



# SYSTEMIC EFFECT OF GLOBALIZATION: INSIGHTS ON LITHUANIA AND POLAND

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## ABSTRACT

In the last twenty-five years Lithuania and Poland have been undergoing substantial changes. Democratic society and open market-led methods have been applied along with the global integration aspirations. Both countries became strongly engaged in the globalization process. Identifiable trends have taken place in politics, economics, culture and defense. But the question remains whether globalization presents a clear, fixed or determined target at which countries should arrive. Will the final result of globalization really be "The end of the nation-state" as it defined by hyperglobalists? In this paper we are presenting some theory-based insights into the holistic process of globalization in order to reveal connections and coherence of the output of this system with some of the environmental factors, considered as subsystems, in the two geographically close countries, namely, Lithuania and Poland.

## INTRODUCTION

The theoretical background of this study is based on Aristotle's interpretation that knowledge is derived from the understanding of the whole and not of the single parts. This theoretical insight evolved during the last century into systems theory (Mele, Pels & Polese, 2010). In other words, the idea was dressed as systems theory and shifted towards science and management society.

Hegel developed a theory of historical development as a dynamic process, which has meaning and reality only with reference to specific climatic, geographical, anthropological, and cultural conditions (David, McGrew, & Perraton, 2000). The model of

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perception in general system theory (Bertalanffy, 1968) provides that each system embraces processes which lead to a change in the current situation. Therefrom arises the idea that as part of historical process, globalization can be considered a system. A system is a set of elements that affect one another within one environment. A closed system does not interact with its environment. Some systems and processes are created by people striving to adapt the existing (current) situation to the desirable result. A superior system may have a set of sub-systems, which determines the total continuous input and output of the superior system. Globalization is an open system with synergistic output of human activity. This open system dynamically interacts with the environment by receiving and transmitting (input-output) information, which causes and effects a dynamic transformation of the system.

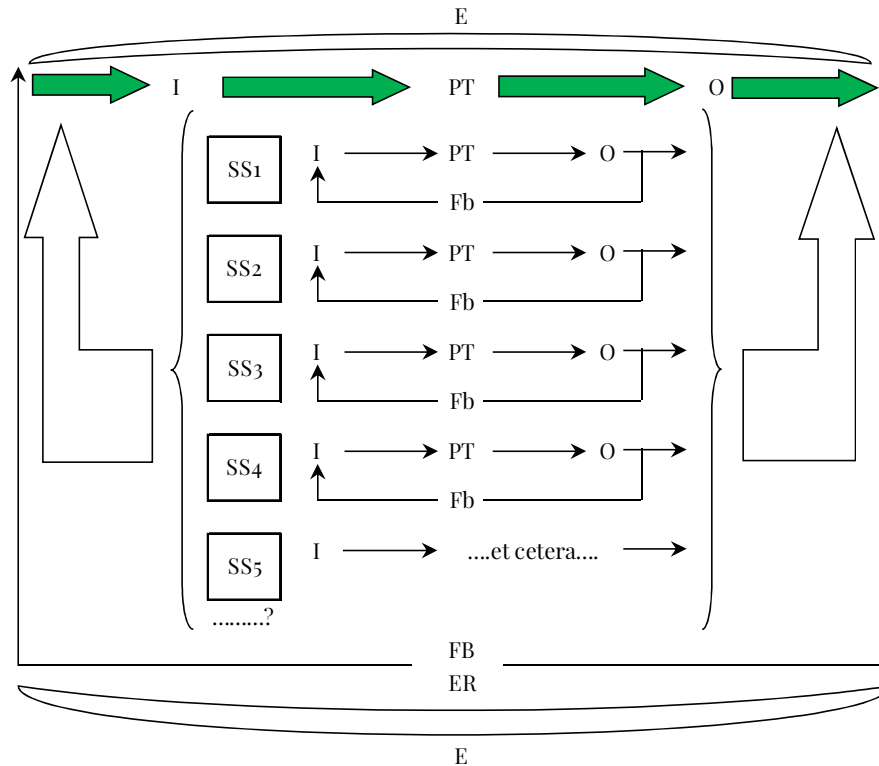
*Problem.* In this study globalization is defined as the open system that works, expresses result of globalization but is not designed system in order to achieve the universal objective of the globalization. Man, despite the fact that globalization is a consequence of human activity, does not have many opportunities to control globalization as a whole. The input and output of globalization system is determined by a set of lower-level subsystems which may reflect significant diversity in all aspects of the human activities, for example in sectors such as science and education, economy, technology, ecology, military, or even more detailed sub-systems - migration, finance, investment, transport, population and other. The global society is becoming increasingly concerned about the fact that globalization turmoil is extremely fast, but does not have a single fixed clear or determinate historical "destination" (David et al., 2000). There is a lot of controversy on whether globalization is a good achievement or destructive consequence.

*The aim of this study* is to crystallize a systems theory that is based on insights into the holistic process of globalization and reveal connections and coherence of the output of this system with some of the environmental factors, considered as subsystems, in the two geographically close countries: Lithuania and Poland.

## THE CONCEPTUAL MODEL

The aim and theoretical roots of this study lead to the inevitable combination of two controversial attitudes: reductionism and holism. According to Saul McLeod, reductionism should be understood in terms of "the simple is the source of the complex". To briefly explain a complex phenomenon, one needs to "reduce" it to its essential elements. Conversely, the holist perceives everything as "the whole is more than the sum of the parts" (McLeod, 2008).

In this study, the fundamental unit of analysis is globalization understood as 'a system' made up of many parts or structures considered as subsystems (Chart 1.). However, we do not seek to encompass all possible sub-system varieties. The idea is to get some insight into the globalization of Lithuania and Poland through subsystems of policy, trade exchanges, the Internet penetration, foreign direct investment and membership in global/international organizations.



E - Environment  
 I - Input  
 PT - Process Transformation  
 O - Output  
 FB - Feedback  
 SS1,2,3,4 ...- Subsystems  
 ER - Environmental Response

Chart 1. Model of globalization system  
 Source: own work.

### POLITICAL GLOBALIZATION SUBSYSTEM

Political globalization subsystem is transforming the very foundations of world order by reconstituting traditional forms of sovereign statehood and reordering international relations and also by influencing the quality of human activity and life. Policy is a set of ideas and actions that determine development of all other human-made subsystems such as military, economy, finance, science, education, technology, ecology and other. Political globalization subsystem is conceptualized as the institutional form of global and inter-regional organizations like the European Union (EU), the World Bank, the International Monetary Fund (IMF), the World Trade Organization (WTO), the North Atlantic Treaty Organization (NATO), the Organization for Economic Co-operation and Development (OECD) and their strengths relative to the strengths of national states and other smaller political actors in the global system.

The recent history and experiential knowledge of both Lithuania and Poland were strongly affected by a few decades of the Soviet regime. Political orientation of those countries is generally predetermined by two geopolitical factors: East and West (Pranulis, 2002). Even in the beginning of the 21st Century the Eastern threat factor is still viable.

*Eastern geopolitical factors*

- The negative attitudes of Lithuanian and Polish societies concerning a foreign country dictatorship.
- The endeavors of some political and military forces from the East to block the efforts of Lithuania and Poland to consolidate the national protection within international alliances, such as NATO.
- A disproportionally increased military power in the region of Kaliningrad (Königsberg).
- Russian military aggressiveness and its actions in the neighboring Georgia, Ukraine and in the Middle Eastern country - Syria.
- Misleading the public through the media.
- The pressure exerted for the incorporation of energy supply to Lithuania and Poland into a single-sided monopolistic diktat of oil and gas supplies from Russia.
- The unpredictable behavior of the Russian authorities in terms of introducing prohibitions, restrictions, limiting the export, import and traffic across state boundaries.

*Western geopolitical factors*

- The favorable attitudes toward democracy-based culture.
- The focus on the development of international mechanisms, institutions and rules of political decision-making which have generated new forms of global and regional governance.
- The extension of political power and political activity across the borders of the modern nation-states.
- Changing forms of political rule and the rise of modern nation-states.
- The growth of transboundary, transnational and intergovernmental political processes.
- Nations, peoples and organizations are linked by many new forms of communication and media which are available across the borders.
- The structure of world military power in the second decade of the 21st Century reflects a significant rebuilding and modernization of Russian armed forces and Russia's involvement in military action in Europe and Middle Eastern countries.

## GLOBAL/INTERNATIONAL MEMBERSHIP

The geopolitical factors greatly influence Lithuanian and Polish political orientations, strategic decisions and their involvement in global and international organizations and structures. Some organizational bodies are based on formal membership (Table 1) but others, like the World Bank, the International Monetary Fund and other are accessible without formal membership.

Table 1. Membership in the global/international organization

Global/International Organization	ACCESSION YEAR	
	Lithuania	Poland
EU	2004	2004
WTO	2001	1995
OECD	Since 2015 in the process of accessing	1996
NATO	2004	1999
EUROZONE (€)	2015	Not member of Eurozone

Source: own work.

Direct comparisons of Lithuania and Poland are not entirely meaningful due to the differences in size, economic weight, and the formation of historical roots each state. However, the data in the first table allows us to get some fairly meaningful systemic insights. *First*, the above listed geopolitical factors predetermined the political strategy of both countries to focus toward national statehood together with the close and active involvement in the group of the world's and European democratic nations. *Second*, accession to the membership in the global/international organization is considered by both countries as the key in the *process* of merger into the group of democratic nations. And the most important thing is becoming a part of unprecedented level of information flow/connectivity across all military/security domains. *Third*, the *output* of the political subsystem was more beneficial for Poland than for Lithuania since Poland became a member of WTO and NATO several years earlier than Lithuania. Poland became a member of the OECD in 1996 while in 2016 Lithuania is still in the process of accession. Lithuania became a member of the Eurozone in 2015. Poland takes a more pessimistic view on the Euro and still remains with their national currency, PLN. The pattern reflects respect for national culture.

## INTERNET PENETRATION

One of the essential conditions of globalization is the transfer of information across the countries, regions and intercontinental space. The growth of the Internet data traffic has many sources: decreasing costs, increasing international business connections, rising numbers of migrants and tourists. The Internet (World Wide Web) grew from its small military beginnings in the 1970s and 1980s. *Around 40% of the world population has an internet connection today. In 1995, it was less than 1%. The number of users has increased tenfold from 1999 to 2013. The first billion was reached in 2005. The second billion in 2010. The third billion in 2014* (Internet Users). In 2016 Internet penetration (percent of Internet users among all population) for both countries, Lithuania and Poland, exceeded 70 %: in Lithuania 77.2 % and in Poland 72.4 % (Table 2).

Table 2. Internet Users by Country (2016)

Country	Population	Internet users	Penetration (% of Pop)
Lithuania	2,850,030	2,199,938	77.2 %
Poland	38,593,161	27,922,152	72.4 %

Source: Internet Live Stats, 2016.

On the list of Internet Users by Country (2016) provided by *Internet Live Stats* among 201 countries, Lithuania and Poland are listed in the first quarter. In terms of the Internet penetration, geographical dissemination and accessibility of information, we have to recognize the obvious and fast ongoing process of globalization in Lithuania and Poland.

#### FOREIGN DIRECT INVESTMENTS SUBSYSTEM

According to the International Monetary Fund, FDI, "... refers to an investment made to acquire lasting or long-term interest in enterprises operating outside of the economy of the investor." The investment is direct because the investor, which could be a foreign person, company or group of entities, is seeking to control, manage, or have significant influence over the foreign enterprise.

Looking at the FDI as a subsystem of globalization yields controversial results for both the supplier and recipient of investments. The FDI as the part of financial globalization imposes the external financial discipline on governments that have contributed to both the emergence of a more market-friendly state and the shift in the balance of power between states and financial markets. For the countries with limited amounts of capital, FDI is a source of external finance they can receive from wealthier countries. A direct foreign investment benefits the global economy, as well as investors and recipients. However, the FDI process for recipients is ambiguous as it has both advantages and disadvantages.

Advantages of the FDI for recipient:

- "Best practices" in management, accounting or legal guidance from investors.
- The transfer of technology.
- The transfer of know-how.
- The development of human capital resources.
- The creation of new jobs.
- Profits generated by the FDI contribute to corporate tax revenues in the host country.
- FDI disadvantages:
- They could lower the comparative advantage of strategically important industries in a given country.
- They can sell off unprofitable portions of the company to local, less sophisticated investors.

- Instead of reinvesting, they lend the funds back to the parent company.
- Countries often choose to forgo some of tax revenue when they cut corporate tax rates in an attempt to attract FDI from other locations.

The calculations based on the World Bank statistics show that FDI's attraction in Poland works more effectively than in Lithuania (Table 3.). FDI net inflows per capita in Poland in 2014 was 3.7 times higher than in Lithuania.

Table 3 Foreign direct investment net inflows (BoP\*, current US\$)

	2000	2005	2010	2014
Lithuania	378,875,000.0	845,877,871.7	865,316,051.6	350,938,698.9
Population	3,486,000	3,343,000	3,123,000	2,888,582
FDI net inflows p. c.	108.685	253.030	277.078	121.492
Poland	9,343,000,000.0	11,041,000,000.0	18,395,000,000.0	17,275,000,000.0
Population	38,486,000	38,464,000	38,575,000	38,484,000
FDI net inflows p. c.	242.764	287.048	476.863	448.888
FDI net inflows p.c. in Poland compared to Lithuania	2.3	1.134	1.721	3.695

\* (BoP) Balance of payments, measure of payments that flow between any individual country and all other countries.

Source: World Development Indicators, 2016.

In 2014, global foreign direct investment inflows fell by 16 percent to \$1.23 trillion, down from \$1.47 trillion in 2013. Foreign Investment Trends in Lithuania and Poland in 2010–2014 were close to those around the world. However, the FDI decline in Lithuania was more significant than in Poland. During the abovementioned period, the FDI inflow in Lithuania declined to 0.4 while in Poland only to 0.94. The decline in FDI flows was influenced mainly by the fragility of the global economy, policy uncertainty for investors and elevated geopolitical risks. Such similarities of the trends show that Lithuania and Poland are closely linked to the global FDI process.

## TRADE FLOW SUBSYSTEM: THE TRANSITION FROM NATIONAL TO WORLD MARKETS

International trade is the backbone of modern economy, as producers in various nations try to profit from an expanded market, rather than be limited to selling within their own borders. Trade is a key mechanism for moving goods around the globe and it is also central to technology transfer and a way to improve the quality of life. The growth of international trade flow over the past several decades has been both the primary cause

and effect of globalization. Thus countries that fostered good international trade indicators are not only involved in the process of globalization, but also accelerate it.

UN data shows that international trade flows (export and import) in Lithuania and Poland during the first 15 years of the 21st Century increased dramatically (Table 4). However, the trade flows growth index is slightly different in Lithuania than in Poland. The 2000–2015 imports increased in Lithuania 5.163 times, while in Poland – 4.502. Over the same period, export rose somewhat faster in Poland – 6.928 times and 6.694 times in Lithuania. Export and import growth differences have not been significant and it can be said that processes have evolved almost at the same speed in both countries. However, the remarkable fact is that over the period of fifteen years (2000–2015), the involvement of both countries in the process of globalization of trade flows increased approximately five times.

Table 4. Trade flow in Lithuania and Poland in 2000–2015

Country	Trade flow	Trade value				Index
		2000	2005	2010	2015	
Lithuania	Import (US\$ mln)	5,456.5	15,704.4	23,378.1	28,172.8	5.163
	Export (US\$ mln)	3,809.4	12,070.4	20,813.9	25,499.0	6.694
	Population (mln)	3.5	3.3	3.1	2.9	0.825
	Import p.c. (US\$)	1565.255	4697.770	7485.766	9789.012	6.254
	Export p.c. (US\$)	1092.774	3610.662	6664.721	8859.981	8.108
Poland	Import (US\$ mln)	48,127.4	101,538.8	174,127.6	216,687.3*	4.502
	Export (US\$ mln)	30,955.7	89,378.1	157,064.9	214,476.8*	6.928
	Population (mln)	38.5	38.5	38.6	38.6	1.003
	Import p.c. (US\$)	1250.517	2639.840	4514.001	5611.916	4.488
	Export p.c. (US\$)	804.336	2323.681	4071.677	5554.667	6.906

Sources: Trade Flow, 2016; List of countries by past population, 2016.

Trade flows expansion from one country into the worldwide environment is the indicator of extensive growth. For the measurement of trade flows intensity in this study, we adopted an indicator that shows the export and import quantity per capita. It should be noted that the index we used differs from the trade intensity index as defined by the World Bank. *The trade intensity index (T) is used to determine whether the value of trade between two countries is greater or smaller than would be expected on the basis of their importance in world trade. It is defined as the share of one country's exports going to a partner divided by the share of world exports going to the partner.*

Over 2000–2015, imports and exports per capita indices rose in Lithuania by 6.254 and 8.108 while in Poland by 4.488 and 6.906. However, it should be remembered that Lithuania is de facto a country of emigration. Lithuania's emigration rate is among the highest in the European Union. Since gaining its independence in 1990, Lithuania's population decreased by 825,000 or almost one third of the entire population. Naturally, the



per capita trade flows for this reason increase. A similar, but lower level of migration trends is found in Poland. After Poland's accession to the European Union and accession to the Schengen Zone in particular, a significant number of Poles, estimated at over two million, have emigrated. But this is only a little more than two percent.

The trade flows per capita and migration indices show that Lithuania is moving towards globalization faster than Poland. These processes in Poland are a little slower.

## CONCLUSIONS

There is a lot of controversy and debate on whether globalization is a good achievement or destructive consequence and there is no consensus on how to measure the overall level of globalization in the world, region, or in the state. This issue is particularly sensitive in the nation-states.

In the time of globalization growth and increasing homogeneity, the state borders or natural boundaries are unable to protect themselves against the prevailing languages in the world's communication and trade. The nation-state finds itself in the middle of a vise, with one side pushing the benefits of globalization, and the other - national sentiments.

Social movements for and against globalization, together with the debates on the nation-state strategic management objectives highlight the social demand of scientific exploration and the development methods and techniques of measuring the level of globalization.

Systems theory, compatible with Aristotle's saying that "knowledge is derived from the understanding of the whole and not that of the single party," and Hegel's theory of historical development as a dynamic process, seems to be an appropriate framework to develop methodology for measuring globalization.

This study presents a model of globalization system covering many parts and structures considered as subsystems. This model can be accepted as the backbone for further research and development methods measuring globalization. Each subsystem used in this study reveals certain processes of globalization in Lithuania and Poland, but does not provide the possibility to assess which subsystem is more important. Further research is necessary to focus on the preparation of subsystem hierarchy.

The results of empirical investigation show that the globalization of Lithuania and Poland, is taking place at a very fast pace. Poland leads with the accession to its membership in the global/international organizations and with attracting the Foreign Direct Investment. Lithuania fares a little better with the Internet penetration and significantly better in terms of imports and exports per capita. However, even a very similar subsystem output when posted against the different context of the country - the economic power, the population and its trends, ethnic composition and political stability, customs and traditions - creates unequal effects of globalization. Hypothetically it can be said that Lithuania is experiencing a deeper effect of globalization on the national identity. But this is an issue for other studies.

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