

SECURITY AND SUSTAINABLE DEVELOPMENT: APPROACHES AND DIMENSIONS IN THE GLOBALIZATION CONTEXT

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Abstract. Security and sustainability conception analysis is being provided in the paper. The conceptions of security and sustainability have been selected due to their significance for contemporary globalized world's issues. Initially, the perceptions encompassing even ancient times are being elaborated. Onward, with an intention to get a more sophisticated view of above mentioned expressions, relevant scientific literature has been critically reviewed accentuating to the dimensions of those two phenomena. The following common dimensions could be proposed: social, economic, environmental. The implication could be stated - security conception provides not only those three dimensions some other important dimensions could be distinguished as well. One more important finding composes the perception of dimensions interactions to analyzed conceptions. Some important implications are being provided in the paper, which elevate the significance of security to sustainability for today's globalized society - security can be proposed as expression with ponderable value, while sustainability gains this power only with "sustainable development" phenomenon.

Keywords: security, sustainability, sustainable development, social, economic, environmental, globalization.

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1. Introduction

Globalization is an inevitable process that embraces practically every field in today's life. This process mainly driven by rapid and largely unrestricted flows of information, goods, ideas, cultural values, capital, services and people shifts to the more than ever integrated world economy creating the common wealth worldwide (Šliburytė & Masteikienė 2010). The concepts of security and sustainability are frequent contemporary expressions. The necessity of analyzing the above mentioned expressions relies in their significance for globalized today's world in case numerous issues and themes are related with them. The inevitability to analyze those two concepts in depth coverage arises with objective to get a wider prospect and understanding. It leads to more sophisticated

view about the security and sustainability expressions.

"Security" is an old expression and the exact meaning of it "feeling safe" is of vital importance from ancient times till today. Through all the centuries security has been considered to be an inherent part of fullness and completeness. The state of security tottered during the wars; this was the biggest penalty for all residents of the country. The security dilemma is one of the most important theoretical ideas in the international relations as well (Tanga 2009).

The expression "sustainability" is as old as security; the exact meaning of it is "durability". The popularity of it has emerged only at contemporary-wisdom society and became a broadly used with the term "sustainable development" (Tvaronavičienė & Lankauskienė 2011).

The concept of sustainable development is an alternative to globalization and is the most popular concept of economic development today (Čiegis *et al.* 2009).

The objective of this article is to perform conceptual analysis of security and sustainability referring the key words found in relevant scientific literature, presenting the approaches and dimensions of security and sustainability.

2. Dimensions of security

In general, security is the degree of protection against danger, damage, loss and crime. Security is a form of protection for structures and processes that provide or improve security as a condition. The Institute for Security and Open Methodologies (ISECOM) defines security as “a form of protection where a separation is created between the assets and the threat”. This includes but is not limited to the elimination of either the asset or the threat. Security as a national condition was defined in a United Nations study (1986) for countries to develop and progress safely.

Security can be compared with related concepts: safety, continuity, reliability. The key difference between security and reliability is that security must take into account the actions of people attempting to cause destruction. Security can impact humanity, animate and inanimate nature. In this particular conceptual analysis we will concentrate to dimensions, affecting humanity.

Relevant scientific literature will be overviewed concentrating on the key words of security, presenting the dimensions of security remarked.

2.1. Social dimension

In most of overviewed relevant scientific literature the social dimension of security is being presented and analyzed. In the article “Life-cycle variation in the association between current and lifetime earnings” analysis of social security records containing career-long earnings is being presented. The assumption has been made that the relationship between current and lifetime earnings departs substantially from the textbook model in ways that vary systematically over the life cycle (Haider & Solon 2006). In another article the effect of the U.S. federal tax policy on homeowners is being analyzed. The article explores how deductions on mortgage interest rates and property taxes offer benefits to home-owners. Tax savings derived from mortgage interest rates and property taxes de-

ductions is discussed in relation to the rates of homeownership (Poterba & Sinai 2008). In other words, social security is expressed by property taxes and mortgage interest norms. In the following literature source the opposite meaning of security-insecurity is being indicated through the same social prism: social insecurity arises when financial markets are incomplete (Krueger & Kubler 2006). Several other social security benefits can be distinguished in the following scientific article. An issue is about Peter’s Diamond’s and Peter’s Orszag’s book. This book offers an objective assessment of social security’s financial outlook and a plan to restore its long-term solvency. Anyone who reads the book carefully comes to understanding of rather complicated U.S. social security system. The Diamond–Orszag plan relies on cutting benefits and raising taxes to achieve long-run financial stability (Shoven 2005).

In the article “Overlapping generations: the first jubilee” the social dimension of security has been indicated as well. An indication could be presented that economic challenges arise when a number of old age people increases and the number of young working people declines. Changes in the structure of employer-provided pensions and social security propel future increases in labor force participation at older ages (Weil 2008).

The following article offers reform ideas for social security system in the U.S. that combines modest benefit reductions and revenues. Three changes could be distinguished: universal coverage under social security, legacy tax on earnings above the maximum taxable earnings base and universal legacy charge that could apply workers and beneficiaries in the future. An assumption could be made that economic reforms impact social security in the U.S. (Hines & James 2005).

The authors of the article “The growth in the social security disability rolls: a fiscal crisis unfolding” define the term “disability”. It relates to labor and payment to disabled employees of social security disability insurance. Between 1986 and 2006 the number of adults receiving disability insurance had increased greatly. The reason relies in their inability to work due to physical or mental impairment. The increase in the payment of disability insurance is due to the increase in the number of people receiving benefits for back pain and for mental illness (Duggan & Mark 2006).

The following paper explains how social security has been working in the U.S. during 2005, how a mixed

system could be working in practice, and how the transition to such a change could be achieved. The social security program in the U.S. provides retirement benefits equal to about 40 percent of the final year earnings for someone who has had median earnings all his life and who retires at the normal retirement age. After beginning of benefits, they are indexed to the consumer price index. These retiree and survivor benefits are financed by a payroll tax (currently 10.6 percent of wages up to \$87,900) and divided equally between employees and employers. In practice, the implicit rate of return that retirees have received on their social security taxes has been much greater than the growth of the tax base because the tax rate was also rising rapidly. A mixed system that combines a pay-as-you-go component and an investment based portion could be structured in many ways. The increased national saving during the transition is achieved by individual out-of-pocket contributions to personal retirement accounts that raise the nation's stock of capital through investments in a mixture of stocks and bonds. When the system is fully phased in, each employee would continue to participate in the pay-as-you-go system and, separately, would contribute to an investment-based on personal retirement account-reforms (Feldstein 2005).

In the article "The case for pay-as-you-go pensions in a service economy" is another example of social security provision. As the elderly consume more labor-intensive services than young individuals, this makes them vulnerable to rising costs of services due to higher wages, which can be caused by increased capital accumulation. This paper presents that in a service sector model, the golden-rule capital stock is lower and dynamic inefficiency is more likely to occur than in the conventional one-sector model. This implies that in many cases, a positive pay-as-you-go tax maximizes long-run welfare in a service economy. Calculations based on data from the United Kingdom and the Netherlands show that the long-run optimal degree of funding coincides with the current situation in these countries (Groezen *et al.* 2007).

The following paper examines how the government might implement optimal intergenerational risk sharing with a social security system. Conclusion is being performed that the social system must either hold equity claims to capital or negatively index benefits to equity returns (Ball *et al.* 2007).

Another article analyzes the response of earnings to payroll tax rates using a cohort-based reform in

Greece using administrative social security data. Conclusion has been made that employers compensate new regime workers for the extra employer payroll taxes but not for the extra employee payroll taxes (Saez *et al.* 2012).

Another paper provides social form of security through empirical puzzle: while most people know little about their own pension plans, retirement behavior is strongly affected by pension incentives. Administrative and self-reported pension data is being combined to measure the retirement response to actual and perceived financial incentives. It could be noticed that well-informed individuals are far more responsive to pension incentives than the average individual. Well-informed individuals seem to respond systematically to their own misperceptions of pension incentives (Chan & Stevens 2008).

One more literature source explores critical point for social security policy, i.e. how program incentives affect retirement behavior. The Health and Retirement Survey (HRS) has been used to examine the impact of social security incentives on male retirement. Forward-looking models have been implemented where individuals consider the incentives to work in all future years. It was found that forward-looking incentive measures for social security are significant determinants of retirement. It was also found that private pension incentives have roughly similar effects. The findings suggest that social security policies that increase the incentives to work at older ages can significantly reduce the labor force exit rate of older workers (Coile & Gruber 2007).

Income maintenance programs, retirement planning, asset allocation – those phenomena are being analyzed as social security aspects leading to government insurance. The following paper provides the optimal allocation of risk in an overlapping-generations economy. The paper also examines how the government might implement optimal intergenerational risk sharing in a social security system. One of the conclusions is being performed that the system must either hold equity claims to capital or negatively index benefits to equity returns (Ball *et al.* 2007).

Another paper examines the analysis of social security records containing nearly career-long earnings histories for the Health and Retirement Study sample. It could be found that the relationship between current and lifetime earnings departs substantially from the textbook model in the ways that vary systematically

over the life cycle. Those results can lead to a more appropriate analysis of errors-in-variables bias in any research that uses current earnings to proxy for lifetime earnings (Haider & Solon 2006).

While overviewing relevant scientific literature and providing social dimensions of security, it could be noticed that in many cases social security leads to financial security.

2.2. Economic dimension

While talking about economic dimensions of security, the following ideas could be distinguished from relevant scientific literature.

Article called “Welfare costs of inflation in a menu cost model” provides an economic dimension of security (Burstein & Hellwig 2008). Another article examines economic security dimension through the prism of employment. The article argues that the East German market is in trouble because all the help it received upon reunification, has not made changes and is continuing today as well. The article examines mistakes made in the field of social support. The mistakes include raising wages for the Eastern German workers based on the union agreements negotiated by the western counterparts. Eastern Germans received generous unemployment benefits from strong job security, raising wages, which later had consequences on productivity, but there were no changes in the employment rates. The article further examines the concept of the “helping hand that cripples” highlighting weaknesses in other European welfare systems (Snower & Christian 2006).

The following article discusses the economic dimension of insecurity as the incidence of job loss in the United States. Drawing upon a variety of data sources including Current Population Survey (CPS), Displaced Worker Survey (DWS), Bureau of Labor Statistics (BLS) figures on job destruction, the author demonstrates that “unwelcome” job loss has been declining in magnitude since the 1970s. Ramifications include lower frictional unemployment and reduced social and economic costs associated with joblessness. To sum up, the author concludes that job security has improved substantially for the U.S. employees (Davis 2008).

The following paper analyzes the economic dimension of security and job security as well. The paper uses a simple macroeconomic model with incomplete

markets to show that cyclical variations in the long-term earning losses of displaced workers can generate arbitrarily large cost of business cycles even if the variance of individual income changes is constant over the cycle. In addition to the theoretical analysis, this paper conducts a quantitative study of the cost of business cycles using empirical evidence on the long-term earning losses of the US workers. The quantitative analysis shows that realistic variations in job displacement risk generate sizable costs of business cycles, even though a second-moment analysis would suggest negligible costs (Krebs 2007).

In the article “Changing household financial opportunities and economic security” households have experienced an expansion of financial opportunities over the past several decades. Such expanded financial opportunities, as the democratization of credit and new lending approaches can yield benefits in terms of household economic security. However, the financial crisis that began in 2007 has powerfully illustrated that expanded financial opportunities can also pose dangers for households. By increasing the scope for investment in risky assets, people may end up with larger swings in wealth than they had anticipated. Households may borrow too much and then face obligations that are unsustainable given their resources. An idea can be distinguished from the paper that economic security leads to financial security (Dyner 2009).

An economic security dimension reflects job security in another article. Most workers have one employment contract that is explicit and another one that is implicit. The explicit employment contract specifies working hours, compensation and job tasks. The implicit contract involves expectations about the extent to which the employment relationship is likely to continue over time. Will the firms seek to avoid mass layoffs unless or until absolutely necessary? Will the firms cushion the wages and compensation of employees to some extent from broad swings in the economy? Will employees show some degree of loyalty to the firm? This paper will argue that, along a number of dimensions, the nature of the worker–firm employment relationship may have changed substantially in recent years (Hallock 2009).

The author of the article “From civil rights to economic security: Bayard Rustin and the African-American struggle for full employment” mentions that no other public policy goal with the exception of civil rights was more widely supported than full

employment among the African-American organizations and leaders following World War II. The author discusses the development of the “Freedom Budget” by civil rights activist Bayard Rustin and union organizer A. Philip Randolph in 1966 working with New Deal Keynesian economists. The Rustin-Randolph proposal suggested full employment and a job guarantee through public works. Employment and job creation are the forms of economic security dimensions provided by the author (Forstater 2007).

In the following literature source economic dimension of security is being analyzed from the following viewpoint: how immigrant earnings effect the changes in the USA wage structure. Since recent immigrants tend to earn less than natives, their relative earnings have been adversely affected by an increase in the return to labor market skills over the past three decades. Using longitudinal social security records matched to cross-sections of the SIPP and CPS, examining the earnings of recent immigrants can lead to an overly pessimistic picture of their actual labor market skills (Lubotsky 2011).

Market security could be distinguished as a dimension of economic security as well. It had been shown that leverage cycles can cause contagion, flight to collateral, and issuance rationing in a frequently recurring phase what can be called the anxious economy. The model has provided an explanation for the volatile access of emerging economies to international financial markets. The analytical framework general equilibrium model has been used with heterogeneous agents, incomplete markets and endogenous collateral, plus an extension encompassing adverse selection (Fostel & Geanakoplos 2008).

The opposite meaning of market security - market risk of public traded securities is being examined in another article. The article examines the effect of lack of information and liquidity on market risk of publicly traded securities following an initial public offering (IPO). The study utilizes IPOs on June 4, 2007 to May 28, 2008 in which analysis was undertaken using Wilcoxon Analysis on the phases of post-IPO period including quiet, lockout, and post lock-out periods. The study reveals that statistically significant differences existed between risks during those periods (Bulck & Hendrikus 2011).

It could be noticed from given examples that economic dimension of security leads to financial security as well (as social dimension).

2.3. Financial dimension

The financial dimension of security is being analyzed in the provided articles.

Financial security has been expressed through portfolio security using a monthly data set on the foreign equity and bond portfolios of the U.S. investors (Curcuro *et al.* 2008). Another article provides welfare costs of inflation in a menu cost model (Burstein & Hellwig 2008).

Prices stability is being indicated as the form of financial security. The following article discusses which driving forces constitute illegal price manipulation in financial markets. The authors comment the difficulty of defining illegal price manipulation precision and discuss a variety of practices that have traditionally fallen under that rubric. In their point of view a practice constitutes manipulation only when it makes markets less liquid and inhibits the ability of prices to allocate resources effectively (Kyle & Viswanathan 2008).

Another article proposes finance instruments as a form of economic insecurity. The asset taxes are being subjected as a form of financial security. The central insight of asset pricing is that security's value depends both on its distribution of payoffs across economic states and on state prices. In fixed income markets, many investors focus exclusively on estimates of expected payoffs, such as credit ratings, without considering the state of the economy in which default occurs. Such investors are likely to be attracted to securities whose payoffs resemble economic catastrophe bonds—bonds that default only under severe economic conditions. It was shown that many structured finance instruments can be characterized as economic catastrophe bonds (Coval & Jurek 2009). The study of asset pricing implications of Tversky and Kahneman's (1992) cumulative prospect theory, has been performed, with a particular focus on its probability weighting component (Barberis & Huang 2008.).

Several other articles represent derivatives from financial insecurity - mainly financial crisis. One article discusses the role in the financial crisis of 2007 of the relationship between two markets: the market in securities repurchase agreements (the “repo” market) and the synthetic market in subprime residential mortgage securities traded through the asset-backed securities index ABX.HE (Gorton 2009). One more article presents mortgage security as a financial se-

curitization dimension. An economic analysis of the main factors considered to have caused the ongoing global economic recession: misallocation by the U.S. financial sector of investment resources to real estate, financed with exotic financial instruments; the acquisition of these instruments by commercial and investment banks; and over-reliance on short-term debt. Specific topics discussed include: the mortgage securitization, credit rating agencies and financial risk management, executive compensation, market liquidity, and the U.S. government responses to the financial crisis (Diamond & Rajan 2009).

The accumulation of pensions is being analyzed and provided as financial security in the article, called "Contingent claims analysis and life-cycle finance". The article discusses the application of contingent claims analysis (CCA) retirement investing and career changes. The article describes how retirement savings plans and career change decision making can be facilitated through the use of dynamic strategies utilizing CCA. The effect of changing careers on human capital is analyzed in the light of risk assessment models (Bodie *et al.* 2008).

The following paper investigates the effect of the current recession on the retirement age population, what is considered to affect financial dimension of security. Data from the Health and Retirement Study suggest that those approaching retirement age (early boomers ages 53 to 58 in 2006) have only 15.2 percent of their wealth in stocks held directly or in defined contribution plans or IRAs. Their vulnerability to a stock market decline is limited by the high value of their Social Security wealth, which represents over a quarter of the total household wealth of the early boomers. In addition, their defined contribution plans remain immature, so their defined benefit plans represent sixty five percent of their pension wealth. Simulations with a structural retirement model suggest the stock market decline will lead the early boomers to postpone their retirement by only 1.5 months on average. The Health and Retirement Study data also show that those approaching retirement are not likely to be greatly or immediately affected by the decline in housing prices. We end with a discussion of important difficulties facing those who would use labor market policies to increase the employment of older workers (Gustman *et al.* 2010).

2.4. Environmental dimension

One more security dimension – environmental – could be distinguished referring to relevant scientific literature.

The following measures of environmental insecurity, i.e. greenhouse gas emissions, climate change are being proposed in the article "Note from the editor: online comments for American Economic Association Journals". The article discusses the online comments section for the journals of the American Economic Association (David 2009).

2.5. Other dimensions

Government security against gambling is being presented in the article "Saving whilst Gambling: An Empirical Analysis". The author examines the UK premium bond, a lottery-linked savings (LLS) program that the British government has offered in 1956. Instead of paying traditional interest, LLS programs allow savers periodic chances to win money or prizes. The author states that the LLS combine a riskless return of principal as well as a risky additional payment in the form of a lottery drawing. The author examines the correlations between the PB sales, gambling activity and a measure of savings activity (Tufano 2008).

National security could be distinguished through energy dependence and security indicators. The article examines whether energy-related tax expenditures in the U.S. are an effective way of achieving policy goals. In fiscal year 2008 the U.S. will spend over \$4.7 billion dollars on programs involving alternative fuels, oil and gas exploration, energy conservations, etc. After describing three rationales often advanced for such expenditures, the author examines the case of federal spending on ethanol. In general he concludes that federal energy spending promotes neither national security, nor reduced consumption of oil and natural gas (Metcalf 2008).

Another article was written by president-elect George A. Akerlof of the American Economic Association. His attempts were to arrange the program for annual meetings of the association. Akerlof explains that his goal for the sessions was to reflect the concerns of the people of the world, since they count on the U.S. economists for solutions to their economic and social needs. Special attention was paid to the areas of the world including China, India, Africa, Europe,

and Latin America as well as topics of the world importance like global warming, national security, and international monetary arrangements. Akerlof describes how the topics were pursued, lists individual members of the program committee, and comments on the quality of the submissions they received (Akerlof 2006).

Another example could be stated, i.e. the role of European Union (EU). The EU is proposed as the security actor in the following relevant scientific article. The central aim of this article is to discuss the question of how we can understand and explain the European Union (EU) as a security actor – in essence, to elaborate on current literature and security governance in order to provide a more theoretically driven analysis of the EU and security (Christoua *et al.* 2010).

There are some agencies, e.g. U.N. Security Council, which represents the importance of security for all nations and composes its own dimensions: 10 of 15 seats on the Council are held by rotating members serving two-year terms. We find that a country's U.S. aid increases by 59 percent and its U.N. aid by 8 percent when it rotates onto the council. This effect increases during years in which key diplomatic events take place (when members' votes should be especially valuable) and the timing of the effect closely tracks a country's election to, and exit from, the council. Finally, the U.N. results appear to be driven by UNICEF, an organization over which the United States has historically exerted great control (Kuziemko 2006).

One more interesting observation could be presented referring scientific literature, i.e. security measures could be felt even if they are not mentioned directly. This perfectly illustrates the following research. The research in Psychology and Economics (i.e. Behavioral Economics) suggests that individuals deviate from the standard model in three respects: nonstandard preferences, nonstandard beliefs and nonstandard decision making (Della & Stefan 2009). The concept "behavioral economics" means "behave economically". The core aspect lies in security of behaving economically, in standard model, while the above mentioned deviations compose the aspects of insecurity to deviate from standard model.

3. Sustainability dimensions

The word "sustainability" derived from the Latin word "sustinere". Dictionaries provide more than ten

meanings for "sustain", the main ones are to "maintain", "support" or "endure".

Sustainability is the capacity to endure. For humans, sustainability is the long-term maintenance of responsibility and encompasses the concept of stewardship, the responsible management of resource use. In ecology, sustainability describes how biological systems remain diverse and productive over time, necessary precondition for the well-being of humans and other organisms. Long-lived and healthy wetlands and forests are the examples of sustainable biological systems. In our particular conceptual analysis we will concentrate to sustainability dimensions affecting humanity.

Not so much sustainability examples could be distinguished in relevant scientific literature, if to analyze sustainability as a separate expression. But the situation changes when we begin exploring the "sustainable development" phenomenon. This is why we will concentrate on this phenomenon for our further analysis.

By the late 1960s and early 1970s the melting pot of different ideas about progress, sustainability, growth and development which have developed over years started pointing in a new direction, i.e. sustainable development (Du Pisani & Jacobus 2006).

However, since the 1980s sustainability has been used more in the sense of human sustainability on the planet Earth and this has resulted in the most widely quoted definition of sustainability and sustainable development, that of the Brundtland Commission of the United Nations on March 20, 1987: "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." The concept of sustainable development is more profound and comprehensive than the concept of economic growth. Generally, the definition of the idea of sustainable development was accepted during the UN Earth Summit conference in Rio de Janeiro in 1992. It accentuated first of all counteraction against the ecological crisis (largely arisen as a result of economic globalization).

The essence of sustainable development most generally is perceived as economic development meeting human needs at present and not reducing its wealth opportunities in the future (Ciegis & Ramanauskiene 2009). According to the definition of the World

Bank of the year 1992, “sustainable development is development that continues”. Another source describes sustainable rather similarly: “sustainable development is development that meets the needs at present without compromising the ability of future generations to meet their own needs”. Robert Allen (1980) defined sustainable development as “development that is likely to achieve lasting satisfaction of human needs and improvement of the quality of human life”. J. Coomer (1979) provided the definition of sustainable society – a society that recognized the limits to growth and looked for the alternative ways of growing (Du Pisani & Jacobus 2006).

The first publications on the theory and practice of sustainable development have emerged because of the conjunction of negative effects of human evolution and development progress (Stanciu et al. 2010). These changes influence negatively the human health, life duration and economic development. These statements prove that the society has reached the critical point that can be followed by the irreversible processes able to put in danger the existence of mankind. To avoid this somber perspective and assure the mankind’s survival and wealth, more and more representatives of the society get the conviction that it is necessary to solve the problems of the environmental protection and economic development in the reciprocal correlation with the interest of the entire contemporary and future human society (Čiegis & Ramanauskienė 2009).

Even though the spectrum of sustainable definitions composes a very wide range, the meaning of the

expression proposes the following dimensions: economic, social and environmental.

In the relevant scientific literature the conception of sustainable development is being analyzed from the economic, social and environmental prospective (e.g., Čiegis & Ramanauskienė 2009, Čiegis et al. 2009, Čiegis & Šimanskienė 2010). In other words, sustainable development is a certain compromise among environmental, economic and social goals of the community, claiming necessity of the wellbeing for the present and future generations. According to Ghosh (2008) the concept of sustainable development can be presented as a geometric shape, i.e. a triangle encompassing three main areas: economic, social and environmental.

We rely on the idea that the analysis of sustainable development should be based on the assumption developed by H. R. Jiliberto (2003). He indicates that sustainable development is not based on the economic, social and environmental dimensions separately; it is based on the system integrating all the dimensions (Čiegis & Ramanauskienė 2009; Tvaronavičienė & Lankauskienė 2011).

Sustainable development is a complex and differently treated notion (Lankauskienė & Tvaronavičienė 2011). On one hand, it is very broad as may be related to competitiveness of a country (Balkytė & Tvaronavičienė 2010), and on the other hand, if to adopt a very practical approach, sustainable development is being estimated by a broad array of indicators (Grybaitė & Tvaronavičienė 2008; Tvaronavičienė & Lankauskienė 2011).

4. Comparison of security and sustainability dimensions interaction

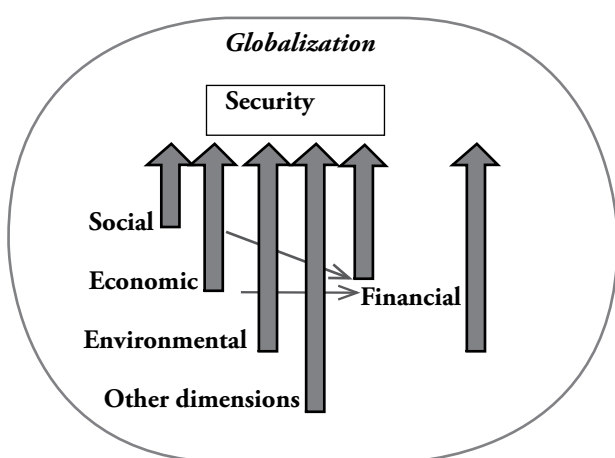


Figure 1. Security dimensions

Source: authors

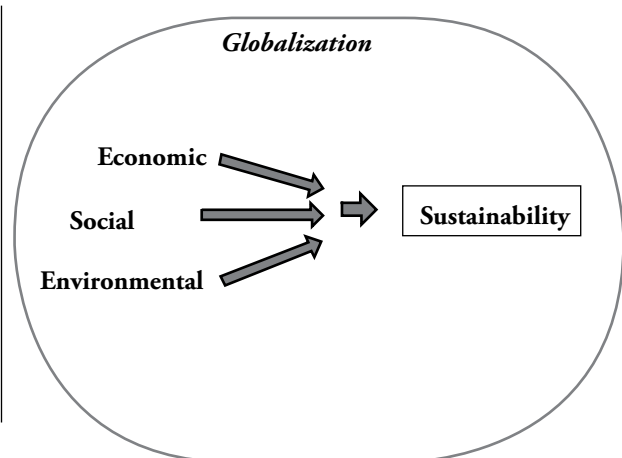


Figure 2. Sustainability dimensions

Source: authors

4. Comparison of security and sustainability dimensions interaction

Figure 1 and Figure 2 present the generalization of conceptual analysis of security and sustainability accentuating to the dimensions of those two phenomena. Security has social, economic, financial, environmental, and other dimensions. While talking about sustainability the dimensions are as follows: economic, social, environmental. This leads to the expression of “sustainable development”. The main notice is that security has a wider range of dimensions than sustainability. Each of dimensions even acting alone can have a significant weight for security phenomenon depending on the context of an issue (e.g. national security, governmental security). Conversely, sustainability dimensions have a significant weight only functioning all together (they cannot reach such significance activating alone as security dimension), and the power of sustainability conception emerges only talking about “sustainable development”.

5. Concluding remarks

The main conclusions of security and sustainability conceptual analysis are as follows:

- Security and sustainability concepts are significant contemporary phenomena for today's globalized world.
- Security unlike sustainability, can reach a significant weight even acting with one dimension (depending from the context of phenomenon). Mostly, even though security is not indicated directly, it can be predicted due to the shadow of the opposite meaning of security-insecurity tear of risk and its tremendous negative impact for structure and hierarchy.
- Sustainability as an expression derived afterwards security in most of the cases. E.g. phenomena “sustainable development” emerged from insecure economic activity of humanity.

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