

THE RELATIONSHIP BETWEEN GOVERNMENT EXPENDITURE AND PUBLIC SAFETY IN LITHUANIA

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Abstract. This article aims to find how government expenditure for the sectors of defense, public order and safety influence the economic situation and national security in Lithuania. The problem how government expenditure for public safety relates to statistics of national security and economic situation in the country is analyzed in the article. The fundamental aspects of the structure of public expenditure and relationship between major defense, public order and economic indicators are analyzed in the article. Analysis is made using self-made figures and counted coefficients that show the strength of the relation of the analyzed factors. Resulting conclusions give an answer how government expenditure affects economic situation and safety of the country.

Keywords: government expenditure, public safety, productive expenditure, crime

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1. Introduction

Government expenditure has always been a challenge for the government and country leaders. In order to have a balanced budget every country each year has discussions about how to collect revenue, which taxes must be raised and what changes and reforms has to be done. Other discussions, no less than previous are about the expenditure of the government and depending on a country size it can also be different extent, because different size of a country influence different quantity of expenditure (Senjur 1996). The decisions taken influence which sectors will get more financing, but sometimes these decisions are not taken correctly and fairly, so more financing might be assigned for sectors that need less of it.

Public order and safety is one of the sectors that are financed mainly by the government, so only deci-

sions from the government influence the amount of it. Different governments after elections may change their attitude for this sector depending on the opinion for the safety of the country, and this can be applied for all other sectors. When we speak about public safety it covers not only safety in the streets, but also safety in a region as a country. And this is very important in Lithuania, because our country is at the Eastern border of the European Union, so it is must to have safeguard at the board.

The *problem* analyzed in this article is how government expenditure for public safety relates to statistics of national security and economic situation in the country, and if this type of government expenditure is really productive: the analysis of statistical data will help to check if government expenditure is productive or not. In order to solve the problem - crime, economic and other statistical data is analyzed. The

aim of this article is to find how government expenditure for the sectors of defense, public order and safety influence the economic situation and national security in Lithuania. There are few **objectives** of this article:

- 1) To reveal the fundamental aspects of the structure of public expenditure;
- 2) To make analysis of the latest statistics of funding on defense and public order sectors;
- 3) To find relationship between major defense, public order and economic indicators;
- 4) To find out how expenditure for public safety affects country's economic situation.

The methods that will be used in this article are these: systematic socio-economical literature review, analysis of statistical data, generalization methods, comparative, structural and logical analysis. Correlation analysis will be used to find the relationship between government expenditure and public safety and other economic indicators. Analysis and the strength of the obtained results that will be made in this article will help to reach the aims and make final conclusions.

2. Structure of Government expenditure

According to Spanish economist J. Ferreiro (2009), government expenditure at first should be analyzed based on functional expenditure. It is convenient, because expenditure is divided into sectors. It is also recommended to use the same expenditure classification that is accepted by the European Union. It allows comparing different countries between each other. There are the sectors in functional classification: social protection, housing and community amenities, education, economic affairs, defense, health, public order and safety, environmental protection, general public services, recreation, culture and religion. Expenditure for recreation, culture and religion in some literature might be found together, and in some - separated into different sub-sectors. In Lithuania we can find another two sub-sectors: expenditure for the debt management and expenditure for the budget of EU. According to functional classification these sub-sectors could be put together into sector of general public services without distinguishing them from widely accepted classification.

There are different opinions about how to divide government expenditure. Ravallion (2002) is dividing these expenditure into social and non-social, but from this point of view, some of social expenditure

might be productive, and other not productive at all, so it is better to divide government expenditure according to its productivity. A.U.I. Clement and E.O. Dickson (2010) are dividing government expenditure into recurrent and expenditure for capital creation. Recurrent expenditure are not accumulated and are used for consumption, so such sectors are financed every time from beginning, while expenditure for capital creation has lasting value, are designed for investment and have long-term accruals. T. Stratman and G. Okolski (2010) have an opinion that government expenditure increases the consumption of private sector, and money that are collected to the budget are allocated unproductively. There is also different opinion that seems to be the fairest - to divide government expenditure into productive and unproductive expenditure. There were a number of researches made, which divided mentioned sectors of expenditure into these groups. As Gray (2007) wrote, proper management of productive and unproductive expenditure (not balancing them!) might have positive impact for economic growth of the country. Irmen and Kuehnel (2008) states that unproductive expenditure has instant affect and has influence only in the short-term, while the productive expenditure are effective in long term and have a lasting value. This classification was also analyzed in researches of Liubimova and Žigienė (2010), Ferreiro (2009). As productive expenditure we can assign expenditure for education, defense, economic affairs, housing and community amenities, health, environmental protection and public order and safety. Expenditure for education enhances improvement, so educational services at higher quality are given for those who will create Gross Domestic Product (GDP) of the country: schoolchildren, students, teachers, academics and their higher competences. Expenditure for defense, public order and safety are productive expenditure, because it influences activity of Lithuanian soldiers, public order officers and their competitive. It can be said that higher GDP will be created in a country that is safe. Expenditure for environmental protection promotes using various projects that are intended to avoid harm for the nature, promotes using alternative energy resources, pollution reduction. New inventory and methods help to create higher economic value more effectively and cleaner. Expenditure for health is needed for researches and new medical equipment. This helps to find illnesses faster and apply correct type of treatment immediately.

Society that has guaranteed high-quality health care can work without fear and develop higher country's welfare. According to Ferreiro (2009), expenditure for the economy includes research and development, transport, communications and foreign relationships. Most scientific researches that promote economies to invent a new, alternative, more efficient and environmentally-friendly inventions get quite meager state budget.

Unproductive expenditure hampers economic development and inhibits its growth. Large unproductive expenditure require additional financing, which is often obtained through higher taxes, and all money that are taken from the private sector is used to spend, instead of being invested and would generate greater economic returns, higher GDP and interest rates in the future. Professor Holcombe (1998) claims that increase in government expenditure by 10% influence decrease of the country's GDP growth by 1%. Unproductive expenditure includes expenditure on recreation, culture and religion. Although these sectors are important, they only satisfy the needs, beliefs of certain groups of people, and create a short-term, non-persistent value. Other large part of expenditure that consumes a lot of financial resources from country's budget is social protection. Social benefits and allowances are classified as non-productive not only because they do not create economic value, but also because they motivate people not to create it. Paying unemployment benefits from the budget their needs are satisfied, and it demotivates and inhibits their willingness to work. Other unproductive expenditure is contributions for European Union, funds for government debt management, and expenditure for general government services. These costs are necessary, but it inhibits economic growth. Huge government borrowing during crisis period leads to a significant need for funds to debt repayment obligations and the redemption of bonds. As a member of the EU Lithuania commits to pay their contribution to the common EU budget.

Both, productive and unproductive expenditure is needed, but anyway - both of them are expenditure. Without active government management of productive and unproductive expenditure, economic growth would show up only in long term period (Irmen, Kuehnel 2008). The COFOG classification that is given is divided into productive and unproductive sectors, and it might be, that these sectors differ in different countries, so the same classification

cannot be applied for all countries. In some cases COFOG classification might be used, i.e. comparing expenditure of different countries between each other, but when talking from national aspect, some of productive expenditure might be unproductive, and vice versa. This article analyses if government expenditure for public safety and defense is really productive. To find out that, it is not enough to make a conclusion according to unsubstantiated statements, but the analysis of statistical data must be done. It is possible that according to statistics, some of government expenditure sectors nationally might differ from COFOG classification.

3. Government expenditure for defense and public safety

Government expenditure for defense and public safety put together takes a significant part in productive government expenditure, so it is interesting to see if it is healthy for economy and conducive to reduction of crime. When being a part of NATO, Lithuania has international soldiers and fighter jets dislocated at the north of the country which also requires additional financing. But being a part of organization helps to reduce expenditure on safety, because some of the expenditure is common for all the members of organization.

Defense sector is very important for the country in order to keep its sovereignty and to be ready for the possible attacks from inimical neighbors. When saying that we dispose of European union countries, but we have in mind Russia, which would like dictate to Baltic countries its own rules for gas and oil. The defense that we have in Lithuania would not be able to stand alone against this giant, but being a part of big organization gives opportunity to join forces where the most help is needed. Because of this fact we have foreign missions and our soldiers help other countries, so it is easier to reach the same aims and objectives.

Public safety sector is not as broad and international as defense sector. It works nationally and it is intended to keep public order in the country. If we think that unemployment and poverty have direct impact on the growth of crimes (Šileika and Bekerytė 2013), then it is a sign of weak economic situation in the country. If economic situation is good, then unemployment level is lower, the financing for public safety is higher and level of public order is higher. As Šileika and Bekerytė (2013) wrote, for many peo-

ple, especially for impoverished ones, goods acquired from crime can outweigh the risks, so it can be suggested that poverty should increase crime rate. But if

the government assigns enough financing for public safety, this threat can be minimized and public order can be kept at the best appropriate level.

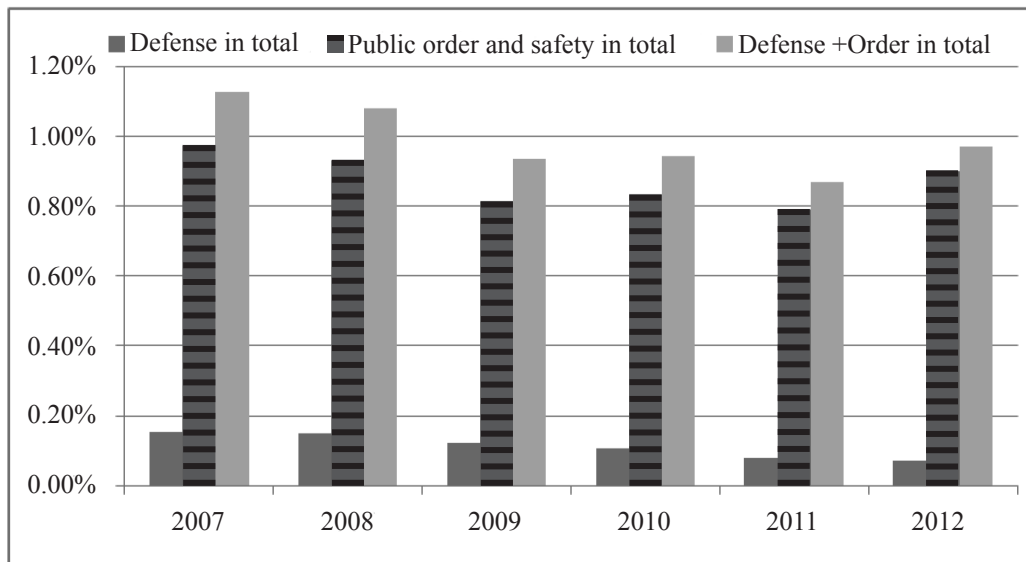


Fig. 1. Government expenditure for defense and public order in total government expenditure in Lithuania

Source: Department of statistics of Lithuania.

In order to see which part of government expenditure is given for each of these sectors, statistical analysis should be made. Figure 1 shows how government expenditure for defense and public order changes during the last six years according to total government expenditure. As we can see, government expenditure for defense is decreasing: during last six year it decreased by 41%. But government expenditure for public order and safety increases, so total result is that government expenditure for both sectors in common is increasing. From the figure below, we can see that the level of these expenditure fluctuate depending on the total expenditure. From statistics we can see that local (micro) issues get more financing than broad issues (macro), where micro is Public

order and safety and macro - defense. Let's say that defense is needed, but people barely feel its existence, while public safety and public order can be seen every day. Of course, being a part of global defense organization helps to minimize expenditure for defense, so the bigger part of money can be assigned for local problems. If there would be a demand for more expenditure for defense, it would be easier to reallocate assignments and swap some money from public order and safety. There are authors who state that better economic situation influences lower level of crime and higher safety in the country, but I haven't found researches on the effectiveness of government expenditure for defense and public safety and its relations to economic situation in Lithuania.

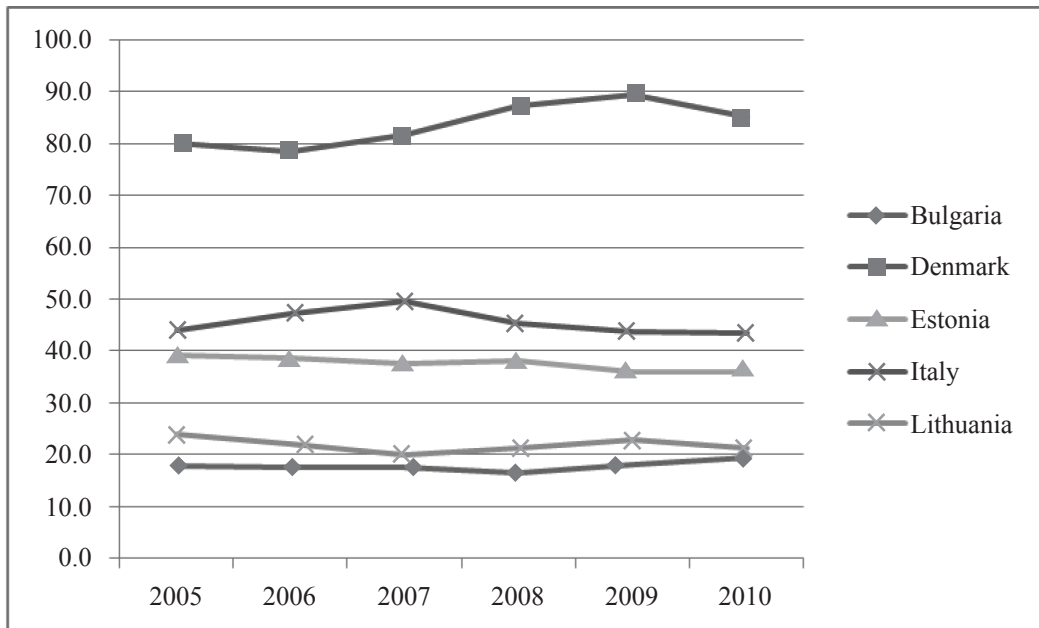


Fig. 2. Criminal offences per 1000 inhabitants in some EU countries

Source: Prepared by authors according to Eurostat.

It might be stated that there are less crime in richer countries, but it is needed to substantiate that by statistical data. In Figure 2, number of criminal offences per 1000 inhabitants is showed. There were Lithuania and 4 other countries selected randomly. Let's say, according to GDP, that two of them are small economies (Bulgaria, Estonia) and other two - bigger economies (Denmark, Italy). As we see from

the graph, those countries with big economies have higher rate of criminal offences than those countries with smaller economy. Because of this fact we cannot state, that richer countries have less crime. As we can see from the statistics, poorer countries have lower rate of criminal offences. This can be described by the difference between rich and poor - where this difference is higher, there are more criminal offences.

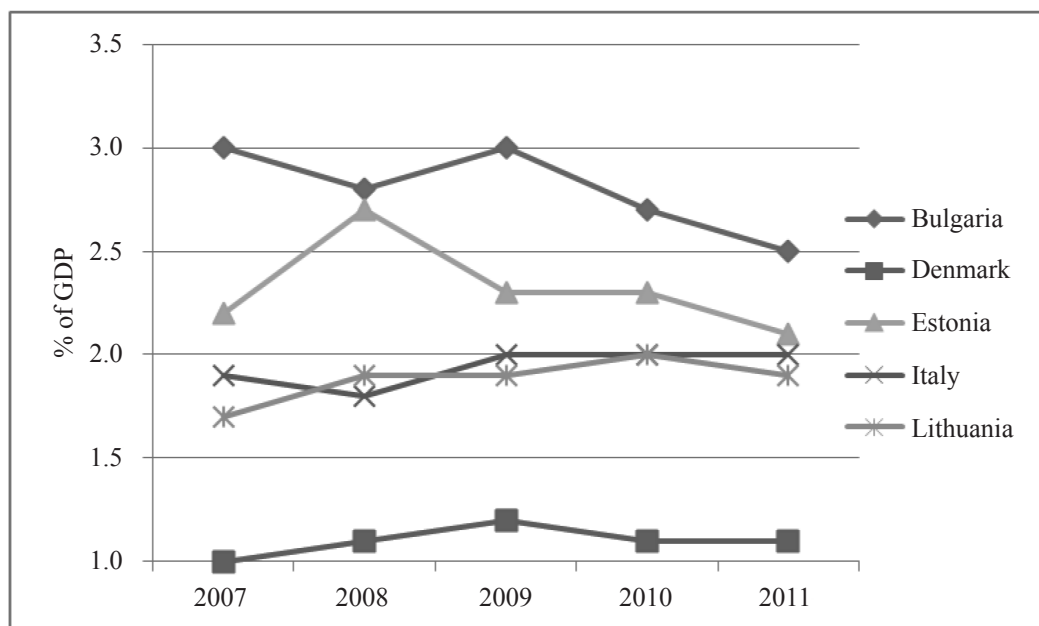


Fig. 3. Assignations for public order and safety in some EU countries

Source: Prepared by authors according to Eurostat.

Other graph shows what difference in the same countries, when giving assignments for public order and safety, is. As we can see from Figure 3, assignments for this sector are highest in those countries, where the number of criminal offences was lowest. It can be thought that assignments are lower because economy

is big and as a number, government expenditure is sufficient enough, and the sector is saturated. But the statistical data about criminal offences shows opposite - those countries, which take more attention to this sector, have better results.

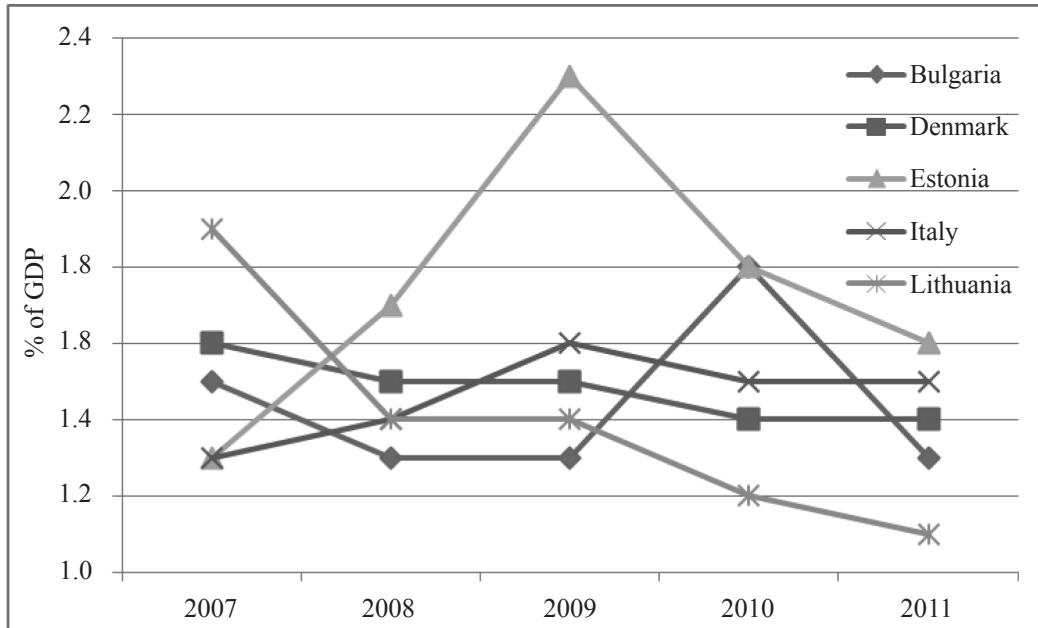


Fig. 4. Assignations for defense in some of EU countries

Source: Prepared by authors according to Eurostat.

When talking about assignments for defense (Figure 4), we can see different situation: assignments for defense in big economies are quite stable, but in smaller economies it is fluctuating. Government expenditure for defense in Lithuania is decreasing and is among lowest in European Union. Lithuania, according to the latest certified statistical data, feels safe as much as Germany, Spain and Switzerland. But do we feel so safe and don't have what to fear about?

Statistical data analysis showed that opinion that richer countries are safer and there are less criminal offences, is wrong. It was found that poorer countries invest more in public safety (according to GDP), and there are less criminal offences and in richer countries it is opposite. Government expenditure for public safety in Lithuania is increasing, while expenditure for defense is decreasing and now is at quite low level and needs more attention.

4. Relationship between government expenditure and public safety.

Public safety and defense depend on the financing from the government. Because government has to allocate revenue from the budget, it is possible that there is a relation between government expenditure and criminal offences in the country. If we talk not only about government expenditure, but about safety in the country, it is possible, that there would be relations between GDP and crimes, unemployment and crimes. To analyze these and other relations correlation analysis will be made. These relations will show how crime statistics and safety in the country on government decisions and how strong these relations are.

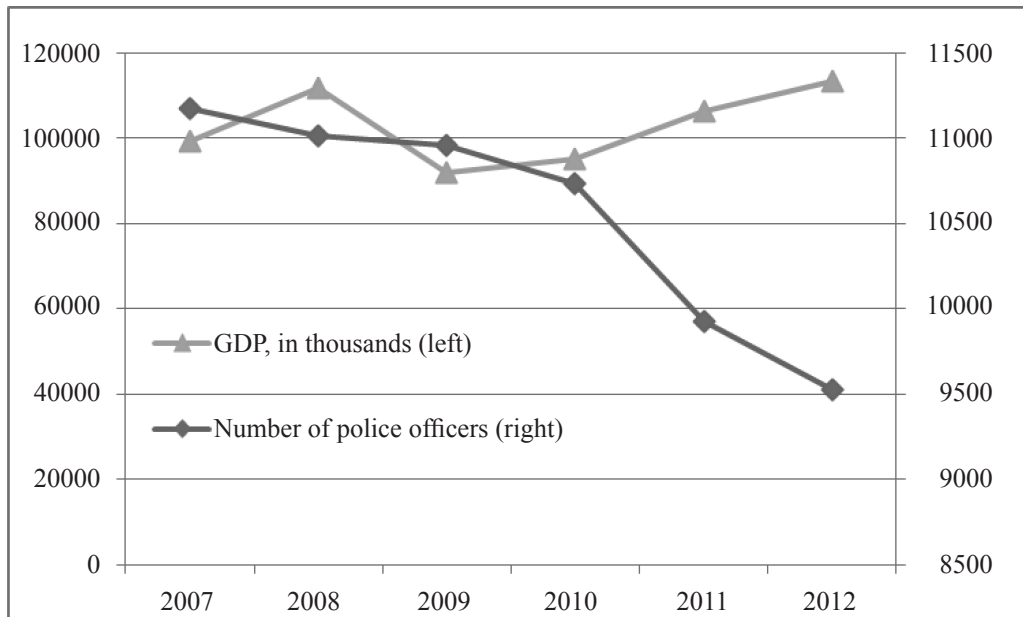


Fig. 5. Relation between GDP and number of police officers

Source: Prepared by authors according to Eurostat and Statistics department of Lithuania.

When looking at various different possible relations between economic and safety statistical information, there are several stronger relations found. The relation was found between GDP and police officers, who are responsible for public order and safety. The relation is not very strong, but we can make intensions about possible reasons, why these factors are correlating.

R^2 for GDP and number of police officers is -0,57. Negative shows that number of police officers is decreasing

when GDP is increasing. It can be said that when there is better economic situation in the country, less police officers are needed. Of course, if we look at Figure 5, we can state that number of police officers was constantly decreasing, but from 2010, after economic burst after crisis, the number started to decrease rapidly. And if we look at long time period and expel crisis from our graph, we would see, that is increasing every year, so it is possible to expect stronger relation between these two factors.

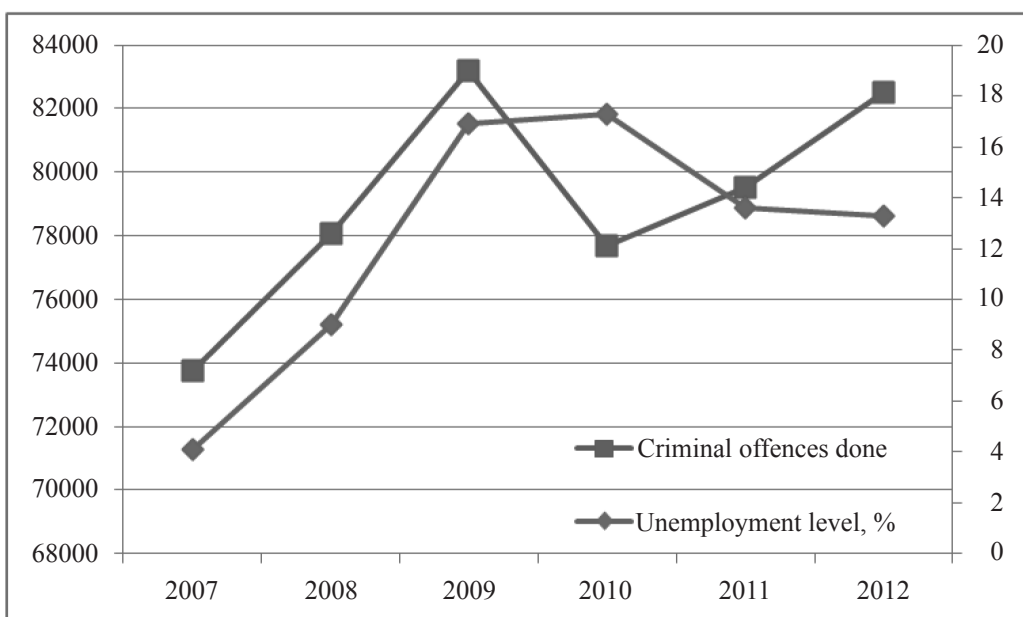


Fig. 6. Relation between unemployment and criminal offences

Source: Prepared by authors according to Statistics department of Lithuania.

Other relation was found between unemployment and criminal offences (Figure 6). It is logic that there is more crime when unemployment is high, because people feel lack of money, so they try to find other

(illegal) ways to live out. R^2 between these variables is 0,72. It is quite strong and reliable relation, which shows that country's safety depends on economic situation and level of unemployment.

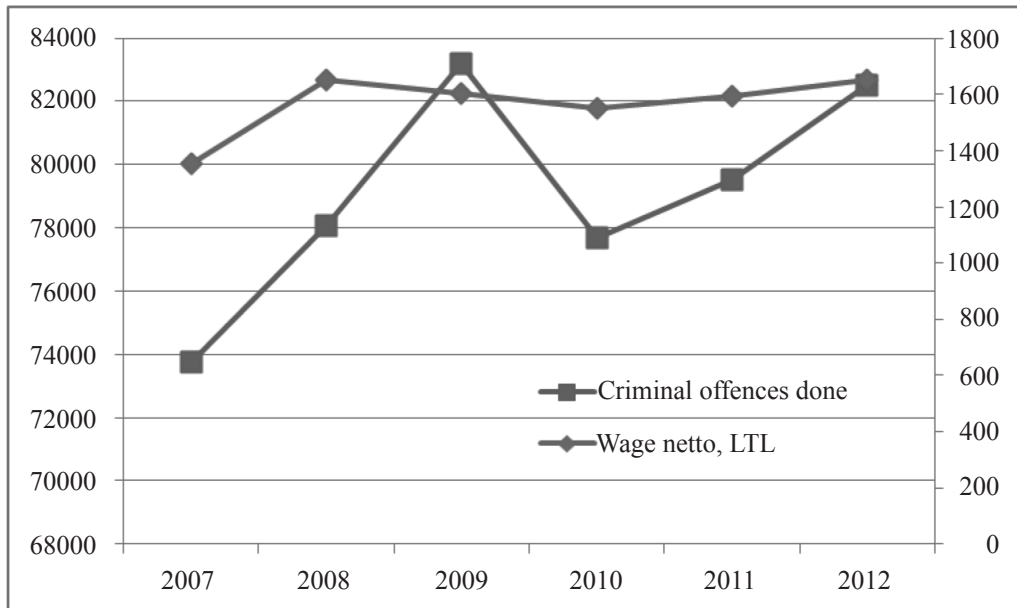


Fig. 7. Relation between criminal offences and wage

Source: Prepared by authors according to Statistics department of Lithuania.

There is also a relation between Criminal offences and wage (Figure 7). The logic of this relation is very similar to the logic about relation between criminal offences and unemployment: when people are lack of money, they make offences, and when people get too low salary, they also are susceptible to perpetration. This research showed a bit different trend of this logic: R^2 between Net wage and criminal offences done is 0,79, which is strong relation and shows that when

people gets more salary, they make more offences. It is possible that those, who earn more, can afford themselves to pay more fines. Increase in average salary doesn't mean that everybody starts to earn more money: it is possible that there was increase in salary for those, who earn more than average salary, so because of that average salary in the country increased. So the difference between minimum and maximum salary in the country increased, and despite

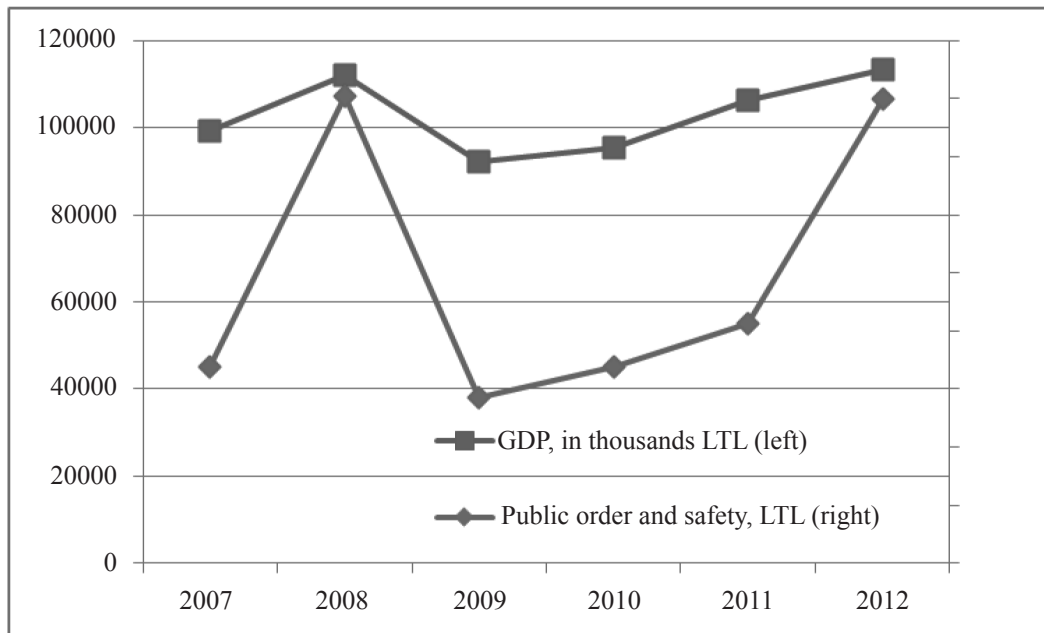


Fig. 8. Relation between GDP and government expenditure for public safety and order

Source: Prepared by authors according to Statistics department of Lithuania.

that, producers in order to be up to the market increases the price of their products, the retailers increases their prices a bit more and the final price of the product becomes too big for those, whose salary didn't increase when counting average salary, so he/she is constrained to make an offence to live out.

Final significant relation that was found during this research was found between GDP and Government expenditure for public order and safety (Figure 8). It was found that the relation between these two factors is very strong and R^2 is 0,92. It means that if economic situation in the country is getting worse and GDP is decreasing, then the expenditure for public safety and order will decrease as well and opposite. We can make an assumption that if GDP is increasing, expenditure for public order increases, because of that number of criminal offences done decreases and because of increase of GDP decreases level of unemployment, what also decreases criminal offences.

Conclusions

Every topic about government expenditure is very interesting, because it is always about our money, so we must be aware where and how this money is allocated. One of the sectors is defense, public order and safety, and it is very important for the citizen of Lithuania, because their safety and welfare depend on that.

This article showed the structure of government expenditure: both, productive and unproductive. Government expenditure for defense and expenditure for public order and safety is a part of productive expenditure and is thought to make positive influence for the economy. The research showed that government expenditure for defense is decreasing, but for public order and safety it is increasing several recent years.

When comparing criminal offences done in Lithuania and in other European countries, we can clearly see that situation in our country is not bad at all - there are more criminal offences per 1000 inhabitants done in western countries than in Lithuania. This can be a result of government expenditure for public order and safety: in Lithuania this expenditure as percent of GDP is not as high as in other European countries.

The research showed interesting fact, that the number of policemen is decreasing and especially when GDP is rising. This fact can also be influenced by new technologies, speed cameras, street view cameras and so on. It was found that criminal offences relates to unemployment, which is related to economic crisis and GDP. It was also found that government expenditure for public order and safety relates to GDP. It means that if there is better economic situation in the country and government assigns more funds for

this sector, there is higher safety in the country.

It is hard to say if government expenditure directly makes influence for economy of the country, but it is a fact that through other economic elements government expenditure is positive for the economic welfare of the country and safety of its citizen.

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