FROM THE MILLENNIUM DEVELOPMENT GOALS TO THE RESILIENCE CONCEPT – THEORETICAL SIMILARITIES AND DIFFERENCES[1]

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Abstract. *The authors of this paper indicate a significant way that theory and practice, but only slightly, crossed from the Millennium Development Goals (MDGs) to the resilience concept. Although both concepts had a common intention, wellbeing of the society, ways to achieve these objectives were set on a very different fundamentals and relationships. The concept of sustainable development and the Millennium Development Goals, which unfortunately have not fully come to life in practice, continued the concept of resilience and Sustainable Development Goals (SDGs). Three pillars, as the basis of the concept of sustainable development, were the basis for the creation of similar but more extensive pillars of the concept of resilience. Defined in 2016, SDGs accompany efforts to achieve long-term sustainable society, on a global level, that will be elastic to all kinds of changes and unexpected shocks of any kind. Through the division of SDGs on 17 global goals and 169 sub-goals, experts in the field of economy, ecology, society and institutions set up and implement a new system that will be able to adapt and to be resilient and elastic to changes that characterise the global reality.*

Key Words: *millennium development goals, concept of resilience, development, pillars*

1. Introduction

Modern society is faced with the most considerable economic, political, technological, ecological, social and similar changes. An intensive and unexpected increase in environmental problems, poverty, terrorism, migration, polarization of the world's wealth, the economic crisis, etc. are the direct and indirect consequence of rapid technological and social development. Hence the idea to create a new concept, which will be the basis for solving new challenges. The first concept that fulfilled

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those needs was the concept of sustainable development, which later developed into the concept of resilience.

The basic document for the realization of the goals of sustainable development is Agenda 21, a global action plan for sustainable development, adopted at the UN Conference on Environment and Development in Rio de Janeiro, 1992 [UN Conference on Environment and Development, 1992]. The overall objective is the integration of sustainable development at international, national, subregional and regional levels through the implementation of a series of specific goals. Agenda 21 is a document in which sustainable development is seen as a link between economic, social and environmental development. Addressing the question of ethics in Agenda 21 led to the creation of the Millennium Development Goals (MDGs), at the UN Millennium Summit in 2000. These eight goals were supposed to be realized by 2015 [The United Nations, 2015]:

1. Eradicate extreme poverty and hunger (halve the number of people living on less than one dollar a day and those who suffer from hunger, i.e. increase the amount of food for such a population)
2. Achieve universal primary education (regardless of gender, and make effort that all children remain in the system of as much higher level of education as possible)
3. Promote gender equality (improve the status of women, especially in the poorest countries by 2005 and eliminate gender disparity in primary and secondary education by 2005 and in all levels of education by 2015)
4. Reduce child and infant mortality by 2/3 not later than 2015 (thus affecting the connection of the Millennium Development Goals in the area of health and poverty)
5. Improve maternal health and reduce by three quarters the maternal mortality ratio
6. Integrate the principles of sustainable development into health care policies (enable reproductive health insurance and reduce the spread of infectious diseases, especially HIV/AIDS and malaria)
7. Ensure environmental sustainability (integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources and halve the proportion of population without sustainable access to safe drinking water)
8. Develop a global partnership for development (This objective includes the cooperation of developed and underdeveloped countries, which is a challenge. The realization of this objective includes further liberalization of non-discriminatory market and financial systems. At the same time, it was necessary to address the special needs of the least developed countries: abolish customs duties on their products, reduce the debt of highly indebted countries with the abolition of official bilateral debt, with increased official assistance to the countries that are committed to poverty reduction. This issue covered the solution for the problem of debt of

developing countries in order to make the debt repayment sustainable in the long term. To achieve this goal, it is necessary to help the younger generation to get a job and participate in the creation of national wealth.)

According to the United Nations (2015) report, the Millennium Development Goals were not fully met. Although there has been significant progress towards meeting MDG's in several countries, others are still seriously lagging behind [United Nations, The Millennium Development Goals Report, 2015]. This was the basis for setting up a new set of aspirational goals – Sustainable Development Goals (SDGs). Defined in 2016 by the United Nations, SDGs are formalized in the document "Transforming our world: the 2030 Agenda for sustainable Development". It deals with 17 goals which are global in character and as many as 169 sub-goals. The implementation of these goals is led by the UN Member States. An important difference between MDGs and SDGs is the structure of participants who supported and actively participated in goals development. To address certain difficulties with implementation of the sustainable development concept based on the Millennium Development Goals, the United Nations launched an initiative to include various social and economic actors, i.e. representatives of civil society and non-governmental organizations in the process of defining new development goals. The process of goal creation should include all parties who affected by the objectives and not just policy makers and experts from various fields. Such an extensive consultation process resulted from a new awareness that the newly defined objectives will be realized only if they are widely accepted, and then implemented into Member States' national development policies.

Partial failure of the implementation of the sustainable development paradigm through the Millennium Development Goals led to the creation of a new concept - the resilience concept, which tries to overcome the identified deficiencies using a somewhat different approach and by partially differently arranged pillars of resilience, taking into account the newly defined Sustainable Development Goals.

Resilience in many respects relies on theoretical and to some extent implemented practical experience of sustainable development. In the literature, sustainable development is viewed as a three-pillar system, except in the Sustainable Kingston approach, where the concept is based on four pillars, as well as resilience. However, an interesting fact is that in 2000, within the United Nations framework, the Commission on Sustainable Development developed a methodology for measuring sustainable development performances, where the indicators are grouped in the same way as the resilience concept is divided into four pillars: economic, ecological, social and institutional. Clearly defined Millennium Development Goals were certainly of great importance for the implementation of the principles of sustainable development.

The aim of this paper is to point out the theoretical parallels of two mutually similar and related concepts as well as dynamics of their development, bearing in mind that both concepts are rooted in the Millennium Development Goals. It could be said that the concept of resilience is a logical sequence in practice of a relatively unsuccessful attempt of the sustainable development implementation.

Resilience is a broad and multidimensional concept. The etymological meaning of the word suggests that the emphasis and effect is to strengthen and increase the overall capacity of the economy and society. The aim of the concept is to raise the resistance of all four pillars up to the higher level that will ensure recovery of possible unexpected shocks. In relation to sustainable development, resilience goes a step further, as it has a tendency to "put pressure" on the whole society and the economy to be more prepared to the occurrence of shocks in the future. For example, the whole economy and society should, as quickly as possible, recover after sudden and unexpected events. The idea is that resilience should make societies more elastic, in the sense to make them more ready for negative surprises even before the shock occurs, i.e. to learn from experience. Accordingly, a resilient economy directly affects the stability and speed of economic growth.

The concept of sustainable development entered the official terminology and the use in the '80s of XX century. Formally, this approach to sustainable development of society in the broadest sense was widely accepted, and the international documents are verified by a large number of states. The reason for global acceptance of this concept is directly related to the adoption of the Millennium Development Goals at the UN Millennium Summit in 2000. Therefore, many countries, including Serbia, introduced national strategies for sustainable development, followed by the local agenda. Resilience, as a concept, appeared at the same time but in the field of psychology, i.e. it characterized the behaviour of individuals. Since the mid '90s, interest in this field extended to pedagogy, and at the end of the same decade to ecology and the management of ecosystem. In the second half of the 2000s, the term, which was later developed into the whole concept, was researched by economists from the standpoint of economic trends i.e. fluctuations in the economy.

2. Literature Review

The concept of sustainable development was made official in 1987, when Environmental Strategy was developed by the International Association for the Protection of Nature and Natural Resources, with the main task "to achieve sustainable development through the protection of vital resources" [Lele,1994]. However, the Strategy as well as the Report of the Commission for Environment and Development, also known as "Our Common Future", is very similar to the 1972 Report of the Club of Rome. The "Our Common Future" report is popularly called the Brundtland Report, while the definition from the Brundtland Report is generally accepted as an official definition of the concept of sustainable development: "Development should meet the needs of the present without compromising the ability of future generations to meet their own needs". If development is understood as increasing welfare, then the concept of sustainable development implies non-reduction of welfare over time. In this way, the Brundtland Commission promoted a politically acceptable idea of the new concept. Interestingly, the "Limits to Growth"

were harshly criticized and misunderstood by economic experts, which was not the case when the Brundtland Report was published a decade later. This report was interpreted as a preferred continuation of the overall economic growth while the "Limits to Growth" were understood as a document that emphasizes redistribution.

Therefore, "The Limits to Growth" had no impact on the national and international environmental policy. The reason for the acceptance of Brundtland Report is rooted in four important facts: [Golušin-Munitlak Ivanović- Teodorović,, 2011, pp 772-776]

1. The proposed concept of development emphasizes the importance of meeting the current needs of the population and economy, without compromising the ability of future generations to meet the same needs.
2. The importance of international cooperation is emphasized as essential, but realistically speaking it is the most difficult principle to be applied. Policies of different countries are conditioned by local and regional interests and therefore do not comply with the ecological needs in wider or global level.
3. It was suggested that the concept of sustainable development should be internationally defined and applied by adopting the United Nations Agenda on sustainable development, i.e. holding the world Conference on Environment and Development.
4. The special contribution of this concept is the recommendation of establishing and strengthening the national environmental agencies, institutions and organizations.

The concept of sustainable development defined in such way is widely accepted. Accordingly, a large number of internationally accepted and signed documents was published, which was followed by each country preparing a strategy of sustainable development, supporting norms and laws, with the possible development of the Local Agenda 21. What follows are the most important documents that served as the guiding ideas and sources for further elaboration of the concept: Agenda 21, Rio Declaration on Environment and Development, Millennium Goals, Kyoto Protocol, Montreal Protocol, Europa 2020, Vienna convention, The Paris Agreement: FAQs, etc. The main reason for the partial success of conceptually ideally designed concept is insufficient promptness in implementing these documents, but also unwillingness of largest producers and polluters to sign and accept the obligations under certain documents at the global level.

Repetto (1985, p.10) gave an explanation on what Brundtland definition implies: economic systems should be managed so that the present generation lives from dividends on available resources. This view has a lot of common elements with Hicks's concept of the ideal income [Hicks, 1945, p 172]. In the middle of the last century, Hicks emphasized that the calculation of income makes it possible to determine the maximum amount that can be spent in the current period, while at the same time not diminishing the prospects for consumption in the future. However, Solow somewhat differently define the concept of sustainability [Solow, 1992, p.15] pointing out that the term does not imply a strict obligation to leave the environment

in the identical state as the initial one. Solow emphasizes that possibilities should be preserved for having quality of life in the future, using the possibility of substitution in production and consumption. This means that there is a moral obligation to enable to future generations to create prosperity, which, according to this author, is the obligation of a general and not specific nature.

The concept of resilience in the late '80s of the twentieth century was used in psychology, indicating the individual's ability to adequately deal with the problems and to further improve, grow and develop. The concept of resilience is thus defined as the ability to successfully adapt to the new situation, irrespective of the threats and challenges that characterize the environment of the individual [Masten-Best- Garmezy, 1990, pp 425–444] [Garmezy,1991, pp. 459-460, 463-466]. Resilience therefore characterized people who positively faced conditions caused by stress and shock, i.e. they perceived these events as a challenge for further development and improvement. In their work, the authors Masten, Best and Garmezy (1990) defined resilience as the capacity of the individual for successful adaptation, regardless of the existence of threats or challenges, because such a situation is perceived as an opportunity for own development and the development of new competence.

The next field of research on resilience was pedagogy. Since the mid '90s, new research appeared [Gordon-,Wang, 1995, pp 225-275], as well as serious studies on resilience of students and pupils and their results under stressful circumstances [Waxman-Gray- Padron, 2003, pp. 1-29]. Some authors [Hertel-,Schuets,-Lammers, 2009, pp 942-945] even analysed the effect of emotional intelligence and mental disorientation on success, i.e. working under stress. It was found that in the same conditions some students achieve poorer results, and they are characterized as nonresilient, unlike the other group, which under the same conditions achieved much better results.

At the end of the '90s, this area was chosen as the topic for researchers in the field of ecology. Authors Peterson, Allen and Holling (1998, pp. 6-18), observe the correlation between ecological resilience and biodiversity, emphasizing the role of environmental institutions through an adequate conceptual model. Through a case study, authors Gotham and Campanella, (2011) analysed the ability of ecological systems to recover from a disaster as soon as possible (specifically the hurricane Katrina in New Orleans). This understanding of resilience can be defined as the ability of ecosystems to maximally resist changes and quickly return to the state before the natural disaster, or to the initial state.

Economic resilience was studied in the mid-2000s. One of the most important studies is the research by Rose (2004, pp 307-314), which provides definition of the concept of resilience as well as proposals for measuring economic resilience to disasters, applying the adequate concept of management. Authors Kodzrycki and Munoz observe, besides economic, the social implications of economic stresses on cities in the United States. Outstanding contribution to the research on the impact of economic resilience at the regional level is given by the authors Hill, Wial and Wolman (2008, pp. 5-21). Many authors, not strictly mentioned here, have developed various

methods for managing the society in a way to reduce the influence of the uncertainty of economic fluctuations but also to learn from previous experience [Lang, 2011], [Hassink, 2010], [Hudson, R., 2010].

It should be noted that in addition to the authors mentioned above, other authors [Holling, 2001], [Gerst-Doms- Daly, 2009], [Adger, 2000], [Perrings, 1996] also dealt with the mutual relations of all four pillars of resilience: economy, society, institutions and environmental protection.

3. Pillars of Sustainable Development

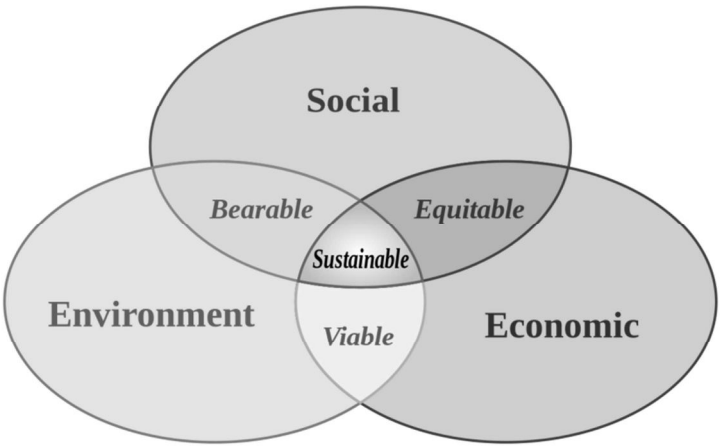
3.1. Sustainable Development Based on Three Pillars of Sustainability

At the World Summit on Social Development, in 2005, [United Nations , 2005], the objectives of the concept of sustainable development were defined, based on three pillars:

1. Economic development
2. Social development
3. Environment.

The relationship between these three pillars is shown in Figure 1. If the concept of sustainable development is indicated in this manner, sustainability lies in the intersection of all three subsystems, which is the common denominator of all three pillars.

Figure 1: Concept of sustainable development based on three pillars



Source: UCN 2006, The Future of Sustainability. Rethinking Environment and Development in the Twenty-First Century, Report of the IUCN Renowned Thinkers Meeting, 29-31 January 2006

As for all values, it was necessary to develop indicators to monitor the movement of components and subsystems of development in all three pillars. Although there are three pillars, the Commission for Sustainable Development proposed four key areas within the program of indicator significance testing. In the period from 1996 to 1999, indicators were tested and methodology of measurement was proposed using the sample of 22 countries. The purpose was to introduce indicators as instruments to make decisions that have an outcome on sustainable development at the national level. The result was the framework network of sustainable development indicators, based on Agenda 21, but adjusted to the proposals of the countries that participated in testing. Methodology with 134 indicators was developed within the United Nations, i.e. the Commission for Sustainable Development (CSD). The following table shows the basic and initial shape of the organizational chart, developed in the framework of the United Nations.

Table 1: Key areas proposed by selected countries within the indicator significance testing (CSD) Testing Country Priorities

Social subsystem	**Environmental subsystem**
Education	Quality and purity of water
Employment	Agriculture-food supply
Healthcare / water supply / utilities	Town planning
Household	Coastal area
Quality of life	Ecological status of marinas and protection of reefs
Cultural heritage	Fisheries
Distribution of income / poverty	Biodiversity / Biotechnology
Crime	Sustainable forest management
Population	Air pollution
Social and ethical values	Global climate change / sea level rise
Participation of women in all spheres	Sustainable consumption of natural resources
Access to natural resources	Sustainable tourism
Structure of society	Changes in land use
Social equality	Restrictive capacities
Economic subsystem	**Institutional subsystem**
Economic dependence / debt	Integrated decision-making
Energy	Capacity building
Models of production and consumption	Science and technology
Waste management	Information transparency and availability
Transport	International conventions and cooperation

Mining	Role of governments and civil society
Economic structure and development	Legal institutions and legislation
Trade	Preparedness for possible natural disasters
Productivity	Participation of the public

The source is adapted to: United Nations Department of Economic and Social Affairs, *Testing the CSD Indicators of Sustainable Development: Interim Analysis: Testing Process, Indicators and Methodology Sheets*, Technical Paper prepared by the Division for Sustainable Development, 25 January 1999, and United Nations Department of Economic and Social Affairs, *UN CSD Theme Framework and Indicators of Sustainability,* Final Draft, Price Waterhouse Coopers for Division for Sustainable Development, November 2000, 18.

Although there are three pillars, the chart indicates the intention to observe them through four subsystems or four types of indicators: 1. Social, 2. Economic, 3. Environmental, and 4. Institutional subsystem.

3.2. Sustainable Development Based on Four Pillars of Sustainability

Unlike the concept of sustainable development, the Sustainable Kingston approach to sustainable development, i.e. sustainable society, is based on four pillars of sustainability. The Sustainable Kingston concept has a socially responsible and non-profit approach, which supports the efforts integrated into four pillars of sustainability: social equality, the development of culture, economic development and responsibility towards environmental protection, i.e. development of environmental awareness. Sustainability is in the long term observed through four pillars, their integration that drives sustainability, highlighting innovation and reducing duplication of effort to achieve sustainability. For development of such a modified approach to sustainable development, the Sustainable Kingston Plan was created, which is based on the view of the Scottish-born American naturalist, John Muir. The plan is based on Muir's sentence: if anything is viewed or picked out by itself, it is understood that it is hitched to everything else in the Universe. There are controversies about the accuracy of the translation of the original text, but the essence is the same [Muir, 2004. p 110][4].

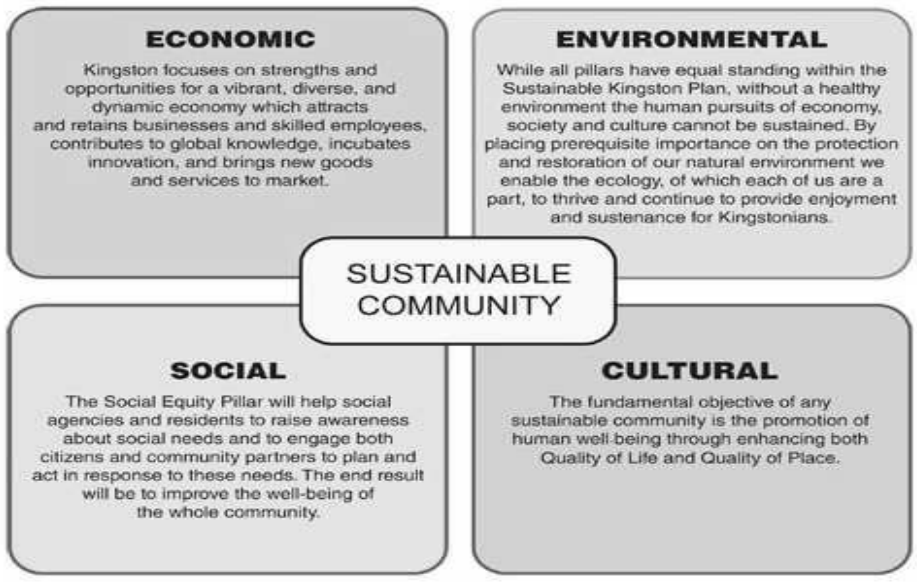
Such a defined Plan indicates that in the long term the greatest importance is attached to the pillar relating to the protection of the environment, since all human activities have an impact but also depend on the condition of the environment. Healthy environment will determine and facilitate economic processes due to resource

[4] The opinion of many theoreticians who subsequently analysed exact quotations of this sentence, published in 1911, is that it reads: "When we try to pick out anything by itself, we find it hitched to everything else in the Universe", as specified in the used list of literature of this paper: Muir, J., 2004 My First Summer in the Sierra, Paperback, Dover Publications, p 110 (Chapter 6), although there are opinions that the disputed sentence reads: "When one tugs at a single thing in nature, he finds it attached to the rest of the world."

base, and at the same time it thus affects the other elements of sustainability: cultural and social pillar. Nevertheless, sound economic fundamentals, i.e. the economic pillar are necessary for adequate development of cultural and social pillars. The following tasks are the areas of special emphasis within the economic pillar of Sustainable Kingston Plan: economic development, the economic development of community, i.e. society, labour market development, issues of infrastructure, tourism and agriculture.

Still, it could be said that the pillar relating to environmental protection is "first among equals", because long-term sustainable ecological environment is a necessary condition for the other three pillars of sustainability, and thus economical pillar as well, to efficiently and effectively function.

Figure 2: Sustainable Kingston approach to sustainable development based on four pillars



Source: Kingston's Strategic Plan 2011-2014, available at: https://www.cityofkingston.ca/documents/10180/30029/2011-2014_CoK_StrategicPlan.pdf/7a74fbba-21a7-415a-84b2-dd7ec34eb3fd

Sustainable Kingston Plan highlights the most significant challenges in the global environment preservation: climate change, depletion of non-renewable resources, destruction of natural habitats and biodiversity, pollution of the ocean and the increased pressure of the growing global population. Starting from the requirements relating to environmental protection, these demands have an economic, social and cultural element [Sustainable Kingston Plan, 2010]. The vision of Kingston Plan is *Kingston – Canada's Most Sustainable City*. The society created according to this vision is a city where the population has a desire to live and work, because the

meaning of the existence of such a community is meeting the needs of the population in the present and in the future. It is interesting that such a society emphasises environmental protection and increase in the quality of living conditions.

Such an understanding of sustainable development and based on four pillars or subsystems, provides the basis for further research on the concept of resilience, which also relies on four pillars.

4. Concept of Resilience

At the Council of Ministers of OECD member states in Paris in 2014, the OECD overview document was adopted [Overview Paper on resilient Economies and Societies, 2014, pp 2-6]. The document clearly delimited four pillars of resilience: resilience of the economy (economic resilience, as a narrow term), the resilience of society, institutional resilience and environmental resilience. Different and unexpected changes in the global market generated the need for research in the field of regional and economic resilience.

Modern processes, i.e. economic cycles, which include jump, reconstruction and recovery are not new in the fundamental sense. An effort to find needed answers through resilience may result from the general characteristics of the modern environment: the instability and insecurity, i.e. seeking "formula" for adaptation and survival. Dominant and constant awareness of the risks in economy, politics and ecology is present in most developed countries. Those are the challenges of the global type and geographic boundaries make these problems and risks permeable, which are increasingly viewed in a regional context [Christopherson-,Michie,- Tyler,, 2010, pp 3-10]. The mutual dependence of economic and environmental crises has increased the awareness of the vulnerability of both pillars. Therefore, this concept is used to find new approaches to their elasticity [Hudson, 2010, pp 11-25], [Pike-Dawley-Tomaney, 2010, pp 11-17]. For the reasons of "permeability" of national and regional boundaries in all areas, research in the individual countries are rare, although Austria conducted an analysis for its own needs in 2009. Karl Aiginger tried to find the answer on how the national economic structure can be more resistant to financial or other shocks, i.e. how economic policy can stabilize the economy before and after the shock [Aiginger, K., 2009, pp 1-16]. Under the influence of the ever growing changes in the global market, the need for research in the field of economic and business resilience is increased. Accordingly, OECD launched the project in 2012 called "New Approaches to Economic Challenges" (NAEC), and thereby officially set up an institutional base for analysing issues of economic resilience. Over time, the European Union noticed the importance of the stabilization of the economic environment, and therefore it incorporated elements of a new sustainable growth into the Horizon 2020 strategic framework. In the project cycle 2014-2015, the resilience concept was first introduced by "Resilient and sustainable economic and monetary union in Europe" as a framework for funding research in this field (EC, 2015 in Zubovic, J., 2016, pp 38-48).

The economic crisis of 2008 stressed the importance of strengthening the resilience of the economy, society and institutions, while the need for environmental resilience, due to previous environmental disasters, was formerly known. Strengthening resilience is of great importance due to the global complex policy, deep-seated demographic, migration and technological trends, the growing environmental pressures, which increases the likelihood of critical events with the negative consequences for welfare and economic growth.

As a multidimensional phenomenon, which involves interrelated factors and conditions, this concept implies understanding the causes of the risks but also opportunities to develop learning through struggle with problems or learning from previous experience. According to the guidelines of the OECD Ministerial Meeting in Paris in 2014 [Overview Paper on Resilient Economies and Societies, 2014, p 2], there is no single methodological way of measuring the level of resilience nor a specific analysis for solving this specific field. However, at the same time the emphasis is on connecting all four dimensions of resilience, as this affects the growth of the capacity of the individual, organizational and systemic ability to promptly and efficiently recover from shocks.

4.1. Economic Resilience

Economic resilience implies the ability to strengthen the capacity of macro economy to withstand shocks, and reallocate threatened resources to areas that offer new growth opportunities. This will minimize potential weaknesses and promote inclusive vital growth. As previously mentioned, research on resilience at the level of specific countries are not yet sufficiently developed, however, some guidance can be given. Economic resilience of the country depends on the influence of its exposure to global economic conditions, i.e. trends and the direction of these relationships, but also on the diversification in geographical terms and in trade.

Fiscal policy and effectiveness in terms of automatic stabilization are also of great importance. Monetary and budgetary policies that set targets on the basis of low and stable inflation and strong public finances can support economic resilience. On the other hand, low government debt and sustainable fiscal balance enable fiscal security and strengthen resilience of a country to the short and long term shocks. Basically, those are measures that return the entire economy to a balanced state, i.e. the condition before the shock.

Economic resilience and strong growth must exist together. In order for economic resilience to provide the best results, reform should aim to growth in productivity and competitiveness, including strengthening and greater participation of institutions. The 2015 NAEC report [OECD, 2015, pp. 1-127] specifically noted that the continued growth of GDP is not necessarily a signal that the economy is completely healthy, because the growing income inequality and deteriorating bank balance sheets may appear as hidden risks, as they are not covered by the values that determine the size of GDP. The reforms aimed at supporting economic resilience

performance can have side effects for overcoming sensitivity to shocks and their expansion. Some types of tax increase, changes in spending reforms, financial and import-export openness can increase the sensitivity and vulnerability of the economy, and therefore must be taken into account when designing policies, so that economic resilience can have an optimal result [Aiginger, 2009, pp. 1-16].

On the other hand, the regulations relating to labour and products, facilitate business and help long-term growth. The overall impact on future shocks is reduced by reallocating resources in the economy [Adger, 2000, pp. 347-364]. Policies that support entrepreneurship and investment in capital based on knowledge, have multiple benefits to the growth of economic resilience. Education and active labour market policies can help mitigate the inequality through impact on wages and employment.

Experience has shown that investments in innovation and capital based on knowledge significantly affect the growth of economic resilience. The application of this practice shows that the capital based on knowledge is resilient to crises and shocks, but on the other hand, in this case there are special requirements. Investments in capital based on knowledge requires constant changes in the field of education, the introduction of lifelong learning, the acquisition of specific skills, and the corresponding labour market policies [Waxman, H.C., Gray, J.P., Padron, Y.N., 2003, pp 1-29]. Promoting job skills training and continuing education is of great importance for the development of working contingent in terms of its better adaptation to labour market needs. In a broader context, social and proactive economic policies are essential to mitigate the impact of falling economic indicators and ensure safety of workers. In this case, it primarily implies the safety of workers who have lost their job, so they can find a new job as soon as possible based on the access to knowledge.

Promotion and encouragement of investment in capital based on knowledge and innovation can be achieved by harmonization of policies that allow reallocation of resources through the operation of labour, product and capital markets as well as laws on bankruptcy that are not too strict in case of failure. At the same time, providing freedom for the dynamics and the creation of business start ups and efficient process of reallocation of resources in all sectors of the economy, including the service sector, are of great importance for strengthening the resilience [Pike, A., Dawley, S., Tomaney, J., 2010, pp 1-17]. Activities to be prevented are the cost and highly distortionary measures that artificially support excess of capacity and prevent market mechanisms by facilitating the efficient reallocation of resources [Lang, T., 2011, pp 1-24].

On the other hand, the structural policies and institutions that lead to a low structural unemployment also favour the resilience of the labour market. In this case, it implies the negotiations on the amount of income, well-balanced protection of workers in the labour market, clearly defined working hours, regulations and the system of benefits for the unemployed. This indicates the fact that labour markets are

essential for economic and social resilience while simultaneously promoting inclusive growth [Hudson, R., 2010, pp 11-25].

The issue of resilience, especially in economics, is very difficult to observe in isolation at the national level [Aiginger, K., 2009, pp 1-16]. As the process of global integration intensifies, the effects of economic shocks can be accordingly distributed among the partners in business, i.e. the growth of international cooperation can positively influence the definition of business rules, reduction of costs and improvement of risk management at the global level [Hassink, R., 2010, pp 45-58]. Therefore, the strengthening of international cooperation in creation of policy and laws relating to competition may affect the sustainable economic development and economic resilience, by reshaping the applicable rules according to the new global business conditions [Hill, E., Wial, H., Wolman, H., 2008, pp 1-21]. Base Erosion and Profit Shifting (BEPS), as a tax reform, aims to improve resilience, diversifying and expanding sources of tax revenue. To ensure long-term effectiveness of this reform, in terms of the amount of fiscal revenue and taxpayers, each country is required to coordinate efforts with other countries, because the benefits from the global tax policy compliance will contribute to increasing global integration and resilience [Gerst, J., Doms, M., Daly, M.C., 2009, pp 1-11].

4.2. Social Resilience

The resilient society is one that can cope with shocks by adopting an adequate set of social and economic policies and practices. Efficient and effective social policies are the basis for the system of protection that enhances social and economic inclusion. Social resilience is characterized by institutions that can provide services, which can help members of society cope with the changes and fully participate in decisions from the economic field. These institutions should focus their resources on the most vulnerable members of society [OECD, 2014, pp 5-6].

Resilient societies are not achieved by simple redistribution, although some forms of redistribution in the economy and society as desirable and necessary. The high degree of income inequality is often harmful to the social, economic and institutional resilience, as it undermines social homogeneity and the sustainability of strong growth, and reduces trust in public institutions. In contrast, the high level of trust is in the strong cohesion with low levels of income inequality. In societies characterized by income inequality or unequal opportunities (for employment, career advancement, the issue of gender inequality, etc.), members of society hardly or not at all share the same sense of belonging to society with mutual distrust [Persson, T., Tabellini, G., 1994, pp 600-621].

In order to develop resilience of society, the optimal approach would be to strengthen personal skills and capacities of the population to ensure that all members of society are competent in certain areas. In this way, they are able to use their strengths and opportunities in new situations, and to more efficiently adapt to conditions of resulting changes. Encouraging individuals to improve and continuously

work on improving their skills through access to market-oriented and quality education, enable these members of society to achieve good economic and social results. Thus, a stronger and more socially resilient environment is built [Waxman, H.C., Gray, J.P., Padron, Y.N., 2003, pp 1-29]. Resilient societies are able to assist residents who are on the labour market in terms of adapting their skills and comparative advantages in relation to changed requirements of the labour market. This is done by focusing activities on those social groups that are at risk the most from long-term failure to participate in the labour market [Hertel, J., Schuets, A., Lammers, C.H., 2009, pp 942-945].

The quality of work activities does not only affect an individual's well-being, but also the well-being of his/her family, as well as the level of motivation and productivity. Observing the society as a whole, that leads to the growth of aggregate labour productivity and to all aggregate economic performances. There is a possibility that, for achieving resilience, the society can be conceived so that the majority of the population spends its greater part of working life on activities that have a positive impact on quality of their life and well-being but also the lives of their families [Kim, K.S., 1997, pp 1909-1924].

Given the vulnerability caused by the latest crisis, the most affected was the younger working-age population that should have priority and better conditions in employment after the crisis. The best effects of public investment in human capital are realized in early childhood, especially if they are focused on the most vulnerable part of population and when investment period lasts throughout the period of youth. This means that significant long-term positive effects on the economic and social welfare are achieved when investment in education starts in the period of growing up. The current generation of young people has acquired the highest levels of education, but they are still faced with a high risk of unemployment than any other age group in society. While this part of the population was acquiring knowledge, the older generation was employed, and gained revenue. At a time when education was completed, due to the onset of the crisis, young and educated people were not able to find a job, despite the high level of education. For most unemployed young people, the unemployment phase is the current state of the transition from education to employment. However, there is still a group of young people for whom this state still tends to remain permanent, as it can lead them to long-term exclusion from the labour market [Kim, K.S., 1997, pp 1909-1924].

Consequently, the population of most developed countries is stationary and the share of elderly residents in relation to the working contingent is changing, in the sense that the share of older population is increasing, which should be financed from pension funds and needs medical care. On the other hand, the number of working-age population is reducing, which should finance pension funds [Lang, T., 2010, pp 10-24]. A country that aspires to social resilience should identify the challenges and opportunities that are the result of the aging of the population, while the issue of funding of pensions, health insurance and long-term care of the elderly should be adequately resolved. These demographic changes increase the opportunities for new

forms of investment in products, stationary and medical institutions with equipment and specific services. Social policies that promote this synergistic and inclusive growth may be helpful in addressing these challenges, characteristic for the XXI century. Policies related to education, balanced regional development, real estate and financial markets may also affect the reduction of inter-generational inequality, i.e. help all generations participate more actively in the labour market during the years of active work and be better prepared for a long, healthy and dignified life when retired [OECD, 2014, pp 5-6].

In developed countries, the issue of gender equality has long been implemented in all segments of society. An interesting fact is that the increase in the share of women in the labour force may affect the resilience of households, and therefore the whole society and economy. Thus, the ability of society is strengthened to create new opportunities, new and different jobs, i.e. to innovate in its entirety. Closing the gap in income on the basis of gender and ensuring greater participation of women in the labour market, do not necessarily and essentially, lead to gender equality, but they are also crucial for the resilience of society. Reintroduced focus on gender equality after 2015, took into consideration women's leadership in the development of effective strategies, because the resilience of family, community and society can be thus raised to a higher level. If women are equally employed and gain income in the family, the resilience of family is thus increased. If a family member loses a job, and a wife still earns income, vulnerability of family is reduced. Resilience of community and society as a whole is raised in this manner [Pebley, A.R., 1998, pp 377-389].

One of the characteristics of resilient societies is that they are medically healthy. State governments should take into account that population, as the driving force, must be of satisfactory health in order to identify problems and carry out an adequately responsible policy in this area. A usual characteristic of developed countries is that its population is obese according to nutritional scale, and the health of the population can impede the development and incur the huge economic and social costs [Pebley, A.R., 1998, pp 377-389].

4.3. Institutional Resilience

The institutions have an important role in strengthening resilience if the effect of an unexpected shock depends on the capacity and competencies of institutions to respond to the shock. Resilient public institutions governed by the citizens, must be organized in a manner that promotes the integrity of the institution, but they also need to be accompanied by increased trust of private sector and business to institutions. Intensive public participation increases democratic engagement and thus trust in government. Open, transparent and inclusive policy creation helps to ensure that the policies managed by the government meet the needs of the population [Boin, A., Lodge, M., 2016, pp 289-298].

Trust in government institutions facilitates economic decisions relating to investment, employment and consumption, helping to boost economic growth.

Openness and transparency are the backbone of resilient society because these make cooperation between the population and the country stronger and fairer. If the government and public institutions operate with greater participation of the population in terms of share in policy creation, from concept to implementation, such governments are characterized as "open governments" [Duit, A., 2016, pp 364-380].

The effective delivery of public services and strong social institutions serve to strengthen citizens' trust in the government. Providing visibility and higher quality of public services that meet the needs of the population is therefore important to establish trust in the government, and thus increase resilience. Regional, municipal and local politicians are at the "front line" of these efforts. Trust in government is built mostly at the local level, where many services are delivered and where the relationship between the government and the population is the closest and obvious. The issue that is directly related to the public integrity and trust is corruption. According to the 2015 OECD report [OECD, 2015. pp 2-127], the data indicate that entrepreneurs and citizens perceived corruption. Therefore, the mechanisms and instruments aimed at the prevention of corruption are necessary. Defining standards of conduct for the political decision-making enhances the credibility and legitimacy of the decision-making process and a sense of fairness of the government and decision-makers. The biggest challenge is transparent and fair decision-making process regarded by the society as proper and fair. A rigid framework of integrity to preventively solve corruption is in strengthening high standards of behaviour and thus strengthening the credibility and legitimacy of the participants in the decision-making policy.

4.4. Environmental Resilience

Resilience of the economy, society and institutions cannot be maintained without taking into account the resilience of the ecological system and environment that support them. At a time when a global society is facing a growing environmental degradation, excessive consumption of resources and potential costs caused by climate change, strengthening the environmental resilience is an extremely important issue. At the OECD Ministerial Meeting in May 2011, work on Green Growth approach clarified the need to find win-win solutions for growth but also for ecological protection of the environment [OECD, 2011]. Policies that adapt to environmental challenges can have beneficial effects on property, employment and hence the income. The transition to a low-carbon economy can contribute to increasing employment in some companies and sectors. The correct policies are those that use all the synergic effects and avoid potentially negative consequences. Such policies introduce resilience of the environment and at the same time do not make economic, social and institutional costs [Rodriguez, M.C., Haščić, I., Souchier, M., 2016 pp. 1-78].

The most extensive and expensive environmental risk is climate change. The basis for strengthening any strategy of global resilience is to identify the biggest causes to climate change. The costs of inaction on the specific problem can be very high. The OECD projection indicates that climate change may reduce the world GDP by 2060

ranging from 0.7%-2.5%, in the case temperature rises from 1.5ºC to 4.5ºC compared to the global average temperature. The international community has taken a position to reduce greenhouse gas emissions so that global temperature rise may be admissible to 2.0ºC above the level that was in the pre-industrial period. Achieving this goal is not easy and requires alignment of strategy through a series of policies: economic, fiscal, investment, energy, trade, competitive and environmental one, to support the extensive global economic transformation. Joint multidisciplinary project by OECD, IEA (International Energy Agency), NEA (Nuclear Energy Agency) and ITF (International Transport Forum) in 2015, aims to help members of these institutions to identify the way in which this could be achieved [OECD/IEA/NEA/ITF/, 2015].

Unsustainable exploitation of non-renewable natural resources, in addition to climate change, is a major cause of risk, because it can negatively affect the availability and quality of production factors. These types of resources cannot be renewed nor they can re-emerge, but they are essential for the process of production and service provision. Non-renewable resources are: fossil fuels (coal, oil, natural gas, various types of stone, metals, uranium and other materials and minerals) [Munitlak Ivanović, O., 2007].

In addition to the improper utilization of resources, air pollution is a serious risk to the environment. This problem is especially true for large cities and densely populated areas. In addition to serious negative consequences for the health of the population, air pollution causes material damage. Particularly vulnerable are the sources of clean water, reduction or loss of biodiversity, reduction in agricultural yield, but also the damage that occurs in all forms of cultural heritage [Peterson, G., Allen, C.R., Holling, C.S., 1998., pp 6-18].

Knowledge of the mechanisms, i.e. better use of environmental taxes or compensation for environmental damage, helps to promote greater efficiency in resource use and coverage of costs incurred in the provision of related services. Penalties of this type are called corrective taxes or Pigouvian taxes. The original idea of introducing the tax system instrument that would be in the function of preserving the environment, was provided by welfare economics theorist, Arthur Pigou, at the beginning of XX century [Pigou, A.C., 1918]. Pigou's idea of environmental tax was later supported by other theorists [Pearce, D.W, 1978]. According to this view, environmental taxes would be able to correct the imperfections and limitations of markets caused by negative externalities. Some contemporary economists point out that the implementation of environmental taxes on pollution brings a double dividend [Parry, I.W.H., Bento, A.M., 2000, pp 67-96]. Double dividend implies that the collection of this tax increases fiscal revenues, while the government acquires the ability to rely less on other types of taxes (this implies taxes on capital, which discourage savings, and taxes on labour, which discourage work). However, the essence of this type of charge is that its introduction stimulates environmentally friendly production [Golušin, M., Munitlak Ivanović, O., Filipović, S., Andrejević, A., Đuran, J., 2013 pp 1-12].

From the historical aspect, the shortage of resources gave rise to a better level of utilization of resources, more productive technological solutions or completely new innovations, technologies, i.e. new alternative resources and substitutes. One of the assumptions is that the relevant features of nature, that is economically relevant functions (as a supplier of natural resources and the recipient of emissions) may be substituted for natural capital. This assumption is an optimistic result concerning the undefined time horizon for carrying out economic activities. For justifying this view, optimism theorists use historical experience because developed societies have successfully overcome the problems of lack of resources. As an example, the lack of wood resources in England in XVII century affected the activities of replacement of scarce forest resources with the opulence of available coal. The result of those processes are many innovations and inventions, such as the steam engine, which in turn enabled the discovery of other inventions. In this way, a shortage of resources led to the discovery of new resources, as well as to technical progress [Golušin, M., Munitlak Ivanović, O., Dodić, S., Vučurović, D., 2011, pp 451-464].

However, if new, alternative or renewable resources are unavailable on the market be for technical or economic reasons, production bottlenecks will inevitably appear. This affects the pressure for supply of resources and thereby pressure is placed on both the price of resources, and the price of output. Inevitable consequences are fluctuations in the market price of goods and services, which have a negative connotation in relation to the economic and social resilience.

5. Conclusion

Given a number of mentioned problems, it is evident that countries face a number of different causes of global risks, which have the potential systemic effects as a result of natural or induced phenomena, pandemics, major accidents and the like, which cause environmental shocks. Against a complex background of technological advances, demographic shifts, climate change, the critical risks can develop unforeseen and quick negative events and shocks that spread across national borders within the global community. Such powerful challenges can be supported by the objectives of sustainable development as well as in the implementation of Millennium Development Goals that are obsolete only in terms of time.

Completely normal expectation of the population is that the government should readily face the occurred shocks, in terms of public expectations and needs of the population, so they can still feel safe and secure. Entire community, population and economy expect the government to be promptly and adequately prepared for a wide range of potential shocks and to effectively respond in order to preserve life and minimize damage.

Resilience, therefore, includes knowledge and continuous improvement of managerial responses to the risks, such as Risk Management, including developing the capacity for rapid recovery of basic economic and social functions after all kinds of

shocks. This includes the identification of priorities by areas and a clear policy framework that creates incentives for the private sector, infrastructure operators and society as a whole, which is more broadly covered by Item 8 of the Millennium Development Goals. The aforementioned implies government investment in adaptive capacities in crisis management in order to better prepare for unexpected shocks, improvement of early detection of problems and development of warning systems, with the continuous implementation of the exercises for such cases. This certainly affects the increase in the level of inter-agency cooperation and international coordination in quite a number of areas. OECD was one of the first to prepare a document with recommendations for countries in such critical situations, which contain strategic guidelines relating to the wide range of problems, followed later by other international institutions, notably the European Union, which created similar documents.

References

Adger, N.W. (2000), "Social and ecological resilience: are they related?", *Progress in Human Geography*, Vol. 24, No. 3, pp 347-364

Aiginger, K. (2009), *Strengthening the resilience of an economy, Enlarging the many of stabilisation policy to prevent another crisis*, OECD, pp 1-16 (www.oecd.org/eco/43558031.pdf)

Boin, A.-Lodge, M. (2016), "Designing resilient institutions form transboundary crisis management: a time for public administration", *Public Administration*, Vol. 94, No. 2 pp 289-298

Christopherson, S.-Michie, J.-Tyler, P. (2010), "Regional resilience; theoretical and empirical perspectives", *Cambridge Journal of Regions 2010, Economy and Society*, Vol. 3, pp3-10

Duit, A. (2016), "Resilience thinking: lessons for public administration", *Public Administration*, Vol. 94, No. 2 pp 364-380

EC. (2015), *Horizon 2020 Work Programme 2014 – 2015*, http://ec.europa.eu/research/participants/data/ref/h2020/wp/2014_2015/main/h2020-wp1415-societies_en.pdf

Garmezy, N. (1991), "Resilience in children's adaptation to negative life events and stressed environments", *Pediatr Ann.* 1991 Sep; 20 (9), pp 459-460, 463-466

Gerst, J.-Doms, M.-Daly, M.C. (2009), "Regional Growth and Resilience: Evidence from Urban IT Centres", *FRBSF Economic Review*, 2009, pp 1-11

Golušin, M.-Munitlak Ivanović, O.-Teodorović, N. (2011), "The review of the achieved degree of sustainable development in South Eastern Europe – The use of linear regression method", *Renewable and Sustainable Energy Reviews*, No. 15, Vol. 15, Issue 1, pp 772-776

Golušin, M.-Munitlak Ivanović, O.-Dodić, S.-Vučurović, D. (2011), *Implementation of Sustainable Energy Management in companies – gap analysis technique*, SDEWES – 6th

Dubrovnik Conference on Sustainable Development, Water and Environment Systems, UNESCO Sponsored Conference, Croatia, pp 451-464

Golušin, M.-Munitlak Ivanović, O.-Filipović, S.-Andrejević, A.-Đuran, J. (2013), Environmental taxation in the European Union – Analysis, challenges, and the future", *Journal of Renewable and Sustainable Energy*, Vol. 5, Issue 4, *American Institute of Physics*, pp 1-12

Gordon, E.W.-Wang, M.C. (1997), "Next Steps in Inner-City Education, Focusing on Resilience Development and Learning Success", *Education and urban Society*, Vol. 29, No. 3, Sage Publications Inc., pp 225-275

Gotham, K.-Campanella, R. (2011), "Coupled Vulnerability and Resilience: the Dynamics of Cross-Scale Interactions in Post Katrina New Orleans", *Ecology and Society*, Vol. 16. No. 3:12

Hassink, R. (2010), "Regional Resilience: a promising concept to explain differences in regional adaptibility", *Cambridge Journal of Regions, Economy and Society*, Vol. 3, No. 1, pp 45-58

Hertel, J.-Schuets, A.-Lammers, C.H. (2009), "Emotional Intelligence and Mental Disorder", *Clinical Psychology*, 65 (9), pp 942-945

Hicks, J. (1946), *Value and Capital*, Oxford University Press, Oxford, p. 172

Hill, E.-Wial, H.-Wolman, H., (2008-4), *Exploring Regional Economic Resilience*, IURD Working Paper Series, Berkeley, CA: Institute for Urban and Regional Development 3, pp 1-21

Holling, C.S. (2001), "Understanding the Complexity of Economic, Ecological and Social Systems", *Ecosystems* 4, pp 390-405

Hudson, R. (2010), "Resilient Regions in an uncertain world: wishful thinking or a practical reality?", *Cambridge Journal of Regions, Economy and Society*, Vol. 3, No. 1, pp 11-25

Kim, K.S. (1997), "Income distribution and poverty: an interregional comparison", *World Development*, 25, pp 1909-1924

Kodrzycki, Y.K.-Munoz, A.P. (2015), "Economic Distress and Resurgence in U.S. Central Cities,-Concepts, Causes, and Policy Levers"; *Economic Development Quarterly, Sage Journals*, No. 1, pp 35-55

Lang, T. (2010), *Urban Resilience and New Institutional Theory – A Happy Couple for Urban and Regional Studies*?, German Annual of Spatial Research and Policy 2010, Springer (pp 1-24)

Lele, S.M. (1994), "Sustainable development: A Critical Review", *World Development*, No. 19, p. 607

Masten, A.-Best, K.-Garmezy, N. (1990), "Resilience and development: Contributions from the study of children who overcome adversity", *Development and Psychopathology*, 1990; 2, pp 425–444

Muir, J. (2004), *My First Summer in the Sierra*, Paperback, Dover Publications, (first published 1911), p 110

Munitlak Ivanović, O. (2007), *Održivi razvoj kao redefinisan pristup ekonomskom razvoju*, Zadužbina Andrejević, Beograd

OECD. (2015), *Final NAEC Synthesis, New approaches to Economic Challenges***,** Meeting of the OECD Council an Ministerial Level, Paris, June 2015, pp 2-127

OECD. (2011), *Towards Green Growth, A summary for Policy makers***,** Council at Ministerial Level, May 2011, Paris

OECD. (2014), *Overview Paper on Resilient Economies and Societies*, Meeting of the OECD Council an Ministerial Level, Paris, May 2014, pp 2-6

OECD/IEA/NEA/ITF/. (2015), *Aligning Policies for a Low-carbon Economy*, OECD Publishing, Paris

Parry, I.W.H.-Bento, A.M. (2000) "Tax Deductions, Environmental Policy, and the "Double Dividend" Hypothesis", *Journal of Environmental Economics and Management*, Vol. 39, pp 67-96

Pearce, D.W., (ed.). (1978), *Valuation of Social Cost*, Allen & Unwin, London

Pebley, A.R. (1998), "Demography and the environment", *Demography* 35, pp 377-389

Perrings, C. (1996), *Ecological Resilience in the sustainability of economic development*, Models of Sustainable development, Cheltenham, Edward Elgar, pp 231-252

Persson, T.-Tabellini, G. (1994), "Is Inequality harmful for growth?", *American Economic Review*, 84, pp 600-621

Peterson, G.-Allen C.-Holling, C.S. (1998), "Ecological Resilience, Biodiversity and Scale", 1998, *Ecosystems*, 1998:1, Springer Verlag, pp 6-18

Pigou, A.C. (1918), *The Economics Welfare*, Macmillan, London

Pike, A.-Dawley, S.-Tomaney, J. (2010), "Resilience, adaptation, and adaptability", *Cambridge Journal of Regions 2010, Economy and Society*, Vol. 3, pp 11-17

Reppeto, R. (1985), *The Global Possible-Resources, Development and New Century*, A world Resources Institute Book, Yale University Press, New Haven, p 10

Rodriguez, M.C.-Haščić, I.-Souchier, M. (2016), "Environmentally Adjusted Multifactor Productivity, Methodology and Empirical Results for OECD and G20 Countries", *OECD Green Growth papers*, No 4, pp 1-78

Rose, A. (2004), "Defining and measuring economic resilience to disasters", *Disaster Prevention and Management: An International Journal*, Vol. 13, No. 1, pp 307-314

Solow, R. (1992), *An Practical Step Toward Sustainability*, Invited Lecture on the Occasion of the Fortieth Anniversary of Resources for the Future, Washington D.C, p 15

Sustainable Kingston, Designing our Community´s future… together. (2010), *Sustainable Kingston plan***,** Sustainability and Growth Group www.google.rs/search?q=pillars+of+sustainability

United Nations Conference on Environment and Development. (1992), *Agenda 21*, Rio de Janeiro, Brazil, June 1992, United Nations for Sustainable Development (pp 1-351)

United Nations Department of Economic and Social Affairs. (1999), *Testing the CSD Indicators of Sustainable Development: Interim Analysis: Testing Process, Indicators and Methodology Sheets*, Technical Paper prepared by the Division for Sustainable Development; United Nations Department of Economic and Social Affairs,

2000, *UN CSD Theme Framework and Indicators of Sustainability,* Final Draft, Price Waterhouse Coopers for Division for Sustainable Development, p 18

United Nations General Assembly (2005), *World Summit Outcome*, Resolution A/60/1, adopted by the General Assembly on 15 September 2005. Retrieved on: 2009-02-17.

United Nations (2015), "The Millennium Development Goals Report", *Time for Global Action for People on the Planet*, New York, 1-75

Waxman, H.C.-Gray, J.P.-Padron, Y.N. (2003), *Review of Research on Educational Resilience*, Center for Research on Education, Diversity and Excellence, (CREDE), University of Houston, pp. 1-29

www.google.rs/imgres?imgurl=https://upload.wikimedia.org/wikipedia/commons/thumb/1/1b/Nested_sustainability-v2.svg/250px-Nested_sustainability

Zubovic, J. (2016), *Ocenjivanje rezilijentnosti privrede – priprema modela*, pp 38-48, Pravci strukturnih promena u procesu pristupanja Evropskoj uniji, Institut ekonomskih nauka, Beograd