

CONCEPTUAL APPROACHES TOWARDS SUSTAINABILITY**Gitana Dudzevičiūtė**

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Received 15 February 2012; accepted 20 March 2012

Abstract. Sustainability and security assessment currently arises as comprehensive and integrated approach. Sustainable development is a fundamental and overarching objective of the European Union (EU) countries. It aims to improve the quality of life of citizens through sustainable communities that manage and use resources, by linking economic development and security, protection of the environment and social justice. Measuring progress towards sustainable development is an integral part of the EU Sustainable Development Strategy (SDS), that defines objectives and targets intended to put the European Union on a path towards sustainable development. The issue of economic security and sustainability has been analyzed in theory from different perspectives. In many studies the macroeconomic indicator Gross Domestic Product (GDP) is the best-recognized measure of economic performance in the world. However, GDP may measure economic growth but does not involve all aspects of sustainable growth or development. In order to effectively measure progress and wealth, clear indicators are needed that incorporate social and environmental costs and benefits. There is no shortage of research on indicators complementary to GDP, but this remains a subject for academic discussions. In order to manage security and sustainability, society has to formulate clear and measurable goals of sustainability. The level, at which these goals are achieved, might be measured using sustainable development indicators. The paper aims to reveal prevailing conceptual approaches of sustainability from the macroeconomic as well as corporation perspectives, to summarize and compare the key factors describing sustainable development. The method of the research is based on logic abstraction that encompasses generalizations and examinations on theoretical approaches and academics' surveys.

Keywords: assessment, growth, sustainable development, economic indicators.

Reference to this paper should be made as follows: Dudzevičiūtė, G. 2012. Conceptual approaches towards sustainability, *Journal of Security and Sustainability Issues* 1(4): 261–272.

JEL Classifications: O4, O10, O11, O12.

1. Introduction

The World Commission on Environment and Development defines sustainable development as development that meets present needs without compromising the ability of future generations to meet their own needs (World Commission on Environment and Development 1987). The issue of security and sustainability has been analyzed in scientific works from different perspectives. In many academic studies sustainable development has been discussed from the macroeconomic side, i.e. the macroeconomic indicators have been analyzed in order to reveal their impact on secure and sustainable development of

the country. Other scientific researches have been presented sustainable development more from the microeconomic level, i.e. the driving factors are analyzed that have influence to the sustainability of the corporation or business unit. Taking into account microeconomic aspect of development, the definition of corporate sustainable development is prevailing in the surveys. The corporation, as the most important constituent of business and society, faces the challenge of moving from conventional to sustainable development (Hart 1997). The effectiveness of integrating sustainable development into business strategy is now being actively debated.

The research object is the contents of sustainability from the macroeconomic as well as microeconomic perspectives.

The aim of this research is to reveal prevailing conceptual approaches of sustainability from the country and corporation perspectives, to reveal the relationship between them, to summarize and describe the most important criteria and purposes for the selection of sustainability's indicators.

Research methods used are systemic analysis of scientific literature, general and logical analysis, comparison and abstraction.

In the research of Schaltegger and Synnestvedt (2002) and Li *et al.* (2009) recognition exists of the need for environmental management and sustainable development. Kryk (2009) evaluated the implementation of the sustainable development concept and effectiveness of environmental protection policy during the economic transformation globalization of the Polish economy. According to Katane and Baltusite (2007), changes, development, interaction and sustainability are the keywords that characterize processes, which are taking place in our society. Sustainable development is regarded as a new paradigm of development in many scientific, political and legal documents that are in force in Europe and the world (Kryk and Zielinska 2007). Chen (2009) in his work investigated causalities between price competition, investment in clean production technologies and consumers' willingness to pay extra premium for green eco-labelling products in the market to reduce environmental impacts of consumption. Ighodaro (2010) found the existence of a long-run relationship between energy consumption and economic growth using Johansen co-integration technique. Electricity consumption and gas utilization are found to determine economic growth, while economic growth determines domestic crude oil production. Efficient energy consumption and sustainable economic development are objectives which can be in a collision of different interests. Burinskienė and Rudzkiene (2007) made analysis dealing with economic, ecological and social components of sustainable development and focusing on the aggregated indicators, such as pollution variation, income, energy consumption and selected social indicators of national residents. The authors have explained the relationship between the increase in the economic efficiency and the decrease in the environmental impact. The efforts to move the con-

cept of sustainable development from a theoretical level to a decision-making level and to link the economic development to environment are followed by a number of problems (Burinskienė and Rudzkiene 2009). One of them is the objective to ensure the efficiency of the concept of sustainable development implies the problem of its measurement. Sustainable development strategies without indicators or qualitative reasoning would be lacking a solid scientific foundation. Meanwhile indicators are in general a quite simple instrument allowing to evaluate economic, social and ecological objectives of state's development. Integrated sustainability assessment itself is the most important and difficult sphere of potential indicator use because such an assessment should include a wide spectrum of different problems and issues (Dahl 2007).

Sustainable development is quite a new area; therefore, design of indicators has an important role in defining sustainability itself. Indicators suggested in many other political spheres might be analyzed only if clear and comprehensive understanding of this sphere and its issues exists. As clear criteria do not exist (in an insufficiently theoretically studied field of sustainable development), wrong set of sustainability indicators could be developed, which would not allow both specialists and society understand the essence of sustainable development. Disability of indicators to meet a function of communication would make them worthless (Moldan, Dahl 2007; Čiegis *et al.* 2009; Grybaitė 2011).

Some studies confirmed the correlation between energy consumption and changes in socio-economic structures (Schaltegger, Synnestvedt 2002; Rutkauskas 2008). They have concluded that this correlation could vary by different countries and different periods of time. Spangenberg (2004) and Blok (2005) confirmed that the significant positive association between energy consumption and economic growth have important implications for further economic development and energy consumption. Innovations by the scientists are seen as a driving force of the economic growth and sustainable development (Bloch 2007, Grossmann 2009, Dudzevičiūtė and Tvaronavičienė 2011).

Bojnec and Papler (2011) analyzed relations between economic efficiency and energy intensity consumption in the 33 European countries: EU-27 countries, four European Free Trade Agreement (EFTA-4)

countries (Iceland, Liechtenstein, Norway, and Switzerland), and two EU candidate countries (Croatia and Turkey). They analyzed structural indicators of economic efficiency and energy intensity consumption as determinants of sustainable economic development. The results of the research confirmed that there were significant differences in economic efficiency, energy consumption and sustainable economic development among the analyzed 33 European countries. This finding has been a reason for presenting and explaining the summary statistics results between more homogenous groups of countries in order to derive similarities and differences between them. Restructuring and transformation of the economies from energy intensive industries towards more technologically advanced products and services might lead to higher value added per unit of product, thus higher labour productivity and energy saving sectors with lower energy consumption per unit of output. This might improve economic performance and lead to higher technological intensity of products but at the same time might reduce energy intensity consumption and also reduce negative environmental pressures as an important factor of sustainable economic development considering possible (non-renewable) resources needed for energy production and environmental implications (Bojnec and Papler 2011).

Speaking about sustainability indicators, the fact should be taken into consideration that any separate aggregated indicator does not show interchange among three main economics dimensions: effectiveness, justice and sustainability (Tvaronavičienė, Grybaitė 2012). Eurostat (2011), making analysis of the EU countries in the context of economic security and sustainability, uses the set of indicators describing economic security and sustainability in different aspects, such as socioeconomic development, consumption and production, social inclusion, demographic changes, public health, climate change and energy, transport, natural resources, global partnership, and good governance.

2. Different conceptual approaches to sustainable development from the macroeconomic perspectives

The concepts of growth and development are not necessarily the same (European Parliament 2007). To grow means to increase naturally in size through the

addition of material through assimilation or accreditation. To develop means to expand or realize the potentialities of, bringing gradually to a fuller, greater or better state. To sum up, growth is the quantitative increase in physical scale while development is qualitative improvement or the unfolding of potentiality. An economy can grow without developing or develop without growing, or do both or neither (Lawn 2000). In order for development to be sustainable, it has to be comprehensive - it has to successfully balance economic goals with social and environmental ones. Development involves economic as well as social and environmental changes, thus requiring an interdisciplinary approach (European Parliament 2007). In the surveys of international organizations and institutions (United Nations *et al.* 2003) three main approaches to Sustainable Development (SD) have been analyzed:

- the first one views SD as referring simultaneously to economic, social and environmental systems, all of which must be simultaneously sustainable, because each of the three pillars is independently crucial and because the three pillars are interconnected.

- the second one is ecosystem health approach, which considers the economic and social systems as subsystems of the global environment. This approach implies focusing on the pressures placed on ecosystems by human activities (material and energy extraction, physical restructuring, pollutant emissions, human appropriation of space and ecosystem productivity). These pressures are often the cause of reduced ecosystem health as manifested in degraded service flows and reduced management options.

- the third one is the resources or capital approach, which views sustainable development as development that ensures non-declining per capita national wealth by replacing or conserving the stocks of produced, human, social and natural capital. It broadens the concept of economic capital by integrating concepts from physical and social sciences to include measures of human, social, natural and environmental capital.

The concept of sustainable development means all forms and methods of socio-economic development, whose background is primarily to ensure a balance between socio-economic systems and elements of natural capital. Sustainable development pursues and tries to find a stable theoretical framework to base decisions on cases involving relationship between human factors and environment, be it environmental,

economic or social. Internationally, the sustainable development concept was born almost 40 years ago in response to the emergence of environmental and natural resources crisis, particularly those related to

energy (Funar *et.al* 2009). The evolution of the approaches towards sustainable development is revealed in the Table 1.

Table 1. The evolution of sustainable development concept

Year	The main event	The main aspects
1972	Stockholm United Nations Conference	113 nations present expressed their concerns about how human activity affects the environment. The conference put in evidence the indissoluble link between the quality of life and environmental quality for present and future generations and recognized that human activities contribute to the deterioration of environment which endangers our future.
1985	Vienna Convention	As the ozone hole over the Antarctic was discovered, the Convention began seeking solutions to reduce consumption of substances harmful to the ozone protective layer surrounding the Planet.
1986	World Commission's work on Environment and Development	Studying the dynamics of environmental deterioration and offering solutions on long-term sustainability of human society.
1992	Conference on Environment and Development, organized by the United Nations in Rio de Janeiro	Nations present agreed on a plan for sustainable development called Agenda 21 and the two sets of principles: the Rio Declaration on Environment and Development and the Forest principles.
2002	Summit on Sustainable Development.	The main issues discussed were: reducing the number of those who have no access to drinking water reserves, halving the number of those who have unhealthy conditions corresponding to 1.2 billion, increased using sustainable energy sources and rebuilding herds exhausted fish.
2005	Commission started a process to revise the Sustainable Development Strategy	It was pointed out that the actions of non-sustainable development had negative effects: climate change, public health threats, increased poverty and social exclusion, natural resource depletion and damage to biodiversity. Commission presented a proposal for Revision, which is focusing on 6 priorities: climate change, health, social exclusion, transport, natural resources and poverty. The ways to be followed to solve these problems were identified.
2006	Sustainable Development Strategy was adopted in 2006 for the enlarged European Union	The Sustainable Development Strategy was adopted in June 2006 for the enlarged European Union based on the Gothenburg strategy and outcome of the process that begun in 2004.
2009	15th Session United Nations Framework Convention on Climate Change held in Copenhagen	The most important topics of the negotiations were the targets for reducing the emissions of greenhouse gases, especially by the developed countries, financial support for developing countries, to adapt to climate change, stop destroying the planet's forests. Copenhagen decisions will come into force on January 1, 2013.

Source: Funar *et.al* 2009

It is not easy to specify which requirements indicators have to meet in order to be viable indicators for measuring sustainable progress. The necessary conditions are in most cases dependent of the situation one wants to use the indicators for. In the scientific literature different approaches exist to the criteria and principles which should be taken into account when choosing particular sustainability indicators. Bell and Morse (2001) have recommended the following criteria of sustainable development: a) social justice; b) local government, public participation, democracy; c) sustainable balance between local and imported resources consumption; d) use of local economic potential; e) environmental protection; j) protection of cultural heritage, protection and regeneration of a new environmental quality, increase in functionality and attraction of area and buildings maintained.

According to the PASTILLE Consortium report (2002), the most important purposes of indicator use might be explored. These purposes are summarized in the Table 2.

Table 2. Purposes for the selection of sustainability's indications

<p>Understanding sustainability: indicators can help to identify relevant elements of sustainable development, promote understanding and indicate the state of local sustainability;</p> <p>Supporting decisions: indicators can make sustainability measurable and therefore manageable;</p> <p>Involving stakeholders: sustainable development itself for many stakeholders is too abstract concept to relate directly to action. Indicators enable this link to be made and can motivate action;</p> <p>Directing: during the implementation stage relevant aspects of sustainable development are identified, indicators are developed and used to provide feedback on progress;</p> <p>Solving conflict and building consensus: indicators can show the advantages and disadvantages of different alternatives and help to find win-win situations.</p>

Source: Pastille Consortium report 2002.

Each purpose discussed above in the table has its own goal, stakeholders, target group for use and many more of its own characteristics. A single indicator is often not able to serve all purposes.

The selection of indicators requires a “fitness-for-purpose” approach (European Parliament 2007). OECD (2008) in its publication named the main characteristics and conditions to take into account when selecting indicators. They should be as follows: analytical soundness, measurability, policy relevance and utility for users (Table 3).

Table 3. Criteria for the selection of sustainability's indications

<p>Analytical soundness <i>An indicator should preferably:</i></p> <ul style="list-style-type: none">- be transparent and be based on a theoretical framework (both in technical and scientific terms);- be based on international standards and international consensus about its validity;- lend itself to being linked to economic models, forecasting and information systems;- allow for being broken down into its underlying components;- be as objective in its construction as possible. <p>Measurability <i>The data required to support the indicator should preferably be:</i></p> <ul style="list-style-type: none">- readily available or made available at a reasonable cost/benefit ratio;- adequately documented and of known quality;- available in homogeneous and coherent databases allowing to assess interdependencies between the indicators;- updated at regular intervals in accordance with reliable procedures. <p>Policy relevance and utility for users <i>An indicator should preferably:</i></p> <ul style="list-style-type: none">- provide a representative picture of economic conditions, social aspects and environmental conditions, pressures on the environment or society's responses;- be simple, easy to interpret and able to show trends over time;- allow for communicating the result and the direction a policy should head to;- be responsive (sensitive and specific) to changes in the environment and related human activities;- take into account side-effects (e.g. sustainability at the expense of another community) and reflect local sustainability that enhances global sustainability;- be universal and provide a basis for international comparisons;- be either national in scope or applicable to regional environmental issues of national significance;- be scalable over space;- be available rather shortly after gathering the data it is based on (timeliness);- have a threshold or reference value against which to compare it, so that users can assess the significance of the values associated with it.

Source: OECD 2008.

Sustainability requires multidimensional indicators showing the links among a community's economy, environment, and society. Indicators have been developed to measure identifiable economic, social and environmental conditions. However, at the same time moving towards sustainability indicators means moving towards less objective and tangible indicators, such as quality of life and ecological integrity (European Parliament 2007). Indicators have to be important, correspond to policy goals, informative, easy to understand and compute, logical, effective, practical, reliable, summarizing, based on accessible data and should be taken into account. It is not an easy task to define an indicator set inherent to sustainable development (Čiegis *et al.* 2009).

Moldan and Dahl (2007) agree that sustainable development is quite a new area; therefore, design of indicators has an important role in defining sustainability itself. As clear criteria do not exist, wrong set of sustainability indicators could be developed, which would not allow both specialists and society understand the essence of sustainable development.

R. Juknys (2008) indicates the following characteristics of sustainability indicators: a) usefulness, b) simplicity, c) versatility, d) representativeness, e) sensitivity, f) consistency, g) qualitative form of indicators, and h) sufficiency of data time series.

During the last two decades efforts have been put to develop indicators for practical assessment of sustainability. Juscius, Snieška (2008) and Čiegis (2009) revealed in order to measure effectiveness of national sustainable development strategy and environmental policy, indicators involving the following aspects should be used: social and economic indicators, including indicators of corporate social responsibility, as the overall idea of sustainable development soon touched the world of the enterprise through a new concept: Corporate Social Responsibility, which now is developing as a response to changing society needs and global problems solving indicators of changes in environmental quality and pressures.

3. Conceptual approaches towards sustainability at organizational level

While discussing the development strategies of the companies, managers have to follow trends of management that dominate worldwide. The main management principles have been discussed in Ejdyš and

Flejšzman (2010) survey were as follows:

1. In the transformation process in an information society, an industrial company will more frequently employ human capital, the bases of which are: information, knowledge and creativity.
2. The main premise in upgrading motivation systems will be the usage of solutions that take into consideration increased participation of employees in both management and possession.
3. Companies will express noticeable interest in the issues concerning social responsibility: environmental protection issues and health conditions in the working environment.
4. Change of company's organization culture will cause consolidation of new standards regarding organization conduct and ethical norms.

According to the Ejdyš and Flejšzman (2010), the process of implementing sustainable development concept at organizational level means steering towards perfection. An organization may not be perfect in terms of reaching full perfection; it is only capable of holding disciplines of learning and reaches better or worse results. Perfection is reached in the process of constant perfection of those elements that decide about perfection. The process of improvement is linked with the process of making changes. There are isolated two types of changes (Hammer, Champy 2003):

- radical – connected with revolutionary change of strategy and constituents of management system. It means introducing radical changes in business processes with the purpose to reach maximum efficiency together with reduction in costs;
- constant – connected with evolutionary changes.

The comparison of these two concepts introducing the changes at the organizational level are summarized and presented in the Table 4.

Table 4. Radical and constant approaches to changes in the company

Features	Radical	Constant
Type of change	Radical change –fluctuation in terms of quantity	Continuance of changes (mainly in terms of quality)
Subject of change	Concerns mega processes	Concerns sub-processes and functional processes
Starting point	Process as a starting point, both for processes and for shaping structures	Prevailing functions or sub-processes
Time	Horizon of changes from short to medium	Horizon of improving – debts
Risk	The purpose of project works is to reach optimum productivity, high risk	Individual and constant learning leads to improvement of prevailing processes and functions, moderate risk
Involvement of employees	Limited participation of employees	All employees involved in the process of creating new knowledge and evolutionary development of a new model of conduct
Initiative of changes	Dependant on management	Dependant on employees of lower and medium level

Source: Hammer, Champy 2003.

In recent years there has been significant discussion in the business, academic, and popular press about corporate sustainability. This term is often used in conjunction with, and in some cases as a synonym for, other terms such as “sustainable development” and “corporate social responsibility” (Wilson 2003). What is corporate sustainability and what are relationships with other terms, this part of the article addresses these issues. Corporate sustainability can be viewed as a new management paradigm, evolving the traditional growth and profit-maximization

model. While corporate sustainability recognizes that corporate growth and profitability are important, it also requires the corporation to pursue social goals, specifically those relating to sustainable development – environmental protection, social justice and equity, and economic development.

In the Table 5, different approaches of scientists and organizations are summarized and CSD concept’s evolution is presented in order to get general view about the sustainable company.

Table 5. Approaches towards sustainable company

Scientists/organizations	Approaches
Porter (1985)	Corporate sustainability consists of carrying out actions that improve the economic growth and long-term profitability of an organization.
Hart (1995)	Sustainable company should have responsibilities towards the environment that go beyond their economic obligations.
Dyllick and Hockerts (2002)	Corporate sustainable development is a business strategy that attempts to meet the needs of organizational stakeholders without compromising the resources and interests of the local community.
Sharma and Ruud (2003).	Corporate sustainable development should be understood as a broad concept, it takes in the whole set of normative issues related to both the role of business in society and the natural environment.
Ness et al. (2007), Erol et al. (2009)	Company’s sustainability represented by three correlated dimensions, namely social, economic, and environmental development. These three dimensions of CSD are known, respectively, as social development through corporate social responsibility, economic development through corporate value creation, and environmental development through cooperative environmental management, such as improving ecology.
Moon (2007), Dig (2008), Enticott and Walker (2008), Gao (2009), Baumgartner and Ebner (2010)	Corporate sustainability borrows elements from four more established concepts: 1) sustainable development, 2) corporate social responsibility, 3) stakeholder theory, and 4) corporate accountability theory.
World Council for Sustainable Business	Sustainable company means adoption of such business strategy and such actions that contribute to satisfying present needs of company and interested parties, as well as simultaneous protection, maintenance and strengthening of human and environmental potential which will be needed in the future.

Environmental Protection Agency (EPA)	Environmentally sustainable organization functions in the way that preserves elements and functions of environment for future generation.
Sustainable Development International Corporation	Sustainable company may function in a short period of time without negative influence on the conditions of existence and functioning of other groups and individuals, including organizations.
Wikipedia (http://en.wikipedia.org/wiki/Sustainable_business)	Sustainable business, or green business, is an enterprise that has no negative impact on the global or local environment, community, society, or economy—a business that strives to meet the triple bottom line. Often, sustainable businesses have progressive environmental and human rights policies.
Environmental & Energy Management News	Seven tips of sustainable organization: setting sustainability goals & measuring success; stakeholder engagement; sustainability issues mapping; sustainability management systems; product life cycle assessment & product design; sustainability/CSR reporting; integrating sustainability into your brand.

Source: author's, Sidorczuk-Pietraszko 2007.

To sum up, a review of the scientific literature (Moon 2007, Dig 2008, Enticott and Walker 2008, Gao 2009, Baumgartner and Ebner 2010) suggests that the concept of corporate sustainability borrows elements from four more established concepts: 1) sustainable development, 2) corporate social responsibility, 3) stakeholder theory, and 4) corporate accountability theory.

The sustainable development concept has been discussed in this paper above, so more attention will be paid to the analysis of the last three concepts of corporate sustainable development. These concepts are as follows: corporate social responsibility, stakeholder theory, and corporate accountability.

Corporate social responsibility (CSR) and sustainable development are both dialectical concept. As a concept, CSR has been around much longer than sustainable development. The origins of CSD concept related to ancient Greece, when governing bodies set out rules of conduct for businessmen and merchants. CSR deals with the role of business in society. It means that corporate managers have an ethical obligation to consider the needs of society, not just to act solely in the interests of the shareholders or their own self-interest. CSR and sustainable development are both considered as valued and are not simply empirical concepts. Both concepts are internally complex. In CSR there is the tension of balancing different economic, legal, ethical and social responsibilities towards a range of stakeholders each bringing different values and expectations to their relationships with the corporation. Moreover, CSR is difficult to generalize across firms as they have differing social, environmental and ethical impacts for which they may be held responsible (Moon 2007).

Stakeholder theory of the firm is a relatively modern

concept. It was first popularized by R. Edward Freeman in his 1984 book *Strategic Management* (Wilson 2003). Freeman defined a stakeholder as “any group or individual who can affect or is affected by the achievement of the organization’s objectives.” According to this theory, the stronger your relationships are with other external parties, the easier it will be to meet your corporate business objectives. Strong relationships with stakeholders based on trust, respect, and cooperation. The contribution of stakeholder theory to the corporate sustainability is the addition of business arguments as to why companies should work towards sustainable development. Stakeholder theory suggests that it is in the company’s own best economic interest to work in this direction because doing so will strengthen its relationship with stakeholders, which in turn will help the company meet its business objectives (Wilson 2003).

The fourth and final concept underlying corporate sustainability is corporate accountability. Different approaches exist to this issue. Corporate accountability often seen in two very different paradigms: one based on traditional economic agency theory, another based on conceptual interdependent relationships between organizations and stakeholders (Swift 2001). The first paradigm, based on traditional economic agency theory, primary views the company as an agent, consisting of the financial transactions it engages in. Accountability is achieved through a duty by the agent to account to the principal, which in turn reduces the level of distrust the principal naturally should have in the self-interested agent. The second paradigm views the company as a web of relationships. In order to become successful in long run companies need to build stable and long lasting relationships with stakeholders (Swift 2001).

Accountability is the legal or ethical responsibility to provide an account of the actions. Wilson (2003) analyzed the relationship between corporate management and shareholders. The author made a conclusion that contribution of corporate accountability theory to corporate sustainability is that it helps define the nature of the relationship between corporate managers and the rest of society.

According to the Friends and the Earth Limited Company (2005), corporate accountability can be defined as the ability of those affected by a corporation to control that corporation's operations. This

concept demands fundamental changes to the legal framework in which companies operate. These include environmental and social duties being placed on directors to counterbalance their existing duties on financial matters and legal rights for local communities to seek compensation when they have suffered as a result of directors failing to uphold those duties.

To sum up, the relationship between sustainable development and corporate sustainability is presented in the Figure 1. This figure also describes the evolution of the corporate sustainability's concept.

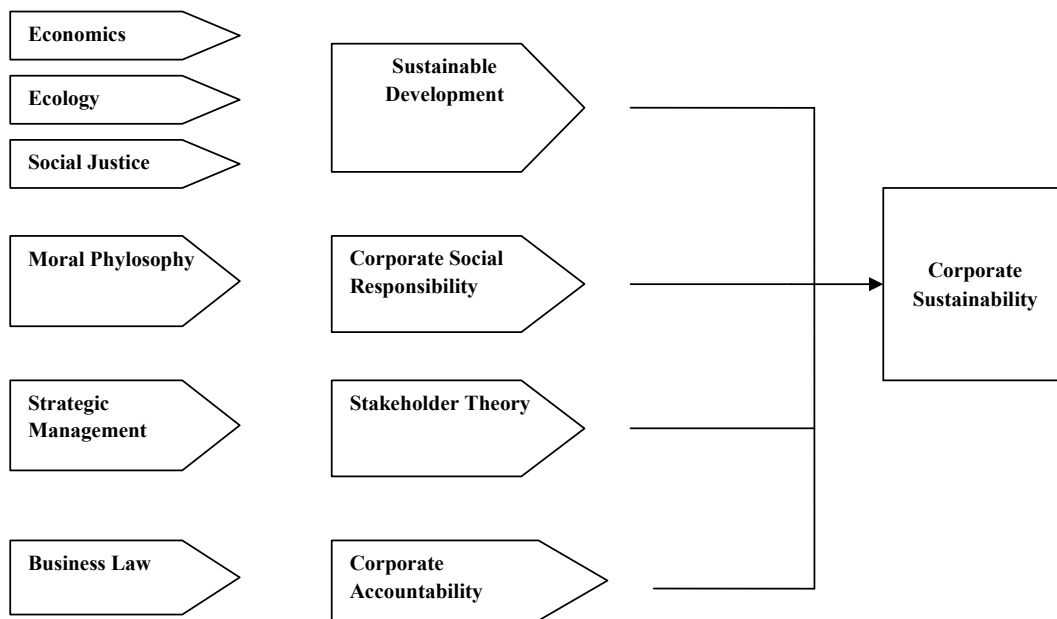


Fig. 1. Relationship between sustainable development and corporate sustainability

Source: author's, Wilson 2003.

Figure 1 illustrates the contribution of four pillars, such as sustainable development, corporate social responsibility, stakeholder theory and corporate accountability to corporate sustainability. It describes the contents of two sustainability concepts- sustainable development and corporate sustainability and relationship between them.

4. Conclusions

The concepts of growth and development are not the same. Generally speaking, growth is the quantitative increase in physical scale while development is qualitative improvement or the unfolding of potentiality. In order for development to be sustainable, it has to successfully balance economic goals with social and environmental.

The sustainable development concept was born al-

most 40 years ago in response to the emergence of environmental and natural resources crisis, particularly those related to energy. In the surveys of international organizations and institutions three main approaches to Sustainable Development have been analyzed. The first approach views SD as referring simultaneously to economic, social and environmental systems, the second one is more ecosystem health approach, which considers the economic and social systems as subsystems of the global environment and the third approach related to the resources or capital allocation.

The process of implementing sustainable development concept at organizational level linked with the process of making changes as follows: radical – connected with revolutionary change of strategy and constituents of management system and constant –

connected with evolutionary changes.

A review of the literature suggests that the concept of corporate sustainability borrows elements from four more established concepts. They are as follows: sustainable development, corporate social responsibility, stakeholder theory and corporate accountability. It is an evolving concept that managers have to adopt together with the traditional growth and profit-maximization model. The contribution of sustainable development to corporate sustainability is twofold. First, it helps set out the areas that companies should focus on: environmental, social, and economic performance. Second, it provides a common societal goal for corporations, governments, and civil society to work towards: ecological, social, and economic sustainability.

Referring to the analysis of the scientific literature, a strong relationship between sustainable development goals and corporate sustainability exists. Economic, environmental and social goals can be achieved through the organization's management components, such as quality management, environmental management system and occupation and safety management system.

References

- Baumgartner, R. J., & Ebner, D. 2010. Corporate sustainability strategies: sustainability profiles and maturity levels, *Sustainable Development* 18: 76–89.
- Bell, S.; Morse, S. 2001. Breaking through the glass ceiling: who really cares about sustainability indicators? *Local Environment* 6(3): 291-309.
- Bloch, C. 2007. Assessing recent developments in innovation measurement: the third edition of the Oslo Manual. *Science and Public Policy* 34 (1): 23-34.
- Blok, K. 2005. Enhanced policies for the improvement of electricity efficiencies. *Energy Policy* 33(13): 1635-1641. doi:10.1016/j.enpol.2004.02.006.
- Bojnec, S.; Papier, D. 2011. Economic efficiency, energy consumption and sustainable development, *Journal of Business Economics and Management* 12(2): 353-374.
- Burinskienė, M.; Rudzkienė, V. 2007. Assessment of sustainable development in transition, *Ekologija* 53 (Supplement): 27-33. Available from: <http://images.katalogas.lt/maleidykla/EkoPr72/EkoPr_027_O33.pdf>. ISSN 0235-7224.
- Burinskienė, M.; Rudzkienė, V. 2009. Future insights, scenarios and expert method application in sustainable territorial planning, *Technological and Economic Development of Economy* 15(1): 10-25.
- Chen, C. C. 2009. Price competition and clean production in the presence of environmental concerns, *Transformations in Business & Economics* 8, 2(17): 100-113.
- Čiegis, R.; Ramanauskienė, J.; Startienė, G. 2009. Theoretical reasoning of the use of indicators and indices for sustainable development assessment, *Engineering Economics* (3): 33-40.
- Dahl, A. L. 2007. Integrated assessment and indicators. Measuring progress towards sustainability: assessment of indicators. A project of SCOPE, the *Scientific Committee on Problems of the Environment, of the International Council for Science*. Washington, DC. pp. 163-176.
- Ding, G. K. 2008. Sustainable construction: the role of environmental assessment tools, *Journal of Environmental Management* 86: 451–464.
- Dudzevičiūtė, G.; Tvaronavičienė, M. 2011. Measurement framework of innovation activity: theoretical approaches' analysis, *Journal of Security and Sustainability Issues* 1 (1): 63-75.
- Dyllick, T.; Hockerts, K. 2002. Beyond the business case for corporate sustainability, *Business Strategy and the Environment* 11: 130–141.
- Ejdys, J.; Flejszman, A.M. 2010. New management systems as an instrument of implementation sustainable development concept at organizational level, *Baltic Journal on Sustainability* 16(2): 202–218.
- Enticott, G.; Walker, R. M. 2008. Sustainability, performance and organizational strategy: an empirical analysis of public organizations, *Business Strategy and the Environment*, 17: 79–92.
- Environmental & Energy Management News. 2010. Seven tips for becoming a sustainable company. Available from: <http://www.environmentalleader.com/2010/01/27/seven-tips-for-becoming-a-sustainable-company/> (2012 03 27).
- Erol, I.; Caka, N.; Erel, D.; Sari, R. 2009. Sustainability in the Turkish retailing industry, *Sustainable Development* 17: 49–67.
- European Parliament. 2007. Alternative progress indicators to Gross Domestic Product (GDP) as a

- means towards sustainable development, Policy Department: Economic and Scientific Policy. 101 p.
- Eurostat. 2011. Sustainable development in the European Union. Statistical book. Luxembourg: Publication office of the EU. 218 p.
- Funar, S.; Curea, C.; Ionescu, C. 2009. Managing sustainable development in the European Union, *Developments and approaches* 12 (2): 1-9.
- Gao, Y. 2009. Corporate social performance in China: evidence from large companies, *Journal of Business Ethics* 89: 23–35.
- Grossmann, V. 2009. Entrepreneurial innovation and economic growth, *Journal of Macroeconomics* 31(4): 602-613.
- Grybaitė, V. 2011. Towards measurement of sustainable development: systems of indicators, *Journal of Security and Sustainability Issues* 1 (1): 19-26.
- Hammer, M.; Champy, J. 2003. Reengineering the corporation. A manifesto for business revolution. Harper Paperbacks. 272 p.
- Sharma, S.; Ruud, A. 2003. On the path to sustainability: integrating social dimensions into the research and practice of environmental management. *Business Strategy and the Environment* 12: 205–214.
- Hart, S. L. 1995. A natural-resource based view of the firm, *Academy of Management Review* 20: 986–1014.
- Hart, S. L. 1997. Beyond greening: strategies for a sustainable world, *Harvard Business Review* 75(1): 66–76.
- Ighodaro, C. A. U. 2010. Co-integration and causality relationship between energy consumption and economic growth: further empirical evidence for Nigeria, *Journal of Business Economics and Management* 11(1): 97-111. doi:10.3846/jbem.2010.05.
- Juknys, R. 2008. Darnus vystymasis [Sustainable development]. Kaunas: VDU. 236 p.
- Juscius, V.; Snieška, V. 2008. Influence of corporate social responsibility on competitive abilities of corporations, *Inžinerinė Ekonomika [Engineering Economics]* (3): 34-44.
- Katane, I.; Baltusite, R. 2007. Ecological approach for the formation and development of prospective teachers' readiness for the professional activities at Latvian schools, *Transformations in Business & Economics* 6(2): 114-132.
- Kryk, B. 2009. Evaluation of environmental policy pursued by Poland during the transformation and globalization of the economy, *Transformations in Business & Economics* 3(18): 110-128.
- Kryk, B.; Zelinska, A. 2007. Role of human capital in education for sustainable development: the case of Poland, *Transformations in Business & Economics* 12(2): 100-113.
- Lawn, P.A. 2000. Toward sustainable development: an ecological economics approach. CRC Press, 462 p.
- Li, J.; Hartman, S. J.; Zee, S. M. 2009. A study of green movement perceptions and behavioral intentions, *International Journal of Sustainable Economy* 1(2): 133-143. doi: 10.1504/IJSE.2009.023043.
- Moldan, B.;Dahl, A. L. 2007. Challenges to sustainable indicators. Measuring progress towards sustainability: assessment of indicators. A project of SCOPE, *the Scientific Committee on Problems of the Environment, of the International Council for Science*. Washington, DC, pp. 1-26.
- Moon, J. 2007. The Contribution of corporate social responsibility to sustainable development, *Sustainable Development* 15: 296–306.
- Ness, B.; Evelin, U. P.; Anderberg, S.; Olsson, L. 2007. Categorizing tools for sustainability assessment, *Ecological Economics* 60: 498–508.
- OECD 2008. Key environment indicators. Available on the Internet: <http://www.oecd.org/data-oecd/20/40/37551205.pdf>. (2012 02 27).
- PASTILLE Consortium 2002. Indicators into action: local sustainability indicator sets in their context. Final report. 159 p.
- Porter, M. E. 1985. Competitive advantage. New York: Free Press. 399 p.
- Rutkauskas, A. 2008. On the sustainability of regional competitiveness. *Technological and Economic Development of Economy* 14(1): 89-99. doi:10.3846/2029-0187.2008.14.89-99.
- Schaltegger, S.; Synnestvedt, T. 2002. The link between green and economic success: environmental management as the crucial trigger between environmental and economic performance, *Journal of Environmental Management* 65(4): 339-346. doi:10.1006/jema.2002.0555.

Sidorczuk-Pietraszko, E. 2007. The concept of sustainable development at organizational level, towards the theory of sustainable development. Bialystok-Warsaw: Polish Academy of Science. 365 p.

Spangenberg, J. H. 2004. Reconciling sustainability and growth: criteria, indicators, policies, *Sustainable Development* 12(2): 74-86. doi:10.1002/sd.229.

Swift, T. 2001. Trust, reputation and corporate accountability to stakeholders, *Business Ethics: An European Review* 10(1): 16-26.

Tvaronavičienė, M.; Grybaitė, V. 2012. Sustainable development and performance of institutions: approaches towards measurement, *Journal of Security and Sustainability Issues* 1(3): 167-175.

United Nations, Eurostat, International Monetary Fund, Organization for Economic Cooperation and Development and World Bank. 2003. Handbook of National Accounting. Integrated Environmental and Economic Accounting. United Nations Publications Series F, No 61, Rev. 1. 598 p.

Wilson, M. 2003. Corporate sustainability: what is it and where does it come from? *Ivey Business Journal* 67 (6): 1-5.

World Commission on Environment and Development. 1987. Our common future: Brundtland report. New York: Oxford University Press. 247 p.

Wikipedia. Available on the Internet: http://en.wikipedia.org/wiki/Sustainable_business. (2012 03 20).