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EDUCATION VERSUS MILITARY EXPENDITURES IN THE BALTIC STATES

I Introduction

Government spending in various segments of the public sector generally reflects government policy priorities. Although the amount of public spending does not always correlate with outcomes, government policy attempts to provide more resources to its prioritized sectors to ensure their quality. In general, there are two main areas of public spending that compete for resources: social and defense spending. Comparisons of military and social expenditures are often used to assess how governments prioritize military and social goals[1]. Education and health, amongst many other segments, are the main social expenditures under consideration. This paper addresses education as a one of the main categories of social expenditure in competition with military expenditure and will attempt to make a comparison between the two and explain some implications of public policy. Three post–Soviet countries, Latvia, Lithuania and Estonia, will be examined as a case study. International data obtained from several International organizations on the Baltic states will be used to analyze factors involved in public expenditures on education versus the military.

Departing from the assumption that policy decisions on public spending should be cost–effective raises the question of whether increasing public expenditure is an effective means of improving the quality of outcomes in the sector. Public expenditures on education and military sectors do not necessarily determine the quality of output, such as military capability or security, or high standards of education. The *money does not matter* claim has been long debated among educators since 1966 when the Coleman report came to light. Hanushek argues[2] that the accumulated research currently indicates that there is no clear, systematic relationship between resources and student outcomes, while other researchers have found an important positive relationship between expenditure and achievement[3]. Analyzing data from international tests, the *money does not matter* claim will be examined in the case of the Baltic states.

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[1] See Stockholm International Peace Research Institute, *SIPRI Yearbook 2007*.

[2] See E. A. Hanushek, *Education Production Functions*.

[3] See L. V. Hedges, R. D. Laine, & R. Greenwald, *Does Money Matter?*

In order to give a bigger picture of public spending in the Baltic states on education versus the military, this paper will compare data on the regional and international level. The case of Georgia is also an interesting example in the post–Soviet space in terms of public spending on education and defense in comparison to the Baltic states. Like Estonia, Latvia and Lithuania, Georgia is a small country which often borrows policy strategies from those countries, in order to gain NATO and EU membership. Its opposite approach towards public spending rationale, however, makes it an attractive case to be examined alongside the Baltic states.

The major findings of the paper are that the Baltic states stand favorably among the countries in the world which disburse a considerable percentage of their GDP on education on both the regional and international level. Statistical data shows that between 1999–2006 the Baltic states spent almost two to three times as much on education as on military expenditures. They expend a smaller percent of their GDP on military than some other European countries. Data analysis shows that investment in human capital has always been one of the main priorities in the Baltic states. Having limited natural resources, the Baltic states have prioritized expenditure on education over military expenditures for years. The Baltic states see investment in human capital as a powerful way of future survival and development of their small countries.

II Social versus Military Expenditure

Generally speaking, the purpose of military spending is to provide for military defense and national security of the country, while the purpose of social spending is to provide social service to the citizens of the country[1]. Both sectors comprise the major functions of the state and reflect the main needs of its citizens. Respective governments vigilantly plan their budgetary policies so that defense expenditures are not impediments to defining social expenditures and do not limit spending on social programs. Careful and effective allocation of public funds is of central importance for governments in every corner of the world.

It is worth noting that national expenditure covers both public and private spending. In addition to government spending on each sector, there are some non–state actors (business, non–governmental organizations, international organizations) which provide financial resources and often make considerable private expenditure. Although frequently a significant part of the total spending comes directly from the private sector, both the education and military sectors are considered to be the primary responsibilities of the state. Due to the nature of military sector that requires confidentiality, data on military expenditure may not accurately reflect total spending. For the purpose of this paper, general government expenditure (GGE), which consists of expenditures by central, regional, and local governments, will be used.

The Stockholm International Peace Research Institute (SIPRI) has comprehensive annual data relating individual government expenditures on

[1] See Stockholm International Peace Research Institute, *SIPRI Yearbook 2007*.

the military sector as a percentage of each countries' GDP. For the purpose of the paper, indicators of military expenditure from SIPRI database are used. Education sector indicators were collected from the Global Education Database and the UNESCO Institute for Statistics.

Military and education spending can be compared in many ways. However, for the accuracy and clarity of the present study, data represented as a percentage of GDP has been selected. UNESCO data on government spending on education covers both current expenditure (administrative costs, teacher salaries, teaching materials, scholarships etc) and capital expenditure (constructions, renovation, equipment etc).

III Case Study: Education versus Military expenditure in the Baltic States

Lithuania, Latvia and Estonia as post–Soviet countries share not only the Soviet past, but also face similar economic, political and social hardships after the collapse of the Soviet Union, when they gained the independence and started to rebuild their nation–states. All post–Soviet countries have inherited similar Russian–style educational policies from their communist past. Shortly after the collapse of the Soviet Union, when international borders opened for the post–Soviet countries, many tried to adopt European and American practices in many spheres, including education.

Baltic educators borrowed part of their educational policy paradigms from Nordic countries. For example, when defining Estonian national school curriculum in a newly established *Laboratory of Curriculum Studies* in the Tallinn Pedagogical University in 1993, the staff of this laboratory established a strong relationship with the Finnish Schools Agency[1]. According to the Ministry of Foreign Affairs of Lithuania, Lithuania has a variety of bilateral ties with all Nordic countries – Sweden, Denmark, Finland, Norway and Iceland, of which education is one of the major sphere of cooperation[2]. The policy of borrowing strategies from Nordic countries marks one of the defining features of Baltic educational systems.

Together with experience gained particularly from Nordic countries, the Baltic states have welcomed opportunities within the EU educational sphere to develop their policies in accordance with European standards. Especially after accession to the EU, they continue to benefit from close cooperation with European countries. Baltic states participate in many European cooperative and exchange programs, which help them remain open to and competitive with the rest of the world.

If one looks closely at the public spending on education in the Baltic states, one finds that their governments spend a considerable amount of financial resources on human capital. Much of this assumption is drawn from the data provided by the UNESCO Institute for Statistics:

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[1] See E. Krull & K. Trasberg, *Changes in Estonian General Education ...* .

[2] See Ministry of Foreign Affairs of Lithuania, *Fact Sheet ...* .

Table 1

Public expenditure on education as % of GDP. All Levels (Primary, Secondary, Tertiary) Finance Indicators by ISCED level							
	1999	2000	2001	2002	2003	2004	2005
Estonia	6.9	5.4	5.3	5.5	5.3	5.0	4.9
Latvia	5.7	5.4	5.5	5.7	5.3	5.1	...
Lithuania	...	...	5.9	5.8	5.2	5.0	...

Source: UNESCO Institute for Statistics

According to Table 1, Estonia, Latvia and Lithuania spend more or less an equivalent percentage of their GDP on education. They used to spend the same percentage of their GDP before their accession to the EU (2004) and thereafter. There has not been a considerable rise or decline in public spending on education in the Baltic states between 1999 and 2005, except Estonia which in 1999 spent almost 7 percent of its GDP on education. The available data illustrates that investment in human capital has been one of the main priorities of governments of the Baltic states. Compared not only to other post–Soviet countries, but also other developed European countries, the Baltic states spend a substantial proportion of their GDP on education.

If we compare public spending on education on the global level we will see that the Baltic states are among the countries in the world that spend a considerable amount – more than 5% of national GDP – of their financial resources on education. The table below shows statistical data on public spending on education by regions:

Table 2

Public Expenditures on Education By Region (2007)	
Region	% of GDP
Arabic States	4.9
Central and Eastern Europe	4.2
Central Asia	2.8
Eastern Asia and Pacific Asia	2.8
Latin America and the Caribbean	4.4
North America & Western Europe	5.6
South and Western Europe	3.6
Sub–Saharan Africa	4.5
International Level	4.4

Source: Global Education Digest, 2007. UNESCO Institute for Statistics

Governments of North America and Western Europe spend the highest shares of their GDP on education while by far the lowest rates of funding are found in Central and Eastern Asia, and Pacific Asia[1]. The Central and Eastern European region is close to the world average at 4.2%. The question arises as

[1] See UNESCO, *Global Education Digest – 2007 ...* .

to how spending on education is related to educational quality. Here one needs to take a look on international assessment of educational quality.

The *money does not matter* claim pointed out earlier could be tested in different ways across the countries. Some of the main tools of assessment of education quality are international tests. International testing systems such as PIRLS (Program in International Reading Literacy Study), PISA (Program for International Student Assessment), and TIMSS (Trends in International Mathematics and Science Studies) have become a significant part of global educational discourse. Founded and organized by Organization for Economic Co–operation and Development (OECD), PISA is one of the more powerful and influential international testing systems. Whether education can best be measured in figures is a question for further discussion, but the reality is that many industrialized and economically well–developed countries are among the lowest–ranking countries in the PISA survey.

A brief overview of the PISA 2006 results shows that students from the Baltic states, especially from Estonia, performed better than students from some other post–Soviet or European countries, for example from Germany, United Kingdom, Austria, Norway, Czech Republic, Slovak Republic. One of the most successful countries in PISA 2006 ranking system was Estonia. Estonian pupils exceeded the average PISA 2006 OECD result significantly in all three cognitive domains: reading, science and mathematics. In PISA 2006 results, Estonians ranked second in scientific literacy, ninth in mathematical literacy (third in Europe) and twelfth in reading literacy (seventh in Europe)[1].

The annual account by the International Association for the Evaluation of Educational Achievement *Trends in International Mathematics and Science Studies* (TIMSS) reports that Latvian students performed very well in TIMSS 2007, while Lithuanian students show upward progress over the 12–year period[2]. Another international testing system, PIRLS, also demonstrates that in 2007 both Latvian and Lithuanian student exceeded the average of PIRLS level[3].

As it has been shown above, based on the date from international comparisons, a significant proportion of budgetary resources spent on education by the governments of the Baltic states has its rationale: students often perform better than their European counterparts. One might argue that students might reach the same degree of performance even if the Baltic governments had spent fewer resources than they did. This argument would be strengthened by the fact that US government spends more than 6% of its GDP (2001, 2002, 2003, 2004[4]) on education, but US students are often below the average in international ranking systems. Another complex aspect of public expenditure on education is the efficiency and proper usage of public funds. Data on the percentage of GDP spent on education does not provide

[1] See M. Kitsing M., *PISA 2006, Estonian Results*.

[2] See I. V. S. Mullis, M. O. Martin & P. Foy, *TIMSS 2007 – International Mathematics Report*.

[3] See I. V. S. Mullis, M. O. Martin, A. M. Kennedy & P. Foy, *PIRLS 2006 International Report ...* .

[4] Source: Global Education Database.

information of effective usage of resources and its positive impact on educational outcomes. Education financing must be used in an effective manner to bring positive change[1]. For example, Namibia in Sub–Saharan Africa spends as much as 7% (in 2002, 2003) or 8% (in 1999, 2000, 2001) of its GDP[2] on education, which is not reflected in the quality of education of Namibian students.

Thus, given the different example countries, it might concluded that quality of education does not necessarily depend upon or reflect public spending on education. However, no one can deny that quality of education is highly influenced by the level of financing. We can clearly see the positive correlation between public spending on education and quality of education in case of the Baltic states.

In order to determine whether education is one of the main priorities of the national governments of the Baltic states one needs to compare it to other public expenditures, in this case public spending on the military sector. Are there so called *trade–offs* in the budgetary decisions of the Baltic governments? Is investment in human capital more significant for the Baltic governments than allocation of funds for defense?

The table below shows the public spending on the military sector by Estonian, Latvian and Lithuanian governments between the years 1999–2006:

Table 3

Public expenditure on military as % of GDP								
	1999	2000	2001	2002	2003	2004	2005	2006
Estonia	1.3	1.4	1.5	1.7	1.7	1.7	1.6	1.6
Latvia	0.8	0.9	1	1.6	1.7	1.7	1.7	1.8
Lithuania	0.9	1.4	1.3	1.4	1.4	1.4	1.2	1.2

Source: SIPRI database

Careful examination of Table 3 reveals that public expenditure on military has never been more than 1.7% of GDP in the Baltic states in general, though during this time period Estonia consistently spent more on its military sector than Latvia and Lithuania. Latvia in 1999 and 2000, and Lithuania in 1999, spent less than 1% of their GDP on military spending. Public policy decisions on military expenditures have not changed considerably in the Baltic states since their accession to NATO in 2004. After joining NATO, only Latvia maintained 1.7% of its GDP spending on military and even slightly increased it by the year of 2006 to 1.8% of GDP while Estonia and Lithuania have decreased their military spending after 2004. NATO has its own standards for military expenditure of its member countries that are reflected in individual Membership Action Plan: the required minimum military expenditure is 2% of GDP, a level that very few of the current member states have reached[3].

[1] See UNESCO, *Global Education Digest – 2007 ...* .

[2] Source: Global Education Database.

[3] See Stockholm International Peace Research Institute, *SIPRI Yearbook 2007*.

Table 4 represents data on the percentage of national GDP spent on military by new member states of NATO which joined the alliance after the fall of Soviet Union. The table covers the period 1999–2006, which is the most recent data available from the SIPRI military database and enables us to make a comparison between NATO new member states and the Baltic states in terms of public expenditures on military:

Table 4

Public expenditure on military as % of GDP								
	1999	2000	2001	2002	2003	2004	2005	2006
Czech Republic	2	2	1.9	2	2.1	1.9	2	1.7
Poland	1.9	2	2	2	2	2	2.1	2
Hungary	1.7	1.7	1.8	1.6	1.7	1.5	1.4	1.2
Bulgaria	2.5	2.5	2.7	2.7	2.6	2.4	2.4	2.3
Romania	2.7	2.5	2.5	2.3	2.1	2	2	1.8

Source: SIPRI database

The main observation for the Table 4 is that most of the new NATO member countries represented in the data table above usually spend more than 2% of their national GDP on military, with the exception of Hungary. Total expenditures on the defense sector by the government of Hungary usually are more similar to that of the Baltic states, but in some years even exceeds them. Thus, public expenditure on the military sector low in the Baltic states compared to that of other new member states of NATO from former–Soviet bloc countries.

The pattern of military expenditure across countries changes when we deal with non–NATO member post–Soviet countries such as Georgia, Armenia, Azerbaijan, Ukraine, Russia and Kazakhstan between the years 1999–2006:

Table 5

Public expenditure on military as % of GDP								
	1999	2000	2001	2002	2003	2004	2005	2006
Georgia	0.9	0.6	0.7	1	1.1	1.4	3.3	5.2
Armenia	3.7	3.6	3.1	2.7	2.7	2.7	2.9	2.8
Azerbaijan	2.6	2.3	2.3	2.2	2.4	2.6	2.3	3.6
Ukraine	3	3.6	2.9	2.8	2.8	2.6	2.8	2.8
Kazakhstan	0.8	0.8	1	1.1	1.1	1	1	1
Russia	3.4	3.7	4.1	4.3	4.3	3.8	3.7	3.6

Source: SIPRI database

Non–NATO member post–Soviet countries, as is clear from Table 5, spend a substantial portion of their national GDPs on the military sector (except Kazakhstan), which is very natural as they see themselves as being less secure than countries within NATO. The share of national GDP on military sector is approximately 2% or more in the case of these countries. We see the trend of considerable increase in military expenditure in the case of Georgia. As opposed to the Baltic states, the countries represented in the table above seem to prioritize public spending in favor of the military sector.

Given this picture of public expenditure for the military sector on the regional level, emphasizing the differences and similarities of the Baltic states with other NATO and non–NATO countries, we can now shift to the comparison between military and educational expenditures in these regions. Comparing Table 1, which indicates public spending on education by Estonia, Latvia and Lithuania between the years of 1999–2005, to Table 3 representing spending on military sector in those same years leads us toward some assumptions:

– The Baltic states have been dedicated to spending more than 5% of their national GDPs on education, which is considered a high level of spending when considering regional and international averages.

– The Baltic states have been spending less than 2% of their national GDPs on the military sector, which is considered low not only in comparison with some non–NATO member countries, but also with new member countries of the NATO alliance.

– The Baltic states have prioritized spending on education and invested in human capital over military sector. The proportion of national GDP on education spent by the Baltic government is two to three times greater for education than for the military sector.

– Finally, the share of GDP spent on military and education sectors of the Baltic states remained roughly constant at around 1.4/1.5% on military spending and 5.0% on education sector between the years 1999–2005/2006.

While the Baltic states have made a firm decision regarding allocation of funds in education and the military, another post–Soviet country, Georgia, has moved in a different direction. Since 2004, Georgia has sharply increased spending on the military sector and spent 8.8% of its GDP on the military in 2007. This figure is very high compared to other post–Soviet and Western countries. This percentage equals the military expenditure of Israel in 2003[1] (8.8% of GDP) which is considered to be one of countries in the world which spends a high percentage of its GDP on the military. At the same time, though the government of Georgia has attempted to increase expenditures on education since 2003, it has never constituted more than 2.9% of Georgia's GDP between the years 2000–2008 (see Table 6).

Table 6

Public expenditure on education vs Military as % of GDP in Rep. of Georgia									
	2000	2001	2002	2003	2004	2005	2006	2007	2008
Military	0.5	06	0.7	0.7	1.6	3.3	5.2	8.8	8.1
Education	2.2	2.1	2.2	1.9	2.9	2.5	3.0	2.7	2.9

Source: Ministry of Finance of Georgia

[1] Source: SIPRI database.

Unlike the Baltic states, Georgia's government's decision to spend more on military versus education is often justified by the fact that Georgia has lost its territorial integrity since the collapse of Soviet Union. Frequent armed incidents took place until August 2008 when another full–scale war erupted with Russia, the first two having been waged in the early 1990s after independence. Therefore prioritizing military budget over education serves Georgia's national security purposes. Despite such a high level of financing for the defense sector, the recent Georgia–Russian war has shown that Georgian military forces lack training and proper management to become a modern fighting force[1]. The August war once more underscored the argument that *money does not matter* and put pressure on the Georgian government to re–think the balance between spending on education versus defense.

IV Conclusion

The Baltic states are often perceived by international society as successful examples of the post–Soviet transition and stand as models for the rest of the post–Soviet countries. The practice of policy–borrowing has become very common amongst the Baltic states and other post–Soviet countries. There is considerable collaboration between the Baltic states and other post–Soviet countries in policy planning and transferring *reform packages*.

Based on the statistical data described above, one can clearly see that what really distinguishes the Baltic states from some other of the post–Soviet countries is the firm governmental commitment to spending more on education than on military. This does not mean that security issues are not important for them. Russia's recent aggression against Georgia and permanent pressure on national governments through Russian–speaking minorities compel the Baltic states to take security risks emanating from Russia seriously[2]. But their approach is to strengthen the commitment of individual NATO member–states towards their security and make the alliance revise military planning regarding Russia.

Public spending on military versus education by the Baltic states reflects not only governmental priorities but also national long–term strategies: presumably the Baltic states see investment in human capital over military as a powerful way of future survival and development of their countries compared to other post–Soviet states, the majority of which share the same security concern with the Baltic nations – fear of the former imperial Russia.

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[1] See C. J. Chivers & T. Shanker, *Georgia Lags in Its Bid to Fix Army*.

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