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Towards Sustainable Development by Creation of Green Social Entrepreneur's Communities

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Abstract

Entrepreneurship is a part of economy which is demanded in modern open economies. Structural changes in the society are needed for creation of entrepreneurship. The current situation shows a clash between the economic and the ecological system in global scale which will result in grave ecological catastrophes for the future. In this article, feasibility of shifting with a structural change in order to redefine links between economy, ecology and society through sustainability will be investigated. The goal of this study is to synthesize this interaction especially in development process for reallocation of resources towards a new concept of *green social entrepreneur's communities*.

Based on the fact that humus rich soil is the key production factor for water, food and hundreds of industrial products, entrepreneurs can form communities of between 50 up to around 200 part time poly-productive micro-farms. Cost and energy efficient housing is a starting point for added value, incomes from highly intensive organic farming can cover parts of the income, small scale production another. With a suitable size that makes such a new town development attractive there will be a demand for childcare, schooling, health and old age care offering additional incomes. Such communities will and must improve soil quality and biodiversity, creating a positive footprint.

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1. Introduction

Entrepreneurship matters in modern open economies it is more important for economic growth than it has ever been. The reason is that globalization and the ICT-revolution imply a need for structural change, requiring a substantial reallocation of resources. This induces an intense demand for entrepreneurship [1, 2]. Audretsch and Thurik show that an increase of the rate of entrepreneurship (i.e. number of business owner per labor force) leads to lower level of unemployment in 23 OECD¹ countries in the period 1984 through 1994 [3]. In recent years renewed attention has been given to the role of entrepreneurship in economic development. Many economists and politicians now have an intuition that there is a positive impact of entrepreneurship on

the growth of GDP and employment [4]. The recent statistics shows rapid increase of natural resource consumption, especially, in the following components: fossil energy (e.g. oil, natural gas, oil), ferrous metals (e.g. iron ore, etc.) non ferrous metals (e.g. bauxite, etc.), non-metalliferous minerals (e.g. lime), biomass (e.g. wood, etc.) [5, 6]. By taking into account the limitation of natural resources, required time for replenish these resources and generated waste in economic sector, it would be obvious that it cannot be continue forever and it is necessary for take some planned action to change and turn this situation to more sustainable manner otherwise, it would be resulted in a grave for ecology [7]. The objective of this article is to synthesize disparate stands of literature in order to understand the role of *green social entrepreneur's communities* in development process. Entrepreneurship is an ill-defined, at best multidimensional, concept. Understanding its role in the process of development requires the decomposition of the concept of entrepreneurship. A *first* goal of this paper is to contribute to the understanding of the dimensions. A *second* goal is to provide insight in the causal links between these entrepreneurial dimensions and

¹ The Organization for Economic Co-operation and Development (OECD) is an international economic organisation of 34 countries founded in 1961 to stimulate economic progress and world trade.

development, while paying attention to suitability and required changes.

Nomenclature

ICT	Information and communication technology
GDP	Gross domestic product
UNDP	United Nations Development Programme
EIA	U.S. Energy Information Administration

2. Definition and dimensions of entrepreneur's concept

Entrepreneur is a loan word from old French “*entreprendre*” which translate simply, “to under take”. The first term was defined by Richard Cantillon in his *Essai sur la Nature du Commerce en General* (1730) and later by Jean Baptiste Say in his treatise on Political Economy (1803). Jean Baptiste Say broadened the definition to include the concept of bringing together the factors of production [8]. In classical economics there were three “factors of production” called land, labor and capital. Today several types of capital could be distinguished as natural capital, manufactured capital (i.e. manmade equipment, building and infrastructure), human capital, intellectual capital (i.e. discoveries, innovations and scientific results), social capital (i.e. trust, mutual understanding and shared value) and financial capital [9]. Table 1 could be an attempt to shows the transition of this concept through the time [10-15].

Among of mentioned definitions (see table 1), Schumpeter has very specific view, he defined the entrepreneurs as “the inventor who implements change within markets through carrying out of new combinations “. Schumpeter mentioned several forms for changing market [11, 12, 16]:

- The introduction of a new good or quality thereof
- The introduction of a new method of production
- Opening a new market
- The conquest of a new source of supply of new materials or parts, and
- The carrying out of new organization of an industry

After Schumpeter's work, most economists (and many non-economists as well) have accepted his identification of entrepreneurship with innovation and this considered as a principal function of enterprises (i.e. the result or consequence of entrepreneurial action) in economic growth [17-20]. This represents a change from the previous tradition, where the term '*entrepreneur*' meant basically “businessman” in classical economics [21]. Therefore *entrepreneurial spirit* is characterized by innovation and risk-taking, and is an essential part of a nation's ability to succeed in an ever changing and increasingly competitive global marketplace. At least thirteen distinct roles for the entrepreneur can be identified in the economic literature [16, 21-24] such as an allocator of resources among alternative uses.

Based on above mentioned literatures, entrepreneurship could be defined as “the art of using land, labor, natural resources, technology and capital which can produce profit and added value in a society”. And *entrepreneurial spirit*

combined with innovation. Required structural change for creation entrepreneurship could be an opportunity for shift current relationship between economy, ecology and society to more sustainable manner and it will be discussed in following sections.

Table1- Dynamic changes in definition of entrepreneurship through the time [10-15]

Authors	Description
Cantillon; 1730	Entrepreneurship is self-employment with an uncertain return. Cantillon recognized three classes of economic agents: landowners, entrepreneurs and employees.
Baudeau; 1767	Entrepreneurship is innovative management
Say; 1803	Described entrepreneur as an extraordinarily talented manager
Menger; 1871	Differentiated entrepreneurial decision-making into four sequential stages
Marshall; 1890	Hinted at a distinction between entrepreneurs and managers
Schumpeter; 1910	Described the entrepreneur as an innovator, carrying out new combinations
Knight	The courage to bear uncertainty
Penrose	Managerial capacities should be distinguished from entrepreneurial capacity Identifying and exploiting opportunistic ideas for expansion of smaller enterprises is the essential aspect of entrepreneurship
Lebenstein; 1970	The reduction of organisational inefficiency and at the same time reversal of organisational entropy
Adam; 1989	An entrepreneur is a person whose business actions make him/her a leader in the economic world especially when results in industrial growth or technical advanced
Kao; 1993	Process of doing something new and something different for the purpose of creating wealth for the individual and adding value to society
Thornton & Flynn; 2003	Discovery and exploitation of opportunities and creation of new organization, which occurs as a context-dependent social and economic process'

3. Development and sustainability:

3.1. Development:

The concept of development is almost as old as civilization. It's used in western societies from Greco-Roman civilizations until now [25]. Among of definitions which exist for development, UNDP definition [26] could stand out as a comprehensive one's. It suggests “*expanding the range of choices for the population that allows development to become more democratic and participative. (...) access to (sic) income... participation in decisions and enjoyment of human, economic and political liberties*”. Reviewing the literatures and mentioned definition, it can be concluded that a process of development should contain three main elements which listed below [26, 27]:

- **Economic:** The development of the economic or productive base of any society, which will produce the goods and materials required for life.
- **Social:** The provision of a range of social amenities and services (i.e. health, education, welfare) which care for the non-productive needs of a society.
- **Human:** The development of the people themselves, both individually and communally, to realize their full potential, to use their skills and talents, and to play a constructive part in shaping their own society.

Development has to do with the above three elements. It should not concentrate upon one to the exclusion of the others. Also each development should adapt through the sustainability which will be explained in next section.

3.2. Sustainability:

Sustainability as defined by the Brundtland Commission² calls for meeting the needs of the current generation while preserving the ability of future generations to meet their needs [28]. Let us first start with economy which is the study of the allocation of limited, or scarce, resources among alternative, competing ends [29].

Today predicting the ends is not a hard task. Current situation shows a clash between the economic and ecological system in global scale. If humankind continued to expand its population and consumption as it had until then it was heading for grave ecological catastrophes in the twenty-first century and it is not obvious which evil end we will reach by current practice in economy [30].

Modern life style is heavily depended on fossil fuels (e.g. coal, oil, natural gas) which are originated from biomass produced long before emergence of human being, and they cannot replenish in historical time. EIA's recently released *International Energy Outlook 2013 (IEO2013)* projects that world energy consumption will grow by 56% between 2010 and 2040, from 524 quadrillion British thermal units (Btu) to 820 quadrillion Btu [31].

Our planet is sustained thanks to photosynthesis, a process by which energy in the form of light is converted into chemical energy. Life on the earth depends on this source of energy, which is available only through plants, algae and some bacteria. Ecological footprint is a tool which used in order to measure of the area of productive land and water ecosystem that is required to producing what an economy consumes, and to absorb all the waste it generates [9]. Fig. 1 shows how the global ecological footprint has increased since the 1960s and how it would be expected to grow. The ecological footprint measured in global hectares and since this value must not exceed the available area (i.e. earth surface). As it demonstrated in Fig. 1, we already live in a full world and rapid reduction or structural change would be necessary to

bring down the global footprint to a level that is consists with the Earth's bio-capacity.

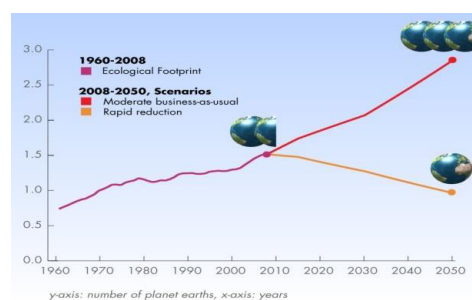


Fig. 1-global ecological overshoot form the 1960 to the 2050s [32].

3.2.1. Sustainability and global ethical trilemma:

Some main approaches suggested for sustainability such as the reduction of population growth, stabilization of industrial production [9] as well as speed up the economic growth in South (i.e. poorer countries of Africa, Asia and Central and South America). A group of researcher under A Latin American World Model considered inequality as important factor for sustainability [33]. The Latin American world model pointed to global ethical trilemma. There are three goals that most of humankind subscribes to-prosperity, justice and sustainability- but to combine the three goals on the global level is a challenge that is hard to confront. This global ethical trilemma shows in Fig. 2.

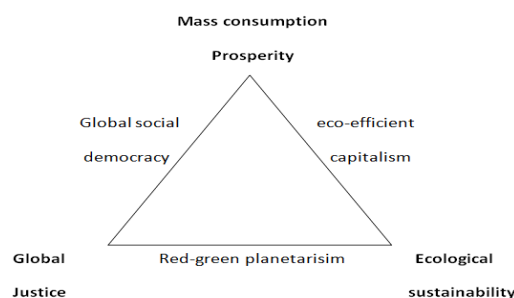


Fig. 2- global ethical trilemma [9, 33]

The corners of the triangle correspond to the three components often included in the dimensions of sustainable development: the ecology (sustainability), the economic (prosperity) and social (justice) dimensions. Eco-efficient capitalism, global democracy and Red-green planetarism (i.e. sides of the triangle in Fig. 2) are schools of thought which only took two corners. Let us briefly take look at each corner.

3.2.1.1. Ecological sustainability:

The term sustainability has its roots in ecology as the ability of an ecosystem to maintain ecological process, functions, biodiversity, and productivity in the future. To be sustainable, nature's resources must only be used at a rate at which they can be replenished. Sustainability could measure

² World Commission on Environment (WCED) published an international report titled "our common future" in 1986 which commonly known as "The Brundtland Report".

through different ways such as ecological footprint, sustainable economic welfare, the genuine process indicator, happy planet index consumption, maintaining production opportunity, non-declining natural capital, maintenance of sustainable yield of resource service and global consensus [9].

3.2.1.2. Prosperity:

The period between 1950 and 1973 is commonly referred to as the *Golden Age* of economic growth, at least for the countries of Western Europe and Japan [34]. This period characterized by the belief in economic growth and mass consumption [9]. According to Rostow's stage theory the mass consumption society constitutes of the end goal humanity whereas, the final stage of prosperity is mature mass consumption stage [35].

3.2.1.3. Global justice:

Global justice means that the desired level of life can be achieved everywhere, and that it can be maintained. It therefore has both international and an intergenerational aspect. The human rights declaration adopted by the United Nation in 1948 marks the breakthrough of the quest of global justice [36]. Distribution of income is one central indicator of how just or unjust world became [9]. Headenus and Azar compared the quintile living in South and North (i.e. the richer countries which are mainly in Europe, North America, and parts of East Asia) countries. Some of their founding is as follow [37]:

- Income (compared in terms of market exchange rates among the respective currencies) is more than 70 times in North.
- Income (compared in terms of purchasing power parity exchange rates) is reckoned as more than 10 times higher in North.
- Consumption of animal food is 7 times higher in North.
- Release of carbon dioxide is 22 times higher in North.
- Consumption of electricity is 35 times higher in North.
- Consumption of paper is 89 times higher in North

At the turn of the twenty first century, the richest 5 percent of people receive one-third of total global income, as much as poorest 80 percent. While a few poor countries are catching up with the rich world, the differences between the richest and poorest individual around the globe are huge and growing [38].

4. Sustainable development and entrepreneurship:

The relationship between entrepreneurship and sustainable development has been addressed by various streams of thought and literature such as: ecopreneurship, social entrepreneurship, sustainable entrepreneurship and, in an indirect way also, institutional entrepreneurship. Table 2 represents the differences between these schools of thought

[39-45]. The term 'sustainable entrepreneurship' essentially combines two words; sustainability and entrepreneurship. This type of entrepreneurship looking for successful business in order to solve environmental and societal problems whereas *green social entrepreneur's community* has more comprehensive view in sustainable development which be explained in following section.

Table 2- Characterization of different kinds of sustainability oriented entrepreneurship [40]

Type of entrepreneurship	Core motivation
Ecopreneurship	Contribute to solving environmental problem and create economic value
Social entrepreneurship	Contribute to solving societal problem and create value for society
Institutional entrepreneurship	Contribute to changing regulatory, societal and market institutions
Sustainable entrepreneurship	Contribute to solving societal and environmental problems through the realization of a successful business

4.1. Green social entrepreneur's communities:

Definition of *green entrepreneur* should also be distinguished from *green social entrepreneur's community*. A *green entrepreneur* can be either making a business "green" or simply entering a "green business" [46]. In other words, green entrepreneurship seeks for ecological sustainability, while *green social entrepreneur's community* is a new definition and it looking for making changes in the relationship between economy, ecology and society towards a sustainable approach. Sustainability is not only viewed as ecological sustainability (see section 3-2-1-1) in *green social entrepreneur's community*. Economic prosperity and global justice are also considered as the essential elements for sustainability in the community and it is looking for innovative approaches to solve and redefine current situation. As it discussed earlier (see section 2), entrepreneurs are required to done some structural change through the market which will changes norms in community as well as economic aspect.

The concept of *green social entrepreneur's community* tries to redefine the current situation practically by creating innovative green social matter in the society. Our extensive work on rural development shows that synergetic value can be achieved by future town and village settlements, whereas local ecological production, environmental condition (e.g. soil and water quality), freedom and housing is redefined and improved in that framework [47]. As it was mentioned development is a process (see section 3-1) therefore it will be better done by providing long term plan as well as short action plan. The role of green social entrepreneur's community in the process of sustainable development could be demonstrated by Fig. 3. Two main roles are suggested for green social entrepreneur's community one as a part of economy which changes the structure of economy to more sustainable manner and another as norm creator in society. The second role acts as a holder for development. This will be formed in a society as a result of enterprise. Maintaining the achieved goals in development process is an important issue which could be

empowered by creating green social norms in a society to overcome the risk of falling down of achieved development.

Green social entrepreneur's community did not consider people as ecological polluters. Improving the ecological condition, making money and spreading global justice will be done by people. Therefore after creation of this community, some norms will be create among of society which be support the sustainability more stronger in comparison with environmental standards, authorities and so on.

Unbalanced further urbanization is a dead end road, deterioration of soil leads to more draught, flooding and decreasing food security already now. Based on the fact that humus rich soil is the key production factor for water, food and hundreds of industrial products [48], entrepreneurs can form communities of between 50 up to around 200 part time poly-productive micro-farms. Cost and energy efficient housing is a starting point for added value, incomes from highly intensive farming can cover parts of the income, small scale production another. With a suitable size that makes such a new town development attractive there will be a demand for childcare, schooling, health and old age care offering additional incomes. Such communities will and must improve soil quality and biodiversity, creating a positive footprint. Starting points are farms that are given up, they can be taken over by entrepreneurs communities. They should not be too far from a city but out of commuting range to have affordable land prices. Ideally beautiful areas are selected; up scaling can lead to a sort of a garden ring around cities. The idea was recorded in a TEDx video at Hamburg University of Technology in 2013 [49].

4.2. Challenges and required changes for creation green social entrepreneur's communities

Some of main challenges for creation this *community* could be summarized as follow:

- Social barriers such as public acceptance
- Economic barrier like marketing constraints, lack of financial support and vulnerability to economic shocks
- Knowledge barriers such as access to information, lack of training, access to training
- Political and governmental barriers such as unsupportive legal and regulatory framework

As it discussed in section 3, reaching to a sustainable development is look like global ethical trilemma situation. The ways to improve the global justice and the economic prosperity could be different from one society to another and this required greater understanding and knowledge for ecology, economy and society in each community as well as worldwide. *Green social entrepreneur's communities* could be implementing in micro and macro scale. But for overcome the economic risk it would be better to happen in the group entrepreneurship [50]. Redefine of existing system could be start first by change the designing stage which will be explained in next section.

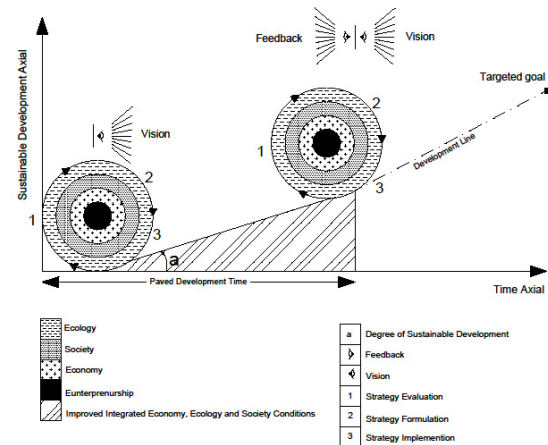


Fig. 3- role of green social entrepreneur's community in process of development.

4.3. Required changes in design stage for creation of green social entrepreneurship:

Design is the engineering stage where the greatest influence can be achieved in terms of sustainable outcome [51]. This can include material, chemical and energy inputs, effectiveness and efficiency, aesthetics and form, and global justice. The design stage also represents the time for innovation, brainstorming and creativity, offering an occasion to integrate sustainability goals with development. Sustainability should not be viewed as a design constraint. It should be utilized as an opportunity to leapfrog existing idea or design and drive innovative solutions that consider systematic benefits and highly synergistic impacts in the society [52]. In designing stage for creation the green social entrepreneurship increasing the integrity of economic, social and ecological goals should be considered in the development plan. This could be demonstrated by Fig. 4.

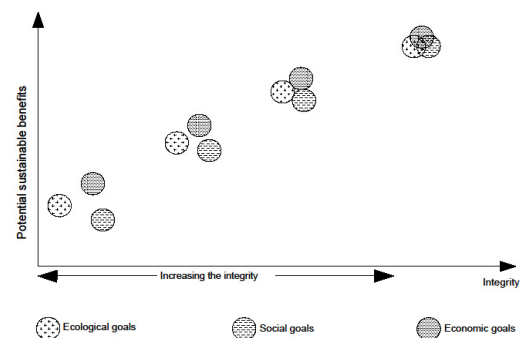


Fig. 4- increasing the potential sustainable benefits with increasing the integrity of development goals

5. Conclusion:

Creation of entrepreneurship will affects the society's norms and values, its institutions, its methods of production, the attitudes of its people and the way in which it distributes its resources. This could be an opportunity for turning the current situation, which is quite obvious, is not sustainable ecologically, to more sustainable situation. Sustainability could be viewed comprehensively as three goals of prosperity, ecological sustainability and global justice which are the dimensions of sustainable development.

Green social entrepreneur's communities could play two main important roles in sustainable development: first as an innovative community to change the structure of economy through the sustainability and second as a community who create and change the norms in a society for maintaining the achieved sustainable development. The *green social entrepreneur's community* could be created in micro and macro scale. But for overcome the economic risk it would be better to create in the group entrepreneurship. Economic, social, knowledge, and political barrier should be understood properly for creation this concept in each society. This can be realized in converting given up farms to multiple productive small businesses, parts of which is intensified organic food production complemented by diversified goods for the local market and services for the new town.

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