for natural persons increased. Although they are financed from the central budget, but with the launch of the programme, state grants have decreased for other purposes, primarily for counties and voivodships.

The scenario for the upcoming crisis is not optimistic. Communes will have to face a drop in own revenues, which will result in either increasing debt or further limiting already low property expenditures. In this situation, according to the theory of public finance, the state should provide support. However, due to the sizeable fixed expenditures, including, inter alia, high debt serving costs and expensive social program, state aid may prove insufficient.

References

- ADAMIEC, J., and P. RUSSEL. 2009. “Światowy kryzys gospodarczy a sektor przedsiębiorstw i gospodarstw domowych w Polsce.” In *Kryzys finansowy. Wybrane zagadnienia*, edited by J. Adamiec, 7–34. Warszawa: Wydawnictwo Sejmowe.
- Gospodarka finansowa jednostek samorządu terytorialnego 2016*. 2017. Studia i analizy statystyczne. Warszawa: Główny Urząd Statystyczny.
- GÓRKA, K., and M. ŁUSZCZYK. 2013. “Współczesne tendencje rozwoju gospodarczego regionu w kontekście teorii cykli koniunkturalnych.” In *Polityka rozwoju regionów oparta na specjalizacjach inteligentnych*, edited by K. Malik, 84–94. Warszawa: KPZK PAN.
- JASIŃSKA-BILICZAK, A. 2012. “Sektor małych i średnich przedsiębiorstw województwa opolskiego na tle polityki regionalnej Unii Europejskiej.” *Nierówności Społeczne a Wzrost Gospodarczy* (28): 326–336.
- . 2014. “Instrumenty wspierające sektor małych i średnich przedsiębiorstw na poziomie lokalnym — przykład powiatu nyskiego.” In *Gospodarka lokalna w teorii i praktyce*, edited by R. Broł, A. Sztando and A. Raszkowski, 54–63. Wrocław: Wydawnictwo Uniwersytetu Ekonomicznego.
- . 2015. “Problem samozatrudnienia — rola i miejsce mikroprzedsiębiorstw w gospodarce regionalnej.” *Barometr Regionalny. Analizy i Prognozy* 13 (4): 75–80.
- JEVONS, W.S. 1878. “Commercial Crises and Sun-Spots.” *Nature* 19: 33–37. doi: 10.1038/019033d0.
- . 1882. “The Solar-Commercial Cycle.” *Nature* 26: 226–228. doi: 10.1038/026226a0.
- JUGLAR, C.M. 1916. *A Brief History of Panics and Their Periodical Occurrence in the United States*. 3rd ed. New York: Putnam.
- KIIVER, H., and R. HIJMAN. 2010. “Impact of the Crisis on Unemployment So Far Less Pronounced in the EU than in the US. Latest Developments Appear More Favourable in the US.” *Statistics in Focus* (20): 1–8.
- KOROTAYEV, A.V., and S.V. TSIREL. 2010. “A Spectral Analysis of World GDP Dynamics: Kondratieff Waves, Kuznets Swings, Juglar and Kitchin Cycles in Global Economic Development, and the 2008–2009 Economic Crisis.” *Structure and Dynamics* 4 (1).
- KURZ-KIM, J.-R. 2016. “Black Monday, Globalization and Trading Behavior of Stock Investors.” *Bundesbank Discussion Paper* (18): 1–14.
- LITTERICK, D. 2002. “Billionaire who broke the Bank of England.” *The Telegraph*, 2002.09.13.
- OWSIAK, S. 2001. *Finanse publiczne. Teoria i praktyka*. 2nd ed. Warszawa: Wydawnictwo Naukowe PWN.
- PIĄTEK, Z., and S. FLOREK. 2009. “Wpływ zmian w systemach wartości na kształtowanie się społeczeństwa wiedzy.” In *Zrównoważony rozwój gospodarki opartej na wiedzy*, edited by B. Poskrobko, 23–42. Białystok: Wydawnictwo Wyższej Szkoły Ekonomicznej.
- PWC: *Kryzys na rynkach finansowych. Wyzwania stojące przed spółkami*. Last updated 2009.03.26 [accessed 2018.12.17]. Available from <http://inwestycje.pl/firma/PWC-Kryzys-na-rynkach-finansowych-Wyzwania-stojace-przed-spolkami;53880;0.html>.
- TEMPEST, M. 2005. “Treasury Papers Reveal Cost of Black Wednesday.” *The Guardian*, 2005.02.09.
- YERGIN, D. 1991. *The Prize. The Epic Quest for Oil, Money, and Power*. New York – London: Simon & Schuster.