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SUSTAINABILITY AS THE MODERN BASE OF THE PROFITABLE BUSINESS ACTIVITY

Abstract. The crisis of modern economic development is connected with depletion of natural resources is described. The needs to increase profit and to reduce an expenses due the restoration of damaged environment are found out. The necessity to increase the sustainability of the procurement process is substantiated. It is given a reasons that economic instruments must be able to integrate itself in market and therefore be prepared to manage fast every environmental disaster. Key efforts and economical incentive for companies and enterprises in reducing the environmental impact are disclosed. The structure of reproduction cycle is offered. Sustainability as a processes and result of processes are described. The main focus on sustainability and it role in long-term exiting of enterprises and companies are shown. The process of the decision-making to use the sustainability as the modern base of the profitable business activity of companies and enterprises on basis of ecological entrepreneurship via the system of constrains and preconditions are created.

Keywords: sustainability, economic instruments, environmental impact, wastes, sustainable development, natural resources, a synergistic effect of sustainable entrepreneurship

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JEL Classification: L20, L21, M21, Q20

Introduction. The global economy is coming under the pressure to pay attention on restoration of damaged environment as well as continuing the development of society (which includes people and business). The crisis of modern economic development is accompanied by increasing of operation costs owing to limitations in natural resources and high level of competition between producers for the right to be owner or user of such resources. As a result prices for output finished goods have to be increased to cover all expenses of enterprises and companies. But considering the limited financial capability of consumers the purchase probability will be intensively cut down. It leads to overproducing of goods. In respect of this a producers have to decline a prices, so the risk of profit loss is more obvious but such decision is more cheap at first blush for owners then to invest in projects for creating a new products.

Literature review and the problem statement. To be solved problem of profitable business activity has to be viewed in different ways. Dominatet views are based on assumption that the modern developments are focused on modernization of

entrepreneurial sphere [Ivanov, Lyashenko, Tolmachova, Kvilinskyi 2016; Lyashenko, Kvilinskyi 2016; Lyashenko, Tolmachova, Kvilinskyi 2016]. In concurrence with this the investment climate is named as modern socio-economic condition of the region's formation and the reduction of the overall negatory environmental impact and the maintenance of sustainability are argued as the main tools for development of any economic [Meshkov, Bondaryeva, Kvilinskyi 2016]. At the same time it is necessary to provide more profound scientific research in the field of economic and ecological incentives for use of the sustainability as the modern base of the profitable business activity.

Research results. Profitability has always been the ultimate goal of any enterprise. Depending on circumstances, this goal can be achieved either by extensive growth or by constantly increasing the efficiency of the existing approaches and practices on every level of value creation. Despite the former being widely used, it is the latter that has become of increasing importance for many companies around the globe, taking into consideration the limited amount of resources and population growth. These factors combined create economic and social tension that can be eased by implementing sustainable practices in day-to-day operations. Procurement is the field of operations that can have significant environmental impact, since it may encompass all stages of a product's lifecycle. This implies that optimising a company's procurement activities and implementing sustainable approaches may largely contribute to the reduction of the overall environmental impact and reaching sustainable development.

The necessity to increase the sustainability of the procurement process has been widely recognised not only by companies (such as TDK, Konica Minolta, Suntory, etc.) but also by governmental institutions as well as by international organisations and governing bodies (the United Nations, the European Commission, etc.). Albeit the definition of procurement practices aimed at reducing environmental impact may vary ("responsible procurement" [University of Manchester], "green procurement", "sustainable procurement" [UNDP, 2008, p.4]), its main principle in many cases lies in "the purchase of products and services which have less impact on the environment and human health compared with competing products or services that serve the same purpose." [UNDP, 2008, p.4] According to the Department of Treasury of the State of Victoria, Australia key efforts in reducing the environmental impact should be concentrated in the following areas:

- Optimisation the consumption and reduction of wastes;
- Assessing the environmental impact considering all stages of a product's lifecycle;
- Consideration of the environmental impact in the value-for-money assessment;
- Purchasing from suppliers that are committed to sustainable performance.

The reduction of environmental impact can be achieved by combining the efforts of authorities and market commitment. The former includes the regulation of environmental performance by means of legislation. The latter implies a better market performance of companies implementing the principles of sustainable procurement. The economic benefits of green procurement include, for instance, cost reduction due to a more efficient use of resources, especially in the long run. The attempts to reduce the environmental impact of procurement also creates the incentives for innovation and indirectly affect small- and medium-sized companies, helping them find markets for innovative products. Lastly, the implementation of green procurement solution results in price reduction of environmental technologies, which, in turn, further affects total production costs.

Kyoto Protocol cannot solve this problem of society in general thinks. So economic instruments must be able to integrate itself in market and therefore be prepared to manage fast every environmental disaster. The considered problem in historical aspects passed a few milestones. The next factors were arising during last century to the present tense:

1. New technologies, especially those associated with the "second industrial revolution," from the 1920s to the 1960s;

2. Expanded labor inputs as a result of growth in the working-age population and higher female participation in the workforce;
3. Urbanization, which acts as an accelerator for technological modernization and productivity growth;
4. Increased use of resources: materials, water, land, energy and other forms of (largely unpriced) natural capital;
5. Fast-moving changes in needs and ways for satisfaction of customer's needs;
6. Ambition of producers to reduce a cost based on using alternative recourses of energy and materials;
7. Zero waste management.

Sustainability is a concept that, over the past decades of last and current centuries, has gained and continues to gain traction in a wide range of enterprises and companies, from top management to local governance in company, from commercial to tourism public activities, and from extracting of natural resources through manufacturing and delivering to consumption. The many enterprises and companies have articulated business decisions centered on sustainability, using it as a framework on which to base integrated strategies covering the ecological, the economic and social axis in the classical interpretation of 3-D Model of sustainable development.

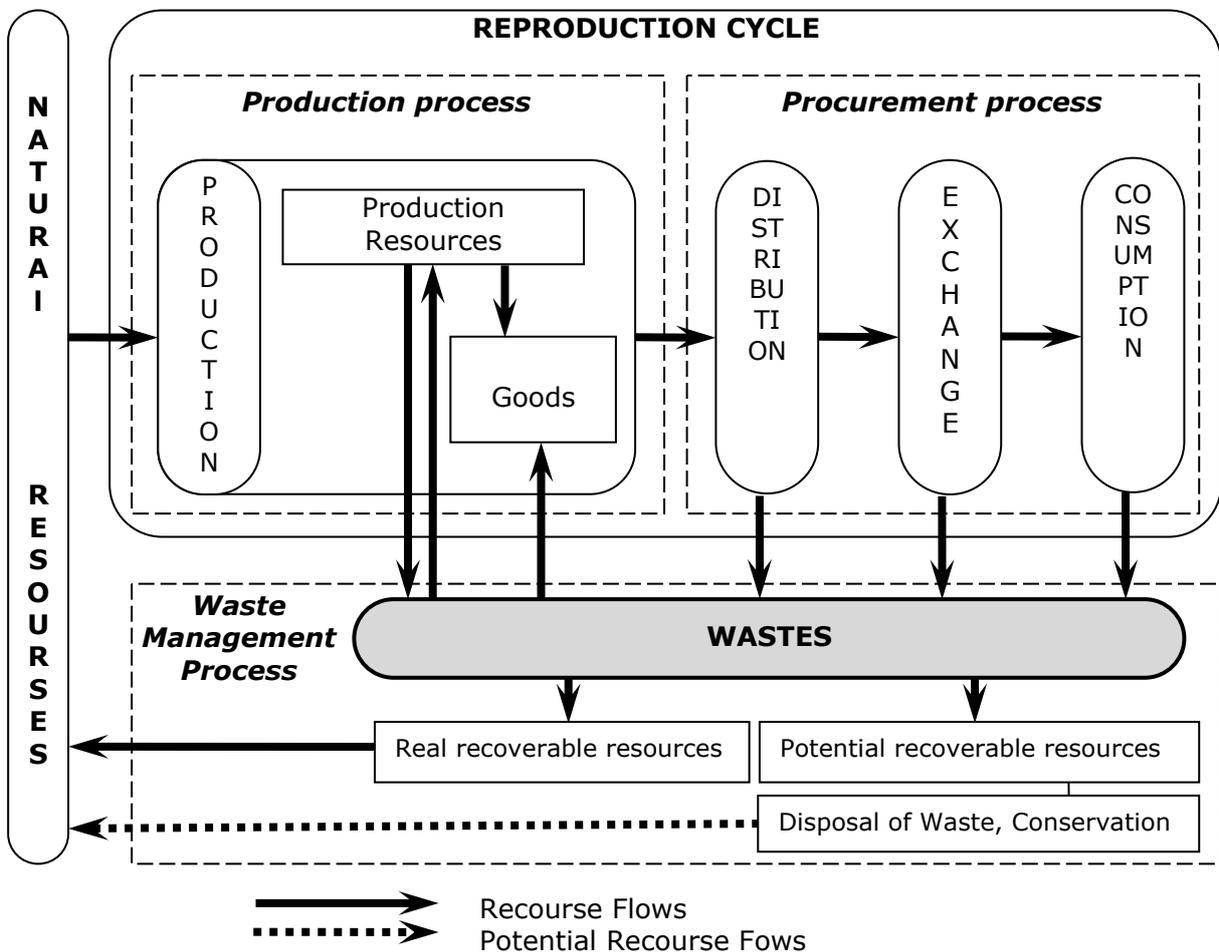


Figure 1 – The structure of reproduction cycle

Source: advanced by authors grounded on [Mennillo, Elmar, Friedric, 2012; Bleischwitz, Welfens, Zhang 2011; Lang, Murphy 2014]

The sense of "sustainability" is complex and multifaceted and can be described from different points of view. For the first let's start from general philosophy context in

which we can consider the core of sustainability as a one type of motion and a direction of development of matter. It is very important to reach stable form of motion. Otherwise, chaos in motion and unstable motion of matter will lead to collapse and destruction of motion. And to check the objective preconditions and subjective preconditions would be impossible. The character of relationship will be not valuated and the matter will be destroyed as a result of stochastic effects of unknown factors produced by external and internal environment. External and internal factors of sustainability based on philosophy context are provoking by maturity phase of relationships between enterprises and companies with supplies and clients as an entire system of the Reproduction Cycle (Fig. 1).

From the Fig. 1 it is clear that sustainability in Reproduction Cycle can be considered as complex processes of systems interaction with fuzzy effects. Sustainability as a processes and result of processes can be described also from another different sides:

- in technology "sustainability" is understood as the object characteristic to perform the necessary functions during a given vibration and to keep values of parameters, within standards;
- in environmental explanation "sustainability" is interpreted as "the ability of the ecosystem to maintain its structure and functional properties by external factors";
- as institution vector "sustainability" can be presented as system of laws and rules (formal and non-formal) which are forming the ability of enterprises and companies to produce an output according to their mission and to the conditions of external information, social, political and economic environment without conflicts and with efficiency maximization for all participating persons in supply, production and consuming processes;
- in social dimension "sustainability" combines and integrates the participation and engagement, interaction quality of life or well-being, built on shared knowledge and values of Stakeholders and community;
- as a strategy "sustainability" is setting corporate social responsibility policies and goals, as well as their results to become more energy efficient and to reduce pollution and waste while continuing to shape its business responsibly and increase its economic success with the long-term preservation and enhancement of natural resources and nature, increasing of social capital based on new kind of knowledge in ecological economics and development of financial capital by identifying emerging challenges and opportunities to gear up production, to expand market share, to cut costs and improve profits;
- from the position of economic "sustainability" is interpreted as "the ability of the enterprises or companies to use natural and artificial resources to their best advantage in current conditions of business environment adjusted for the sensibilities of the stakeholders and customers to chops and changes of market situation;
- ILO-Labour Conference 2007 assumed that "Sustainable enterprises should innovate, adopt appropriate environmentally friendly technologies, develop skills and human resources, and enhance productivity to remain competitive in national and international markets". The main focus on sustainability and its role in long-term exiting of enterprises and companies is at the moment that the main (primary) task is to prevent natural environment from damage and depletion of natural resources and in the same time to decline the ecological damage of previous periods. But in this case the main rule of efficiency valuation will be frustrated.

So the conclusion about role and place of sustainability in business activity has to be done as following - sustainability operates a business so as to be viable in long-term, economic grow based on social well-being of staff, society, state and earn different types of benefits measured in economic, social, environmental, institutional and inter-generational equity. The crown of sustainability for enterprises and companies is to earn profit. Considering that the enterprise operates by big varieties of business partners including but not limited to shareholders, creditors, regulators, employees, customers,

suppliers, and the community we can structure type of potential benefits in sustainable development of enterprise or company.

So acting sustainable also not only benefits its reputation, such kind of acting benefits with real monetary profit. This enhances the image of enterprises and companies as an environmentally-committed and responsible business, giving good PR in a competitive markets and creating high level of sureness for clients in safe and clear of ecological danger the style of consumption. In this case enterprises and companies will create a new additional needs of client to feel environmental responsibility during an act of consuming but the level of payment will be too less in end-price of goods for customers and not so appreciably from the side of costs but with perceivable benefit for customers and producers (see Table 1).

Table 1 – Type of benefits for enterprises and companies and customers

Type of benefits	Content	
	for enterprises and companies	for customers
Economic	New business opportunities; Improving economic efficiency through the means of resource use, treatment and disposal and creating markets for recycles; waste management practices; Green procurement; tax optimization.	Green design; cost savings; providing better information for customers.
Social	New jobs; new sources of employment and potentially lifting communities out of poverty.	High education; Low unemployment; High quality health care systems; Minimizing the consumer cost which leads to increased volume of customer's box.
Environmental	Reducing, reusing and recycling, and minimizing resource extraction, wastes and damage.	The most energy-efficient goods.
Institutional	To restrict: - financial mismanagement; - corruption; Exploring the potential for information and communications technology (ICT) to increase sustainability.	To decrease: - information and communication restriction; - criminality and violence.
Inter-generational Equity	More robust economy for subsequent generations; to eliminate trade tariffs for low-carbon technologies and environment-friendly products and services.	Fairer and more inclusive society and cleaner environment; reduction of carbon emission.

Source: advanced by authors grounded on [Dayal 2014; Colombo, Masera 2013; Taticchi, Carbone, Albino 2013; Salomone, Clasadonte, Proto, Raggi 2013]

The concept of sustainable development can be determined as an aim to attain social and economic development by the means that will not exhaust the earth's finite natural resources. The demands of the world nowadays are huge and immediate and that is why it is urgent to invent methods to satisfy these demands. It is considered, that the next generations will struggle to satisfy their demands in the way it can be accomplished today, because of the lack of natural resources and extreme environmental change in the future. There are several common practices of sustainable development. First group of practices can be named as first-order practice for the reason that each company or enterprise can use primary natural resources for producing of goods. So economic and ecological benefit will belong to each individual commercial or non-commercial person via:

- Renewable energy. Solar and wind energy, for example, is considered to be unlimited. These sources are supposed to diminish the human dependence on oil, coal and other limited energy sources.

- Sustainable construction. Buildings, premises and other structures that include recycled and renewable building materials are supposed to be more energy efficient and able to last for long period of time.

- Crop rotation. A lot of agrarians are using this way as a chemical free method to avoid soil diseases and provide their crops with better characteristics and increase the growth.

- Water fixtures. One of the most important criteria of sustainable development is water preservation. For that reason, there are nowadays a fast growing trend for the products that are aimed at minimization of water consumption. For example, toilets, showers, dishwashers and others.

Second group of practices can be named as second-order practice for the reason that many kinds of natural resources have to be transformed before the using in production process. In this case responsibility for environmental and all reached benefits must be divided between group of companies or enterprises involved in manufacturing process. For this reason the decision on the subject of business decisions centered on sustainability must take in the attention a synergistic effect of sustainable entrepreneurship.

So decision-making to use the sustainability as the modern base of the profitable business activity can be shown as following system of equations:

$$\sum_i E_i \leq E_{ECON} + E_{ENV} \quad (1)$$

whereas E_i – economic effect of independent activity of the enterprise i ;
 E_{ECON} – economic effect of joint activities;
 E_{ENV} – environmental effect of joint activities.

$$E^S = (E_{ECON} + E_{ENV}) - \sum_i E_i \quad (2)$$

whereas E^S – a synergistic effect of sustainable entrepreneurship.

The system of constrains for decision-making can be presented as a following preconditions for Θ and Δ :

$$E^S \geq \sum_i \Theta_i \quad (3)$$

whereas Θ_i – the stability boundary, which is determined by the individual reserve ratio of financial assets to cover environmental costs.

$$\sum_i E_i \geq \sum_i \Delta_i \quad (4)$$

whereas Δ_i – the minimum rate of return which are sufficient and necessary for sustainable cooperation.

A logical scheme for using the system of equations for decision-making can be given below.

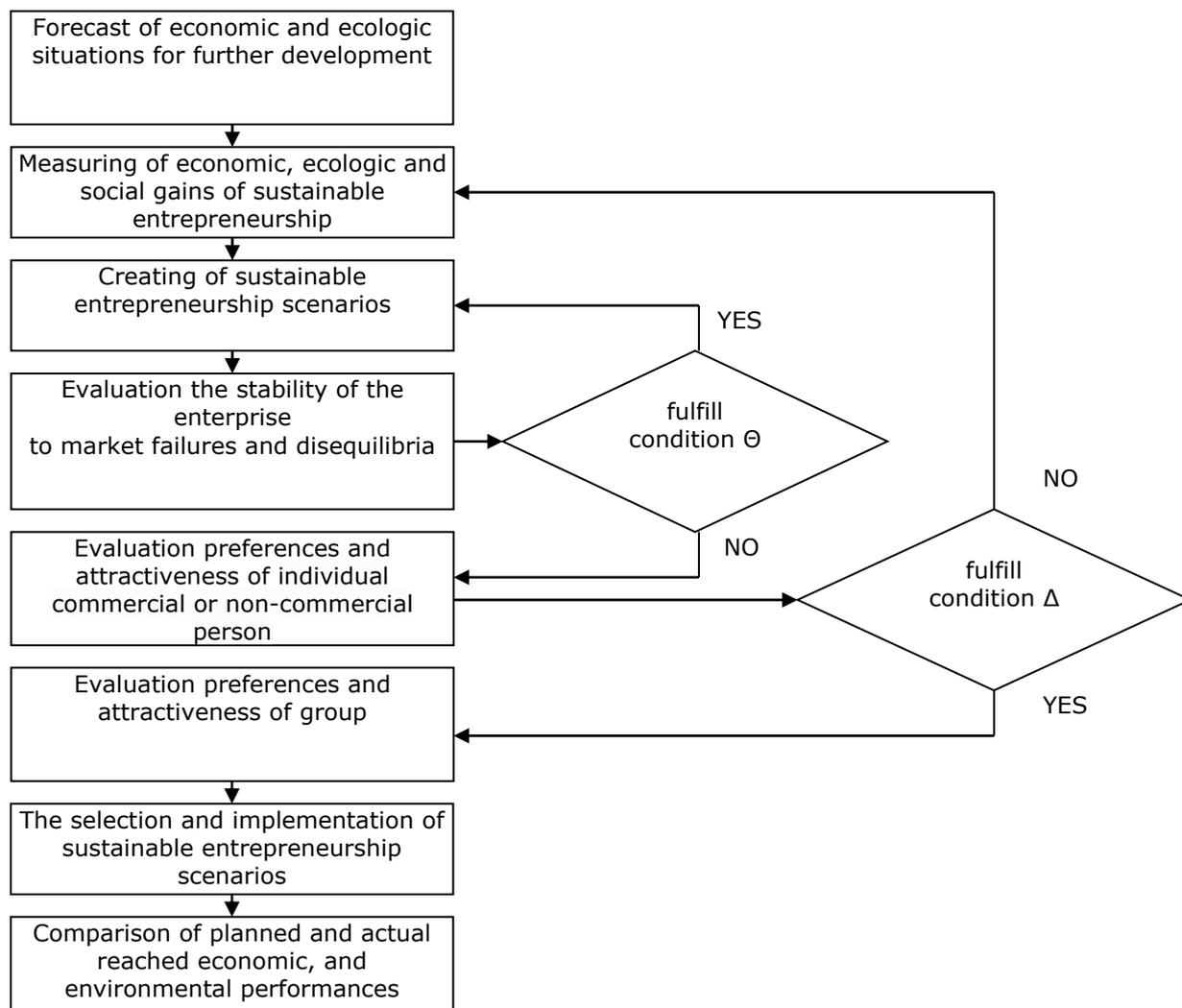


Figure 2 – Decision-making to use the sustainability as the modern base of the profitable business activity of companies and enterprises

Source: author's design

Conclusions. So cheap sustainable incentives will provide for producers additional attractiveness in a competitive markets paid by clients. This approach ensures fundamentally new products with long-term sustainable characteristics which at the same time provide additional margins as a general target of each kind of business activity.

References

- Bleischwitz, R., Welfens, P., & Zhang, Z. (2011). *International Economics of Resource Efficiency, Eco-Innovation Policies for a Green Economy*. Heidelberg: Springer-Verlag Berlin Heidelberg.
- Colombo, E., Bologna, S., & Masera, D. (2013). *Renewable Energy for Unleashing Sustainable Development*. Cham, s.l.: Springer International Publishing, Imprint: Springer.
- Dayal, V. (2014). *The Environment in Economics and Development. Pluralist Extensions of Core Economic Models*. New Delhi, s.l.: Springer India, Imprint: Springer.
- Ivanov, S., Lyashenko, V., Tolmachova, H., & Kvilinskyi, O. (2016). Features of

- modernization of entrepreneurial sphere in the context of the national economic policy in Ukraine. *European Cooperation*, 3 (10), 9-34.
- Lang, A., & Murphy, H. (2014). *Business and Sustainability. Between Government Pressure and Self-Regulation*. Cham, s.l.: Springer International Publishing; Imprint: Springer.
- Lyashenko, V., & Kvilinskyi, O. (2016). Evolutionary aspects of reflective processes in economic systems in case of political history of Ukraine-Polish relations. *European Cooperation*, 1, 9-24.
- Lyashenko, V., Tolmachova, A., & Kvilinskyi, O. (2016). Państwowa polityka rozwoju przedsiębiorczości w kontekście stabilności społecznoekonomicznej (na przykładzie Ukrainy). *Zeszyty Naukowe Polskiego Towarzystwa Ekonomicznego w Zielonej Górze*, 4, 155-164.
- Mennillo, G., Elmar, T., & Friedric, E. (2012). *Balanced Growth. Finding Strategies for Sustainable Development*. Berlin, Heidelberg: Springer-Verlag Berlin Heidelberg.
- Meshkov, A. V., Bondaryeva, I. A., & Kvilinskyi, O. S. (2016). Factors of the region's investment climate formation under modern socio-economic conditions. *Perm University Herald. Economy*, 2(29), 120-134.
- Salomone, R., Clasadonte, M. T., Proto, M., & Raggi, A. (2013). *Product-Oriented Environmental Management Systems (POEMS)*. Dordrecht: Springer Netherlands.
- Taticchi, P., Carbone, P., & Albino, V. (2013). *Corporate Sustainability*. Berlin, Heidelberg: Springer Berlin Heidelberg.

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