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"INCLUSIVE AND SUSTAINABLE DEVELOPMENT AND
THE ROLE OF SOCIAL AND SOLIDARITY ECONOMY"

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FACULTY OF ECONOMICS AND ADMINISTRATIVE SCIENCES
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ANADOLU UNIVERSITY
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INTRODUCTORY NOTES

Božidar Cerović[1]

It is my pleasure to recommend to the readers of this book a collection of papers that were presented during the 12th ASECU conference that took place in Eskişehir, Turkey, at the Anadolu University - Faculty of Economics and Administrative Sciences, on September 29-30, 2016. My feeling of pleasure comes from two important facts. Firstly, the event took place in the year when our association celebrates its 20th anniversary. Secondly, the meeting dealt with an outstandingly interesting and important topic as being devoted to analysing issues of inclusive and sustainable development and the role of social and solidarity economy.

Recalling the first days of the ASECU when a brave and dedicated group of Greek colleagues, headed by prof. Yanis Tsekouras, took an action to strengthen links between the universities in South-eastern Europe, the 20 year jubilee of our association demonstrates what could be reached through a coordinated and collective action. After twenty years ASECU became an association of 51 members, Universities, Faculties and Scientific Centres, even beyond the strict SEE borders. Among them 47 are regular members from Albania, Armenia, Bosnia-Herzegovina, Bulgaria, Former Yugoslav Republic of Macedonia, Greece, Montenegro, Poland, Romania, Russia, Serbia, Slovakia, Turkey and Ukraine and four are associated members from Egypt and Lebanon.

All along these 20 years, our association continuously develops various programmes of scientific cooperation among which one should particularly mention annual conferences like the one we speak about today. These conferences are organised in different countries promoting in that way many of our member universities and opening floor for new researchers from local surroundings that can exchange thoughts with other participants coming from abroad. The second important way of scientific communication goes through our journal SEEJE (South East Europe Journal of Economics) that particularly intends to promote authors from the region and from member schools but is equally open for other high quality contributions.

Also, during past years a specific care was given to development of the ASECU youth, a programme that incites and supports younger researchers and students to communicate and present their ideas within conferences and summer schools that are organised each year in some other country. Recently, the ASECU has introduced a special annual award for the best paper of a student presented during the ASECU youth events. It bears the name of prof. Tsekouras, the founder and for long president of our association and a man who financially backs this prize. Finally, we may also turn attention to "webinars" that is, international seminars and lectures offered via internet, by colleagues from member universities that can gather participants – either professors or students – from all other member schools for discussion, dialogue or simply learning about some new ideas.

The second reason for contentment and pleasure regarding this book is its topic. In the complicated and pretty confused relations of the contemporary world the issues like solidarity, inclusion and sustainability seem to be pushed aside the main tracks of economic and social development. Even the ideas of sustainable development and its goals are not necessarily positively related to the goals inclusiveness – either social or environmental (see Gupta and Vegelin, 2016). On the other hand, we permanently face some disturbing signs of an excessive increase in inequality all over the globe and encounter various kinds of evidence that repeatedly point at such a circumstance (see Milanovic, 2011; Piketty, 2014; Stiglitz, 2015 and many other). Global wealth becomes increasingly concentrated in the hands of a small group of wealthy individuals that have generated and sustained their possessions through expressing interests in various activities including some very specific sectors like finance, insurance, pharmaceuticals and healthcare that are obviously highly important for broad public and their economic and social positioning and security (see Oxfam, 2015). Some calculations show that in 2014 just 85 billionaires have the same wealth as the bottom half of the world's population (Fuentes-Nieva and Galasso, 2014).

Nevertheless, there are authors that underestimate such developments explaining them simply as a mere market assessments of individuals' capabilities and pointing out that these inequalities can only help in inciting people to invest more efforts and diligent work into everyday duties and that the raise in wealth of an individual is automatically beneficial for all. Of course, this kind of reasoning suffers of an evident lack

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in its economic logic – if inequalities, poverty for example, prevents some talented individuals to develop their abilities due to high schooling costs while some other and less capable ones, due to their richness could attend the best schools – isn't this a typical case of suboptimal allocation of resources that resulted from a specific market failure? A vast number of similar examples could be added to the one from above when no individual effort could help in overpassing such a chasm.

Under pressure of this kind of opponents to those that try to conceptualise problems of poverty, inequality and resulting misallocation – is it at all possible to establish and develop even ideas if not some tangible elements of social and solidarity economy that is based on non-profit goals? Analysing the issue one could be astonished: the number of solidarity units and new approach to economic development that aims at better use of resources on cooperative and consensual foundations are rapidly growing. According to ILO (2011) data, there are 2 million organisations in Europe that could be understood as units of social and solidarity economy and they represent about 10% of all companies while in UK alone around 62,000 social enterprises contribute £24 billion to the economy and employ 800,000 people; mutual benefit societies provide health and social protection services to 170 million people worldwide; millions of people, yet predominantly women, are organised in self-help groups, as well as millions of workers in cooperatives and so forth.

Moreover, it appeared that during the crisis since 2007-08 hundreds of firms in Europe (mostly in Spain and Italy) have been successfully taken over by the workers from their previous owners who did not find motives to continue with their engagement. Although this cannot be seen as a typical non-profit commitment but rather as a commercial one this fact demonstrates that collective arrangement and collective action could bring some economic results that in conventional thinking were unexpected. For the sake of curiosity let me inform you that recently, together with two of my foreign colleagues from US and Italy, I have analysed a sample of 69 Serbian firms (see Cerovic et al. 2015). We have remarked that the level of employees' satisfaction and loyalty to the firm increases with a more active position they have in defining, realising and controlling objectives and duties of the firm that should be fulfilled. Moreover, this conclusion came after the answers and opinions of managers in the firms observed though they did not directly come to that conclusion (when directly asked they are pretty reluctant to the idea of participation) but nonetheless their opinions on the matter – when connected with the character and philosophy of the managerial process of their firms – appeared to be highly significant.

This finding that gives a specific support to the ideas of cooperation and solidarity in economic questions is especially important since it comes from a country once known for its semi market system with certain forms of economic democracy the so-called self-management system. However, in reality that system could not be fully developed under previous political arrangements, which could explain to some extent why its experience was pretty intentionally forgotten and why it was frequently blamed, making an excuse for many economic failures and wrong political choices of the politicians in power. On the other hand, our analytical results together with the crisis aftermath characterised by an increased number of cooperatives, warn that many layoffs and bankruptcies of firms and losses in production during the so-called transition from plan to market in a big number of countries would have not be inevitable if only some more space had been remained for solidarity and collective action within general prescriptions used for all countries irrespectively of local conditions and legacies.

For all these reasons the 12th ASECU conference devoted to the issues of social and solidarity economy and inclusive and sustainable development represents quite an appealing and courageous attempt to elucidate some new economic phenomena. If the papers from this book that cover a wide range of issues related with the conference topic will serve in the future to additionally enlighten certain issues, help in understanding the ideas of cooperation, solidarity and inclusiveness and incite some putting into practice of these ideas we may gladly conclude that our mission is successfully realised.

For this brave undertaking our Turkish colleagues from Anadolu University deserve a special merit – they managed all preparatory work, controlled the entire organisation and finally realised the conference in a passionate and committed way under not just everyday circumstances in their country. However, they accomplished the event in an excellent way representing outstandingly their school, our profession, our association and above all their beloved country. For that reason they deserve a sincere gratitude from all of us and I am happy that can congratulate them on behalf of the ASECU.

REFERENCES

Cerovic, B., J. Svejnar, M. Uvalic, (2015), "Workers Participation in a Former Labour-Managed Economy: The Case of Serbian Transition", *Economic Annals*, Vol. LX, no. 205, pp 7-29.

Fuentes-Nieva, R., N. Galasso, (2014), "Working for the Few: Political capture and economic inequality", *Oxfam Briefing Papers*, Oxfam International, 20 Jan 2014.

Gupta, J. and C. Vegelin, (2016), Sustainable development goals and inclusive development, *International Environmental Agreements: Politics, Law and Economics,* Vol.16, no. 3, pp 433–448.

ILO, (2011), *Social and SolidarityEconomy: Our common roadtowards Decent Work*, The Reader, International Training Centre of the International Labour Organization

Marcuello, C. and P.Nachar-Calderón, (2014),"The Objectives of Co-operative Firm and the

Motivation of its Members to Cooperate. An alternative approach", paper presented at 17th *Conference of the International Association for the Economics of Participation* (IAFEP), Montevideo, Uruguay, July 16 – 18, *mimeo*.

Milanovic, B. (2011). The haves and the have-nots. New York: Basic Books.

Oxfam, (2015), *Wealth: Having It All and Wanting More*, Oxfam International, January 2015.

Piketty, T. (2014).Capital in the twenty-first century. Cambridge MA: Harvard University Press.

Stiglitz, J. E. (2015). The great divide: Unequal societies and what we can do about them. New York: WW Norton and Company.

INCOME DISTRIBUTION AND DEVELOPMENT

INCOME DISTRIBUTION AND COLLECTIVE SOCIAL ACTORS – MISSING TOPICS IN MAINSTREAM ECONOMIC THINKING

Aleksandra Prascevic [1]

Abstract

The paper discusses questions of income distribution and the presence of collective actors as missing topics in mainstream economic thinking since the neoclassical revolution in late 19th century. Unlike the classical political economy in which problems of income distribution were important for the economic growth, neoclassical revolution induced neglecting of these questions, as well as of the fact that in the economic arena we can find collective social actors (classes) with specific motives and incentives, especially important for their acting within the economic system. Such development in the mainstream economics, based on the faith in market forces achievements, was doctrinarian result of the "microeconomic revolution" in economic theory which had the expression in modern macroeconomics as the "microeconomic foundations of macroeconomics". Only during the times of bad economic movements the questions mentioned above became important, in concert with the fear of social conflicts within the capitalist societies. Recessional developments during 1930s were important for reestablishing the influence of social relationships on macroeconomic movements through the impact on effective demand in the theory of Keynes and Keynesians. After decades of neoliberal domination in the mainstream macroeconomics, the global economic recession that started the age of secular stagnation ended the faith in the market optimality in inducing economic growth. Since conventional and no-conventional measures for boosting economic recovery didn't have enough success, new explanations for what is happening was needed. The problem of income and wealth distribution and income inequality became important in discussions among economists with the ideas that distribution is shaped by social and political relationships, also. The mentioned missing topics in mainstream economics, especially in the standard model of economic growth, play the central role in discussions concerning the future of modern capitalism.

Key Words*: income distribution, collective social actors, economic theory*
JEL Classification*: B22, E32, O11*

1. INTRODUCTION

The unusual recession that hit the global economy 2007 – 2009, followed by unusual weak recovery in both industrialized economies and those with emerging markets, imposed some of the intriguing questions to macroeconomics and economic theory in general. Most observers could conclude that some of the basic macroeconomic principles, including those connected with the monetary policy, perfect functioning of the market economy or economic growth, are no longer the axioms which could not be taken into the question. Period during and after the recession could be named as the "age of secular stagnation" (Summers, 2016) with conclusions that the macroeconomic model based on the microeconomic foundations of the representative agent acting appeared to be wrong in forecasting the appearance of such severe economic recession and macroeconomic problems with high unemployment rates, slow recovery of economic activity and modest rates of economic growth in post-crisis period.

Models have proved to be useless in predicting the crises, as well as in determining the effects that can be expected from economic policy measures taken to overcome it. If we start from the fact that during the crisis and in post-crisis period in most industrialized economies (US, EU, Japan) an aggressive monetary policy has been taken, often accompanied by a similar fiscal policy, resulted in the interest rates equal to zero or negative. Such strange movements in interest rates persisted during the long period of time without creating inflation, but also without significant recovery.

The claim that the capitalist economic system left to its own would strive to suboptimal state of equilibrium in which involuntary unemployment exists is one of the most exploited Keynes's feature. According to that, the economic recession seems to be a "general" state of capitalism, while the status of full employment could be achieved as temporary situation. This is due to the fact that the capitalist economic system in which the government does not intervene in the right way does not possess the self-

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correcting mechanism that would provide a stable equilibrium at full employment. In order to avoid this, the government should interfere in order to bring aggregate demand to the level at which there is full employment. Fiscal policy measures are necessary for such intervention because monetary policy is inefficient in combating the recession.

The orthodox economic theory has intended to explain economic phenomena according to the rational behavior of the representative agents. The mainstream macroeconomic model is based on the modeling of the aggregate movements that will be induced by action of "a representative of the economic agent" and entirely neglecting action of larger social groups - social classes. Such development induces deriving macroeconomic relations as the outcome of individuals` optimizing, subject to the constraints imposed by markets and technology (Backhouse, 1995, p.118). In these models there is no place for the collective actors, such as the social classes.

Such development of modern macroeconomics is owed to the neoclassical tradition that methodologically abounded the classical political economy of David Ricardo, but continuing the tradition of Adam Smith. It is in the later development of macroeconomics, after the Second World War that neglect of Keynes's revolutionary concepts happened, originally by the form of neoclassical synthesis, which has been perhaps the most successful attempt in establishing a consensus in macroeconomics. However, since it was not possible to synthesize Keynesian economics revolutionary approach to the old neoclassical approach, the modern macroeconomics appeared to be disconnecting with the Keynes's revolutionary elements (Barbera, 2008). Later, it became even more obvious by the victory of monetarism whose founder Fridman has been often called as "a minor post-Wicksellian" (Taylor, 2010, p. 231). After the monetarism the New-classical rational expectations approach, which also was accepted by the rival school of macroeconomics - New Keynesians, became the basis for macroeconomic modeling. Unlike the New Keynesians, the second Keynesian macroeconomic school – the post-Keynesianism (heterodox schools or structuralism) has remained faithful to the most important features of Keynes. Post-Keynesians, however, remain in the minority, and the subsequent development of macroeconomics in the context of new classical macroeconomics, and the New Keynesianism, followed the neoclassical synthesis, creating a "new neoclassical synthesis."

Global recession imposed the topics which are related to the income distribution at the level of national economies – between social classes (wage earners and financial industrial capitalists). In the paper that problem primarily will be considered in the context of consequences on the level of aggregate demand. It is obvious that global aggregate demand has not fully recovered in post-crisis period. Reasons can be found relating to the participation of wages, and profits in total income distribution, which largely determines personal consumption and savings. These parameters determine the level of interest rates, amount of investments, which are at the low level in long period of, due to lack of aggregate demand. The importance of these issues imposes requirements that macroeconomic phenomena are viewed as the result of collective economic actors - social classes, who are interested for their participation in the distribution of income, but it ultimately determines the economic growth and cyclical fluctuations. The importance and power of action of collective actors is large and refers to a social agreement on income distribution (including politically), which was neglected for decades in the economic theory because it was considered as consequence of market activity. This distribution may affect the important relationship between savings and investment in an economy. This relationship is crucial for economic growth because they are the basis for movements of investments and savings. However, according to Keynes and Kalecki, the causal link is going in the opposite direction - from investments towards savings. Thus, the amount of savings will depend on the amount of investment. Therefore for the level of investment, increased tendency to save induce a decline in consumption and a slowdown of GDP growth, which will further reduce investments and prospects for GDP growth.

2. "MICROECONOMIC REVOLUTION" IN THE ECONOMIC THEORY

Collective actors – social classes, and their participation in income distribution, have played an important role in the economic science since its very beginnings. This is primarily related to the development of classical political economy, which is predominantly linked to Great Britain in the second half of the 18th and in the 19th century. David Ricardo, with his model, was particularly important among the British classical economists. Famous debate between Ricardo and Malthus on the relationship in the distribution of profits and rents was also important. This relationship becomes significant in considering the possibility of the capitalist system to automatically reach full employment and economic growth.

Ricardo believed that the rents would "eat up" the profits, thus compromising the economic growth (pessimism), unlike Malthus who advocated high rents as the source of increase in demand for goods by the "non-productive" class - landowners. This approach placed Robert Malthus among the theoreticians of insufficient consumption, much like the French physiocrat Francois Quesnay who divided society into classes as social reproduction agents (Landreth and Colander, 1994, p. 53). The type of achieved social reproduction will depend on the terms of exchange between these classes - organs (similar to the metabolic processes in the body). Therefore, although the classical economists assumed a harmonious economic system, the theory and model of David Ricardo still include certain factors that can disturb this system. These factors are directly related to distribution, and according to the classical political economy the distribution of income was the result of social agreement.

Therefore, they were aware of conflicts in society, although they advocated general social and personal freedoms and non-interference of the state. Ricardo used the labour theory of value to explain the changes in income distribution over time. His theory is deductive and abstract because for the first time in the economy it is based on an abstract model such as the "corn model". However, his theory is determined also by the problems of that particular time in history - rising price of food due to the Corn Laws, which is a direct consequence of the conflicts between the class of landowners who had political power and the class of capitalists who had economic but lacked political power (Jaksic and Prascevic, 2011). Considering the forces that affect the changes in income distribution, Ricardo in fact comes to the changes in relative prices over time. According to him, these changes in the distribution of income affect the rate of capital accumulation and economic growth.

Another economist, Karl Marx, who was under significant influence of classical economists, especially of David Ricardo, explained how the distribution relationships were based on the exploitation of the working class that did not possess the means of production. Marx based his theory on the classical political economy, German philosophy - primarily Hegel, and achievements of the French Revolution (Dunleavy and O'Leary, p. 204). Particularly important was his acceptance of the Ricardo's labour theory of value, which enabled him to explain the process of exploitation of the working class, and to provide a different explanation of a long-term tendency for the rate of profit to fall. Marx came to the conclusions diametrically opposite to those of the British classical economists, demonstrating that the conflicts in the capitalist economic system would not be solved through the operation of market forces. He insisted on the conflict between the productive forces and the relations of production due to the faster development of productive forces than the relations of production. This conflict can be resolved by changing the relations of production and forming the new mode of production.

Hence, the classical economists and Marx believed that capitalists, landowners and workers were the key actors, which means that they analysed the economic functions, behaviour and future of these classes. The differences between the classical economists and Marx were ideological and also gave rise to the differences regarding the vision of the future of capitalism. According to the classical economists, the profit drive of capitalists will be decisive for the efficient allocation of capital and savings (accumulation), which will promote growth and wealth. On the other hand, according to the Marx's theory, exactly the appropriation of profit that drives capitalists will be a crucial element of the adverse consequences suffered by the working class and entire society (Roncanglia, 2001, p. 251).

However, the development of economic theory in the second half of the 19th century and later did not follow the Ricardo's theory or his deductive and abstract method. John Stuart Mill - the most important representative of the development of classical political economy, and Alfred Marshall - the most important representative of neoclassical economics followed the Smith's theory. This is why their interest deviated from social conflicts between classes, in particular from Ricardo's preoccupation with the concept referred to as functional distribution of income in the modern economics. Instead, they focused on the market mechanism, market structure, forces and factors behind supply and demand as determinants of value or price. Such development of economic theory ended the supremacy of the labor theory of value which dominated the classical political economy and its theory of income distribution.

The neoclassical economic thought was developed based on the new method of marginal analysis, while the macroeconomic issues of determining the income or the rate economic growth were almost entirely neglected (Landreth and Colander, 1994, p. 211). This is why we have a "marginalist" revolution, also known as "microeconomic" revolution due to its focus on microeconomic problems. It imposed new topics - market functioning, behaviour of individual economic actors as consumers or producers, as well as their equilibrium. The models referred to the measurement of utility and the establishment of equilibrium. The

equilibrium of individual markets is reflected in the general economic equilibrium as it was explained by Leon Walras, which is methodologically beyond the Say's Law.

Economics is separated from the "social philosophy" with the requirement to be developed as value-neutral and objective. The same applies to the distribution of income, which is seen as the result of the marginal rule effect, and not of the social agreement between the classes on the mode of distribution. The factors that determine the distribution are objective, so that the share of labour in the distribution is determined by its productivity, while any desire to increase real wages must be supported by real changes. However, they cannot happen without changes in technology.

The mainstream economic theory all the way before Keynes followed precisely this line, and re-emerged when the domination of Keynesianism ended. The issue of the distribution of income and wealth, which used to be neglected in the economic analysis, had its origin also in the famous Cambridge controversy, i.e. the debate that took place in the 1960s between the two Cambridges - British and US. The underlying issue of the debate was the question of whether the distribution of income and wealth was partly determined by social and political factors and relationships, including class conflicts, or the distribution was largely determined by the operation of market mechanisms. Victory in this debate was uncritically attributed to the supporters of the US Cambridge, so that their view has become an integral part of the standard mainstream model of economic growth (Robert Solow) and the macroeconomic model of Blanchard and Fischer (1989).

According to this concept, an increase in the capital stock causes a reduction in the rate of profit, the growth of output and real wages, and positively impacts the distribution. A market mechanism would determine the lowest costs of labour force utilization for different combinations of capital goods and at different profit rates. However, there is no clear connection between the total value of capital and profitability. It is not clear how the wages and profits correspond to the capital stock. It is therefore necessary to introduce some non-economic factors that impact the amount of profit and wages, that is – the distribution of income. The model of economic growth should take into account the aggregate demand and the distribution of income and wealth (Taylor, 2016).

3. MAINSTREAM MACROECONOMICS AND ABONDENMENT OF KEYNESIAN ECONOMIC SYSTEM

The Keynes' economic theory emerged in the circumstances of prolonged high unemployment, but also of the crisis of economic policy, the Great Depression and the "agony of laissez-faire"; although it had a solid contextual base, it constituted a complete system of economic ideas based on new assumptions and strong methodological grounds. The Keynes' work caused a real intellectual revolution in economy, and therefore can be compared with the scientific works of Marx, Darwin, Freud and Einstein (Mynski, 2008). The most important Keynes' work has an indicative title The General Theory of Employment, Interest and Money (1936), revealing its underlying idea that it is a theory whose generality refers precisely to its ability to explain the general situation of capitalism in the future, unlike the classical theories that explain specific cases. Although the general public and economic policymakers considered The General Theory to be a theoretical base for economic policy, the Keynes' motive for its writing was in the domain of economic theory and it was intended primarily for academic economists, while economic policymakers were meant to be the secondary target audience.

The Keynesian economic system in the post-war period led to decades of changes in the functioning of the capitalist system, in particular a change in the relationship between labour and capital. The abandonment of the Keynesian intellectual revolution and poor interpretation of his ideas were partly the result of the fact that Keynes himself did not participate in them and that after the publication of The General Theory he had a small amount of time to further elaborate his theory in order to make it clearer and more specific. Therefore, the task of interpretation was assumed by his successors, who unfortunately turned to methodological neoclassicism.

The conceptual abandonment of Keynesianism was much more than a simple change in the dominant economic theory and policy. It was an ideological shift in managing the capitalist system, which meant to diminish the importance of labour (the working class), which had grown during the post-war development of the Keynesian welfare state and full employment capitalism. The abandonment of the Keynesian economic system, that is – a definite abandonment of the Keynes theory and Keynesian economic policy, took place in the years when profits dropped, wages growth exceeded productivity growth and production capacity was significantly underutilised. Capitalism then returned to capital as the most important factor of production in capitalism, whereas the requirement of full employment capitalism was considered to be

wrong because it led to reduced competition in the labour market, largely unjustified wage growth at the expense of profits and reducing the propensity to invest. A whole series of concepts associated with monetarism or later with New Classicism, including the NAIRU unemployment concept, justified the existence of unemployment.

Structural economic problems have an important place in the Keynes' theory, including certainly the structural unemployment problem that cannot be solved by competitive market processes. Seeking to overcome it, Keynes advocated the socialisation of investment, not only through increased state spending on capital investment but also through public and quasi-public companies. Keynes insisted on the modeling of behaviour of collective actors rather than "rational" individual economic actors. Indeed, it must be taken into account that Keynes did not assume the modern meaning of the word "rationality" since he questioned the possibility of knowing the exact economic model (we are acquainted with the Keynesian concept of subjective probability and uncertainty, which is different from the objective probability that later prevailed in the macroeconomic theory and policy through the concept of rational expectations).

4. EFFECTS OF INCOME DISTRIBUTION ON SECULAR STAGNATION

The concept of secular stagnation, which can nowadays be used for explaining the macroeconomic developments in the post-crisis period, was originally proposed by one of the most famous American Keynesians - Alvin Hansen. According to this concept, a long-term stagnation may occur as a result of the growing propensity to save, which is not accompanied by the corresponding propensity to invest, but rather the opposite – by reduced propensity to invest. According to the concept of Knut Wicksell, there is a "natural" or "neutral" interest rate at which savings are equal to investment. The increased savings, which imply the reduced consumption, will contribute to a reduction in real interest rates, which however will not affect the increase in sustainable investment but will lead to the growth of unsustainable investment, such as in real estate, which in turn will result in the increase in the price of real assets, contributing to the creation of a housing bubble. The discrepancy between savings and investment can be explained by the consequences of the distribution of income in society, which goes in favour of profits rather than work and in favour of the rich layers of society who have a lower propensity to consume and a greater propensity to save.

Therefore, in considering the unsatisfactory economic growth in the past period, we should also take into account the fact that since the 1990s the income share of the richest 1% of the population has increased by as much as 10%, so that now 1 million households appropriate as much as 15% of the national income (in the USA). Such trends in income distribution affected the level of consumption but also the level of savings. The rich households save more than the poor ones and the richest 1% of the households save about 40% of income. The rich get richer because of growing profits, big capital gains and high savings.

The findings are even more controversial if we analyse the distribution of wealth. This could have devastating effects on the changes in the levels of aggregate demand and consequently on economic growth. Therefore, the trend of increasing the share of profit should be ended due to the fact that the growth of real wages and employment are lagging behind productivity growth, which is a direct consequence of the worsened situation of the working class and deregulation of the labour market, which is required to be more flexible in order to ensure higher competitiveness of the national economy.

The neoclassical explanation of the process of balancing investment and savings through changes in interest rates had an important shortcoming of not taking into account the impact of the increased savings on the level of aggregate demand. If we only lower real interest rates, it will not automatically lead to an increase in investment that would result in significant economic growth. Economic growth in the long term is directly linked to the capital stock, technological innovation, trade policy and fiscal policy. Higher propensity to save would also mean increased capital investment and higher economic growth rate. Private savings are also positively linked to the economic growth in the long term, while in the short term they may slow down the economic growth. However, taking into account the global economic developments in recent years, we may ask which factors limit the growth.

The rate of private savings, as an important factor determining the economic developments in both short and long term as economic fluctuations, but also the economic growth, should be viewed from three aspects: the share of wage (or labour) in GDP, tax on profits including capital income taxation and the system of progressive taxation of household incomes. The problem of long-term economic stagnation affecting the global economy in the post-crisis period is connected directly to the low long-term neutral real interest rate. The literature offers different explanations for such trends in real interest rates. The most important among

them are certainly the explanations according to which the distribution of income in favour of those who are wealthier have resulted in a greater propensity to save and the uncertainty about the duration of working life (because of the reform of labour legislation including the extension of working life due to the extension of life expectancy). Consequently, people prepare timely for the period of retirement, by increasing their current savings. There is also an increased accumulation of assets by foreign central banks, as well as the inflow of funds from the growing capital flights from the emerging market economies.

All of this brings the global economy to the situation similar to the one faced by Japan since the 1990s, which is often explained as liquidity trap, the concept developed by Keynes, but which should basically refer to a short-term phenomenon. The state of liquidity trap has a direct impact on the complete inefficiency of monetary expansion in this case. By all accounts, however, it is a situation that will continue in the future and whose overcoming requires a significant modification of economic policy, but also changes in the social agreement on the manner of income distribution, which has greatly contributed to this situation. In fact, what was expected to be done by the market mechanism through the establishment of balance does not happen either in the short or in the long term. The expansive monetary policy, although it must be applied, will not yield sufficiently significant effects on spurring the economic growth.

With the beginning of global recession in 2007, fiscal policy became again in the agenda of economic policy through the "pragmatic Keynesianism" and countercyclical fiscal expansion measures that should have resulted in a growth of aggregate demand. However, precisely due to the slow and long process of recovery, the fiscal imbalances in the form of significant increase in the state budget deficit and public debt have brought back the classical approach to economic policy, which required balancing of the state budget. Thus the economic stagnation got another stimulus – austerity measures, which according to the classical approach should have resulted in the release of funds for the necessary private investment or for personal consumption. If the state consumed less, it would mean a smaller deficit and more funds remaining for the private sector – businesses and households.

This would encourage households to spend more because they would not have to save to secure the funds for the repayment of debt in the future (Barro-Ricardo equivalence proposition), and since the state does not appear on the side of demand for funds, more of these funds would remain for the private sector to invest. However, although there is a significantly low neutral rate of real interest, it does not encourage investment. It seems that this confirms the Keynes' postulate according to which aggregate demand is crucial, because there is no investment without it, regardless of the availability of funds, and consequently there is no economic growth. Monetary policy cannot solve the problem of low neutral real interest rate and the possibility of shifting the focus from inflation targeting to nominal GDP targeting should be seriously considered.

5. CONCLUSIONS

Post-crisis stagnation shows that the aggregate demand-side factors are much more important than the aggregate supply-side factors, which is why the economic policy should focus on the measures that would have an impact on aggregate demand. One of them is certainly the monetary expansion that would cheapen the money, although this is not a substantial measure because the real interest rate has already been low for a long period of time without having an appropriate investment-encouraging effect. The currency depreciation policy could also be applied to increase export demand; however, the effects of such a policy would be significantly limited because there is a global shortage of aggregate demand that cannot be solved in this way, but can only result in shifting the recessionary pressures from one economy to another. Therefore, if the problem of inflation does not exist, it is crucial for every economy to try to increase its own aggregate demand thus stimulating the economic growth. The sources of such growth can be found in the measures for redistribution of income in the economy, which requires the refocusing of analysis to the participation of collective social actors in the distribution of income – similar to the Keynes' and Keynesian postulates, which are completely opposite to the neoclassical explanations based on microeconomics and rational behaviour of economic agents. However, such changes would actually require the changes in the social agreement and the acceptance of one part of the consequences of recessionary pressures by the rich stratum of the population, preventing the poor to become poorer and the rich to become richer.

REFERENCES
Backhouse, R. E. (1995). Interpreting Macroeconomics, London: Routledge
Barbera, R. J. (2008). Preface in Mynski, P. H., *John Maynard Keynes*. New York: McGraw Hill

Dunleavy, P. & O'Leary, B. (1998). Theories of the State: The Politics of Liberal Democracy. London: Palgrave Macmillan.

Jaksic, M. & Prascevic, A. (2011). Istorija ekonomije. Beograd: Ekonomski fakultet

Landreth, H. & Colander, D. C. (1994). History of Economic Thought. Boston: Houghton Mifflin Company

Mynski, P. H. (2008). John Maynard Keynes. New York: McGraw Hill

Roncanglia, A. (2001). The Wealth of Ideas – A History of Economic Thought, Cambridge: CUP

Summers, L. (2016). The Age Secular Stagnation, Foreign Affaires, Retrieved from: http://larrysummers.com/2016/02/17/the-age-of-secular-stagnation/

Taylor, L. (2010). Maynard's Revenge – The Collapse of Free Market Macroeconomics. Cam, Massachusetts: Harvard University Press

Taylor, L. (2015). Veiled Repression: Mainstream Economics, Capital Theory and the Distribution of Income and Wealth, Working paper No. 32, New York: Institute for New Economic Thinking, Retrieved from: https://ineteconomics.org/ideas-papers/research-papers/veiled-repression, April 2016

INCLUSIVE INSTITUTIONS AND SUSTAINABLE ECONOMIC DEVELOPMENT

Miomir Jakšić[1], Milica Jakšić[2]

Abstract

Different destinies of particular countries and non-existence of warranted economic and social prosperity are explained by two paradigms: geographical and institutional one. Geographical paradigm insists upon significance of physical geography, climate, ecology, that shape technology and individual behaviour. Institutional paradigm attributes the central role to institutions which promote investment in human, physical capital and technology. Within institutional paradigm emphasis is nowadays is put upon inclusive institutions.

In recent two decades, due to contributions of Political macroeconomy, focus of macroeconomy turned away from narrow perspective based on market and privatisation (market fundamentalism) towards broader perspective based on institutions and values (institutionalism). Main thesis of one of leading proponents of Political macroeconomy, D. Acemoglu, is: "growth is much more likely under inclusive (economic and political) institutions than extractive institutions. But most societies throughout history and today ruled by extractive economic institutions: they are designed by the politically powerful elites to extract resources from the rest of society."

Apart of independence and accountability of institutions what is need is sufficient level of inclusion. Authors suggest that index of inclusion is needed to measure and assess performance of public institutions. Inclusion should encompass three dimensions - personal, 2. financial and political. Introduction of principles of independence, accountability and inclusion is essential for emergence and performance of all institutions.

***Key Words**: Polıtıcal Macroeconomy, Inclusive Institutions, Sustainabılıty, Good Governance*
***JEL Classification**: B10, B15, O13*

1. INSTITUTIONS AND ECONOMIC DEVELOPMENT

Social Inclusion in *World Bank Report* is defined in following way: "1. The process of improving the terms for individuals and groups to take part in society. 2. The process of improving the ability, opportunity, and dignity of people, disadvantaged on the basis of their identity, to take part in society."[3] Main findings of this report are: " 1. Excluded groups exist in all countries. 2. Excluded groups are consistently denied opportunities. 3. Intense global transitions are leading to social transformations that create new opportunities for inclusion as well as exacerbating existing forms of exclusion. 4. People take part in society through markets, services, and spaces. 5. Social and economic transformations affect the attitudes and perceptions of people. As people act on the basis of how they feel, it is important to pay attention to their attitudes and perceptions. 6. Exclusion is not immutable. Abundant evidence demonstrates that social inclusion can be planned and achieved. 7. Moving ahead will require a broader and deeper knowledge of exclusion and its impacts as well as taking concerted action."[4]

World Economic Forum released *Inclusive Growth and Development Report: "* It presents a framework and a corresponding set of indicators in seven principal policy domains (pillars) and 15 subdomains (subpillars)".[5]

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[3] World bank report: new frontiers of social policy, advance edition, The foundation for shared prosperity, 2013, International bank for reconstruction and development / the world bank.
[4] World bank report.
[5] http://reports.weforum.org/global-competitiveness-report-2015-2016/box-1-the-inclusive-growth-and-development-report/.

Figure 1: Inclusive Growth and Development Framework

Pillar 1: Education and Skills Development	Pillar 2: Employment and Labor Compensation	Pillar 3: Asset Building and Entrepreneurship	Pillar 4: Financial Intermediation of Real Economy Investment	Pillar 5: Corruption and Rents	Pillar 6: Basic Services and Infrastructure	Pillar 7: Fiscal Transfers
Access	Productive Employment	Small Business Ownership	Financial System Inclusion	Business and Political Ethics	Basic and Digital Infrastructure	Tax Code
Quality	Wage and Non-wage Labor Compensation	Home and Financial Asset Ownership	Intermediation of Business Investment	Concentration of Rents	Health-related Services and Infrastructure	Social Protection
Equity						

http://www.weforum.org/reports/inclusive-growth-and-development-report-2015

Six overall conclusions emerge from the report The Inclusive Growth and Development Report: "First, all countries have room for improvement. Second, it is possible to be pro-equity and pro-growth at the same time. Third, fiscal transfers can be helpful—but so can other policies. Fourth, lower-income status is no bar to success. Fifth, there are significant regional similarities. Sixth, the current debate on inequality needs to be widened."[6]

Next graph illustrates main blocks of institutionalism: first, essential elements of social, economic and political inclusion, second, Institutions – economic and political as basis of every policy, and third, supreme goals - reduction of poverty and higher growth.

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[6] http://reports.weforum.org/global-competitiveness-report-2015-2016/box-1-the-inclusive-growth-and-development-report/.
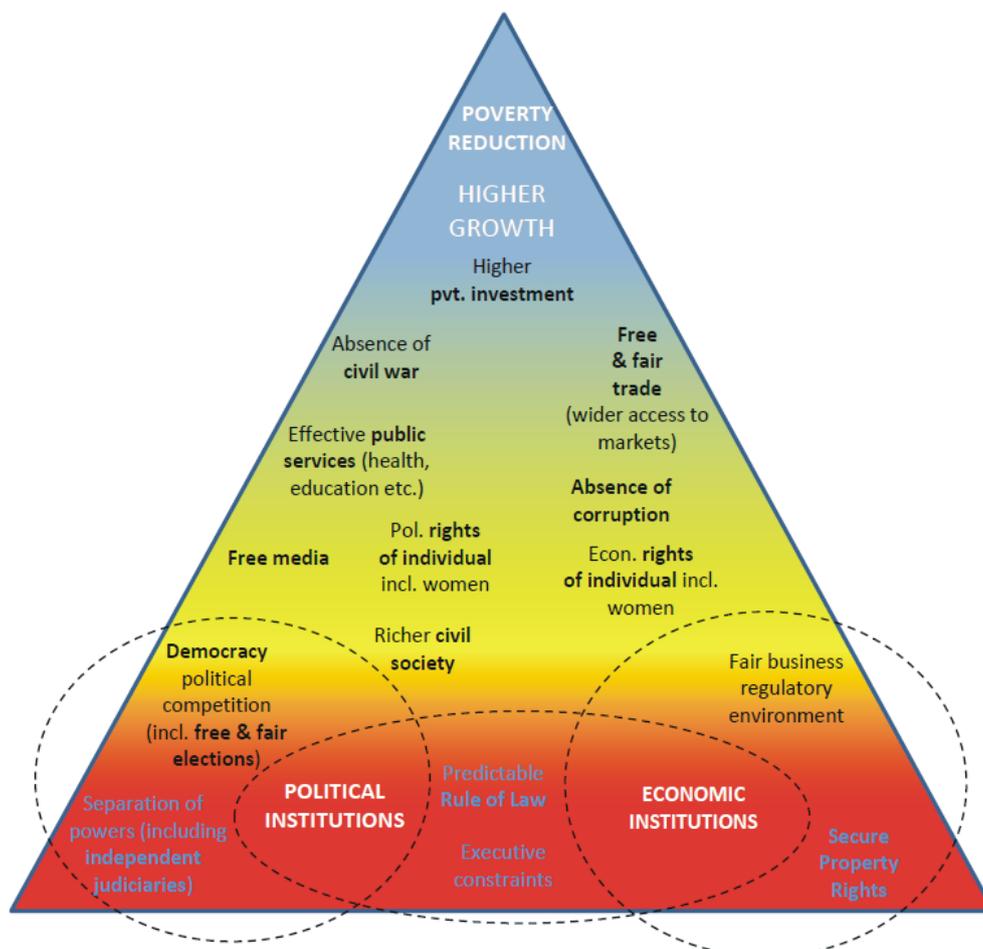
Figure 1: (Snakes and) Ladders: the role of governance and institutions in growth and poverty reduction.

Source: DFID Evidence Product – literature review, Governance, institutions, growth and poverty reduction: a literature review, Authors: William Evans, Clare Ferguson, 2013., p. 12. http://r4d.dfid.gov.uk/pdf/outputs/misc_gov/61221-DFID-LR-GovernanceGrowthInstitutionsPovertyReduction-LiteratureReview.pdf.

D. Acemoglu classifies institutions into two groups: Predatory ("bad") institutions: as institutions that do not encourage investment and economic development, and Developmental ("good") institutions: institutions that permit or encourage investment and growth.[7] We can present this in following matrix:

Economic institutions	extractive	inclusive
Political institutions	bad (nondemocratic)	good (democratic)
Economic and social Outcome	Stagnation	Development

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[7] Acemoglu, D., "Political Economy Lecture Notes", PE9524.pdf,http://economics.mit.edu/faculty/acemoglu/courses, p. 14.

2. INCLUSIVE INSTITUTIONS
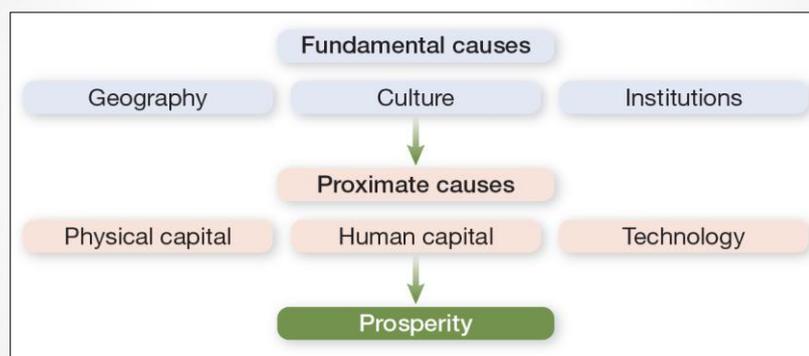
Exhibit 8.1 Fundamental and Proximate Causes of Prosperity

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Source: Macroeconomics, Acemoglu, Liabson, List, Chapter 8, Why Isn't the Whole World Developed?, Pearson, 2015, www.pearsonhighered.com, Instructor resources.

Democratic **political institutions** tend to have growth-enhancing and growth-stabilising effects. D. Acemoglu in following manner explains essence of relationship between economic and political institutions.

economic institutions$_t$ $\Rightarrow$ economic performance$_t$
$\qquad\qquad\qquad\qquad$ distribution of resources$_{t+1}$
political power$_t$ $\Rightarrow$ economic institutions$_t$
distribution of resources$_t$ $\Rightarrow$ de facto political power$_t$
political power$_t$ $\Rightarrow$ political institutions$_{t+1}$ [8]
The case of Asiatic mode of production (AMP) supports those findings.

3. FUNDAMENTAL FACTORS OF GROWTH

Discussion about Asiatic mode of production (AMP) is alike Phoenix that regularly resurect and uprise from time to time. Having in mind recent development if the field of economics, especially Political macroeconomy, its useful to evaluate heritage and contributions of AMP. Arguments are as follows:

1. Mainstream neoclassical economics focused on proximate factors of development (land, labour, capital). Theory of AMP focused on fundamental factors of development (institutions - state intervention).
2. Discussion on transition from feualism to capitalism European path identify as progressive, whilst Asian path as ahistoric and stagnant. Dynamic development and high growth rates of Asia are due to incentives created by state authorities similar to centuries old AMP heritage (Hydraulic society).
3. European model of development of capitalism is evaluated within triangle – 1. *physical geography* (proximate causes of development), 2. *culture (*norms, traditition, religion) and 3. *institutions (*since recently inclusive institutions). Nowdays according to Political macroeconomy dominant factor are institutions. Theory of AMP integrates all three factors: 1. significance of physical

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[8] Macroeconomics, Acemoglu, Liabson, List, Chapter 8, Why Isn't the Whole World Developed?, Pearson, 2015.

geography (K. Wittfogel hydraylic society and Russian discussion on Geographical deviation in thirties years, XX centrury), 2. culture (long lasting evolutionary path dependence), and 3. institutions (central role of state apparatus, great public works instead of free market initiative).[9]
The geography, culture, and institutions hypotheses advance different fundamental causes of prosperity.

Geography —The geography hypothesis claims that differences in geography, climate, and ecology are ultimately responsible for the major differences in prosperity observed across the world. Geographical factors have significant role in determining the location and level of interactions of those ancient agricultural civilisations.[10]

Different destinies of particular countries and non-existence of warranted economic and social prosperity are explained by two paradigms: geographical and institutional one. Geographical paradigm insists upon significance of physical geography, climate, ecology, that shape technology and individual behaviour. Institutional paradigm attributes the central role to institutions which promote investment in human, physical capital and technology. Those two approaches have their roots in: 1. Traditional society theory (Theory of Asiatic mode of production): differences in traditional societies of each country explain their different growth rates and level of economic development, and 2. World system theory: only countries that escaped colonial status have chance to develop,

The discussion on the Asiatic mode of production was and still is the centre of discussion on the dynamism/stagnation, revolutionarity/evolutionism of society in general. It is a paradigmatic example to demonstrate the advantages of one model or the other as well as the coincidences (a) dynamism and revolutionarity in the West that breaks all connections with pre-capitalism and (b) the coincidence of stagnation and evolutionism in the East. The example of the Asiatic mode of production is used in the theoretically and practically for verifying (a) one development model and (b) its foundation in the West.

Culture —The culture hypothesis claims that different values and cultural beliefs cause the differences in prosperity around the world. According to this hypothesis, religious beliefs, strength of family ties, social norms, and other cultural differences shape the way different societies respond to economic incentives. The most common tool for measuring institutions and culture is through indices and surveys questions. In this paper we used Hofstede dimension indice and The World Values Survey (*WVS*) for culture and compared different countreis. Classical work of G. Hofstede was basis for inclusion of culture in the field economics, and nowdays contributions made by international human resource management and organizational culture.[11]

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[9] Jakšić, M., "Asiatic mode of production revived", submitted for Journal of contemporary Asia.
[10] Putterman, Louis. "History and comparative development." The New Palgrave Dictionary of Economics. Online Edition. Eds. Steven N. Durlauf i Lawrence E. Blume. The New Palgrave Dictionary of Economics Online. Palgrave Macmillan. 22 May 2014 <http://www.dictionaryofeconomics.com/article?id=pde2014_G000223> doi:10.1057/9780230226203.3921. Jak[i', M.., "Geografska devijacija i istorijski razvoj", Ekonomske teme, Niš, 4, vol 53(3), 2015, PP. 319-334.
[11] Hofstede, G., 2001, Culture's Consequences: Comparing Values, Behavior, and Organizations Across Nations, second edition, Sage Publications.
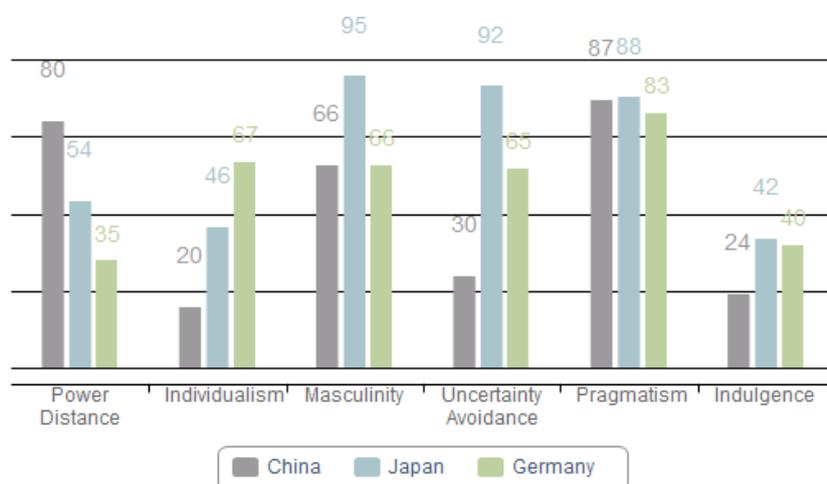
Graph compared three countries (China, Japan and Germany). This countries were selected on the basis of following logic:[12]

China: example of Asiatic mode of production – traditional society based on traditional culture, and, as Central empire, was not in the status of colony part of capitalist world economy and world system.

Japan: example of Asian feudal, not Asiatic mode of production, country, was not a as a colony part of capitalist world economy and world system. This enables us to exibit experiment and to analyse influence of different traditional societies.

Germany: European capitalist economy, Japan Asian capitalist economy, China country of Asiatic mode of production.

"Based on a sample of over 200 countries, it indicates that the quality of institutions 'trumps' everything else. Once institutions are controlled for, geography has at best a weak direct effect on incomes, although with a strong indirect effect on influencing the quality of institutions. Similarly, once institutions are controlled for, trade is almost always insignificant."[13]

4. ROLE OF INSTITUTUIONS IN SERBIA

Experience of institutional development in Serbia in recent decade confirm the conclusion that institutions are more oriented toward fostering economic growth and competitiveness instead relying on social, political and economic inclusion. This applies to main institutional dimensions - rule of law, anticorruption campains, promotion of innovation, competitiveness, export/led growth, attracting FDIs, etc.

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[12] http://geert-hofstede.com/dimensions.html, accessed 4.1.2015.

[13] Rodrik, D., Subramanian, A. & Trebbi, F. (2004). Institutions rule: The primacy of institutions over geography and integration in economic development. *Journal of Economic Growth, 9*(2), 131-165.
http://www.hks.harvard.edu/fs/drodrik/Research%20papers/institutionsrule,%205.0.pdf

Serbia - Global Competitiveness Rank

94

(Rank (1=the best))
in 2015
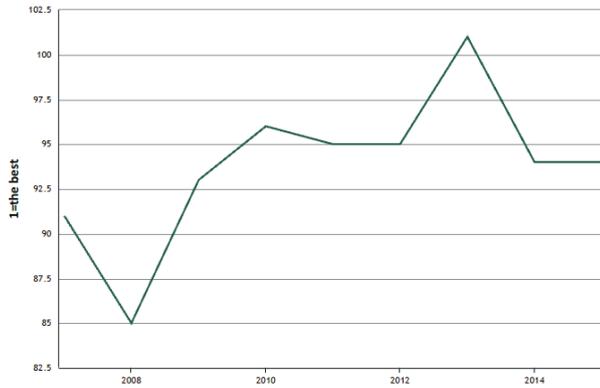
Date	Value	Change, %
2015	94	0.00 %
2014	94	-6.93 %
2013	101	6.32 %
2012	95	0.00 %
2011	95	-1.04 %
2010	96	3.23 %
2009	93	9.41 %
2008	85	-6.59 %
2007	91	

Source: The Global Competitiveness Report 2015

https://knoema.com/atlas/Serbia/Global-Competitiveness-Rank

Source: http://reports.weforum.org/global-competitiveness-report-2015-2016/economies/#economy=SRB.

Source: http://reports.weforum.org/global-competitiveness-report-2015-
2016/economies/#economy=SRB.
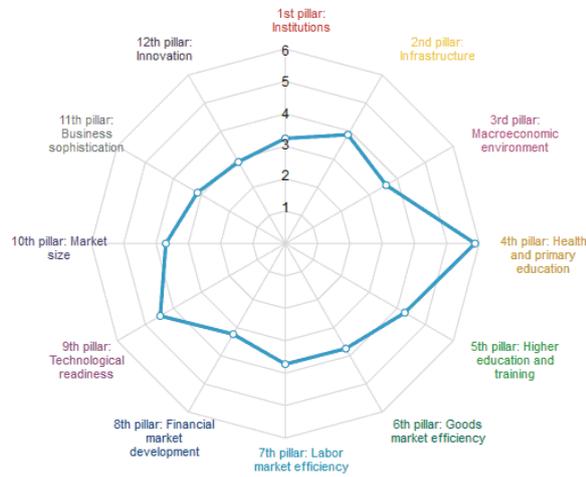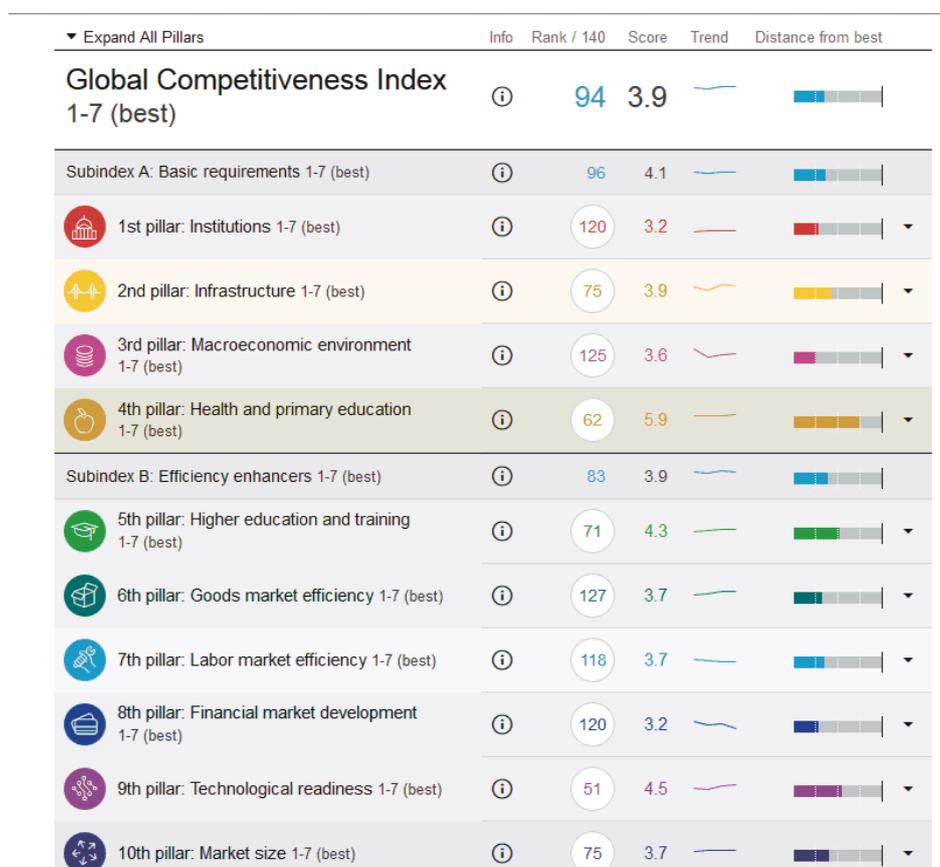
Executive opinion survey indicators were derived from the *World Economic Forum's Executive Opinion Survey.* Survey questions asked for responses on a scale of 1 to 7, where an answer of 1 and 7 always corresponds to the worst and best possible outcome respectively. For Serbia results concerning the institutional pillars are as follows:[14]

- Intellectual property protection: How would you rate intellectual property protection, including anti-counterfeiting measures, in your country? [1 = very weak; 7 = very strong] | 2011–12 weighted average (rank: 116; value: 2.8).
- Judicial independence: To what extent is the judiciary in your country independent from influences of members of government, citizens, or firms? [1 = heavily influenced; 7 = entirely independent] | 2011–12 weighted average (rank: 129; value: 2.4)
- Burden of government regulation: How burdensome is it for businesses in your country to comply with governmental administrative requirements (e.g., permits, regulations, reporting)? [1 = extremely burdensome; 7 = not burdensome at all] | 2011–12 weighted average (rank: 136; value: 2.4)
- Strength of investor protection: Strength of Investor Protection Index on a 0–10 (best) scale | 2011 (rank: 65; value: 5.3)
- Quality of the educational system: How well does the educational system in your country meet the needs of a competitive economy? [1 = not well at all; 7 = very well] | 2011–12 weighted average (rank: 111; value: 3.1)

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[14] *Insight Report The Global Competitiveness Report 2012–2013 Full Data Edition,* Professor Klaus Schwab, World Economic Forum, Editor, www.weforum.org/gcr, pp. 388 and following.

- Effectiveness of anti-monopoly policy: To what extent does anti-monopoly policy promote competition in your country? [1 = does not promote competition; 7 = effectively promotes competition] | 2011–12 weighted average (rank: 142; value: 2.8)
- Number of procedures required to start a business: Number of procedures required to start a business | 2011 (rank: 74; value: 7)
- Time required to start a business: Number of days required to start a business | 2011 (rank: 59; value: 13)
- Availability of latest technologies: To what extent are the latest technologies available in your country? [1 = not available; 7 = widely available] | 2011–12 weighted average (rank: 127; value: 3.9)
- Capacity for innovation: In your country, how do companies obtain technology? [1 = exclusively from licensing or imitating foreign companies; 7 = by conducting formal research and pioneering their own new products and processes] | 2011–12 weighted average (rank: 120; value: 3.5)
- Company spending on R&D: To what extent do companies in your country spend on R&D? [1 = do not spend on R&D; 7 = spend heavily on R&D] | 2011–12 weighted average (rank:132; value: 2.3)
- University-industry collaboration in R&D: To what extent do business and universities collaborate on research and development (R&D) in your country? [1 = do not collaborate at all; 7 = collaborate extensively] | 2011–12 weighted average (rank: 99; value: 3.2)
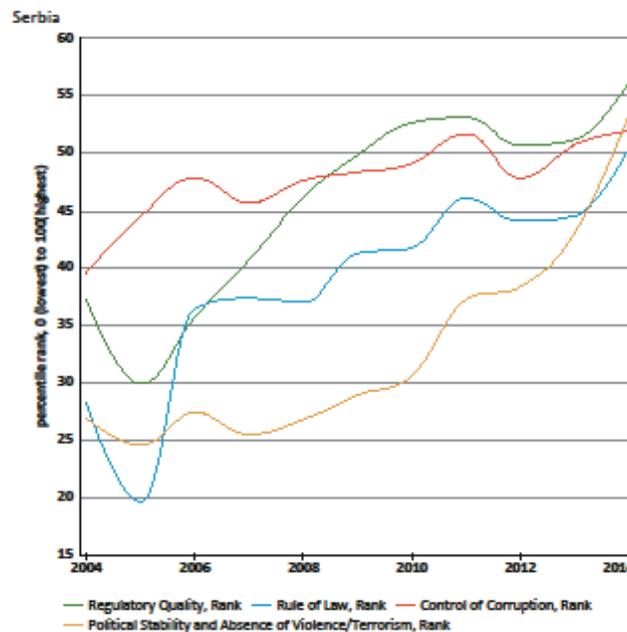
Source: WGI indices, accesed 33.5.2016.

5. CONCLUSION

Institutionalism, traditional and new one, gives great significance to institutions, and on that basis evolved theory and practice of *good governance* and *inclusive institutions* in its core: "The term 'inclusive institutions' does not refer to a clearly defined field of theory or policy within international development, but to a normative sensibility that stands in favour of inclusion as the benchmark against which institutions can be judged and also promoted." (DFID)

REFERENCES

Acemoglu, D. et. al.Macroeconomics, Chapter 8, Why Isn't the Whole World Developed?, Pearson, 2015.

Acemoglu, D., "Political Economy Lecture Notes", PE9524.pdf, http://economics.mit.edu/faculty/acemoglu/courses, p. 14.

DFID Evidence Product – literature review, Governance, institutions, growth and poverty reduction: a literature review, Authors: William Evans, Clare Ferguson, 2013., p. 12.

http://geert-hofstede.com/dimensions.html, accessed 4.1.2015.

http://r4d.dfid.gov.uk/pdf/outputs/misc_gov/61221-DFID-LRGovernanceGrowthInstitutionsPovertyReduction-LiteratureReview.pdf.

http://reports.weforum.org/global-competitiveness-report-2015-2016/box-1-the-inclusive-growth-and-development-report/.

http://reports.weforum.org/global-competitiveness-report-2015-2016/economies/#economy=SRB.

https://knoema.com/atlas/Serbia/Global-Competitiveness-Rank

Insight Report The Global Competitiveness Report 2012–2013 Full Data Edition, Professor Klaus Schwab, World Economic Forum, Editor, www.weforum.org/gcr

Jakšić, M., "Asiatic mode of production revived", submitted for Journal of Contemporary Asia.

Putterman, Louis. "History and comparative development." The New Palgrave Dictionary of Economics. Online Edition. Eds. Steven N. Durlauf i Lawrence E. Blume. Palgrave Macmillan, 2014. The New Palgrave Dictionary of Economics Online. Palgrave Macmillan. 22 May 2014

World Bank report: new frontiers of social policy, advance edition, The foundation for shared prosperity, 2013, International bank for reconstruction and development / the world bank.
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SOLIDARITY ECONOMY, ECONOMIC COLLECTIVISM AND SELF-MANAGEMENT: THE KIBBUTZ EXPERIENCE

Neslihan Çelik[1], Hasan Basri Özpek[2]

Abstract

The economic, social and environmental consequences of neoliberal policies, the crises and the increased inequity in the distribution of income and resources provided intensity to the search of sustainable alternative economic development models. "Social economy", "solidarity economy" or " third sector" concepts began to be discussed in terms of their potential to be an alternative to the neoliberal policies. The question whether solidarity and social enterprises are among the "non-capitalist options" within the market economy in all fields of cooperatives, production-consumption and economy stepped forward among the questions that should be answered.

The collectivist Kibbutz experience in Israel based on agricultural cooperatives in which the means of production such as land, buildings, factories, equipments are under joint ownership and where self-management is considered as the most important components of participatory governance and democracy is among the remarkable historical examples in terms of the solidarity economy. The aim of this study is to investigate the Kibbutzim which underwent a structural change to adapt to new market conditions together with the liberalization and the lessons that may be driven in terms of solidarity economy.

Keywords: solidarity economy, kibbutz, kibbutzim, development, agricultural coperatives, social economy, JEL classification: N5, O1, O4

1. INTRODUCTION

Social and environmental problems that accompany economical growth and liberalization accelerated the discussions on alternative growth and consumption models in the world. (Utting & others, 2014). Poverty that increased as a result of neoliberal politics caused the role of market to be questioned in distribution of source and income, in this regard the concept of "solidarity economy" which prescribe solidarity in all fields of economics, such as production, consumption, circulation, saving, finance appeared among the paradigms that were brought to the agenda.

It is noted that the term of solidarity economy was used in the meaning of creation of economic solidarity (economía solidaria) between worker collectives in rural and urban areas by Felipe Alaize in Spanish Civil War in 1937. It is seen that contemporary usage of concept started to flourish with the context of "third sector", "social economy" in the search of traditional market alternatives in France and South America during 1980's (Miller, 2010).

Today solidarity economy is discussed within the context of contribution to develop more humane economy and society as an alternative to neoliberalism and aims for creation of collective organizations and attempts. Against the concept of capitalist market, the potential of egalitarian attempts, which are based on free cooperation of workers, self-management, democracy, participation end efficiency to be a model against crises is discussed. (Alcorta, 2009: p.62-63). With solidarity economics and organizations, which are perceived as third sector except for private sector and public sector, it is assumed that;

1. it will be possible to transfer residual from the strong one to the disadvantageous one through social solidarity, 2. socially excluded ones will be protected and strengthened in the existing market system, 3. self confidence of solidarity motivation of the individuals will be improved through social cooperation network and encouragement of the activities of NGOs&NPOs. 4. a socially secured environment will be created through the cooperation among public sector, private sector and non-profit sectors as well as their mutual supervisions (Alcorta, 2009, p.65-66).

As different from capitalist initiatives based on profit maximization, such international organizations as United Nations, ILO (2011) also regard social and solidarity economy initiatives which pay attention to social benefit-cooperation-solidarity and are based on collective ownership, reciprocity; redistribution;

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association; social utility; profit mutualisation; and democratic self-management as a part of sustainable development (Utting& others, 2014). It is considered that social and solidarity operations (SSEOs) have an important role in such areas as the transition from informal economy to decent work, local development, sustainable cities, food security, universal access to healthcare and equitable distribution of health resources, which are the areas of sustainable development problem (TFSSE,2014)

Within this context, kibbutzim which is an example of solidarity economy with its self originality and historical conditions is shortly examined in this study.

2. CONCEPT OF "KIBBUTZ", HISTORY AND TODAY

"Kibbutz" which means communal settlement in Hebrew represents a society based on social justice and cooperation, a socio-economic system based on mutual ownership, equality and solidarity in production and consumption; the effort of adopting the idea of "from everyone depending on skill, to everyone to the extent that they need" (The Kibbutz & Moshav, 2016).

Degania that is the first kibbutz was established in 1909, approximately 40 years before the foundation of Israel State, on the land that was granted by Jewis National Fund on the coast of Sea of Galilee. Jewis National Fund was founded in 1901 in order to purchase land in Palestine (JNF, 1901: it all…).

From the beginning, Kibbutzim was regarded as an important phase of Zionism and National Labor Movement. The majority of first kibbutzim was established by the members of Zionist Youth Movements who came from Israel and other places of the world by drying the swamps primarily in unsettled places. During the following 20 years, the majority of kibbutz members were composed of second generation born in kibbutzim. Today there are approximately 273 kibbutzim and around 106 thousand registered kibbutz inhabitants 20 thousand of which are under 18 (KIA, 2016).

In Israel kibbutzim developed as a type of agricultural cooperatives. Moshavim was another type of agricultural cooperative. While kibbutzim was agricultural production cooperatives under worker control, Moshavim was cooperatives composed of individual farmers. In Moshavim equal land was assigned to each family to cultivate and sell products. In kibbutzim, the members were workers who worked in the field of agriculture and service branches. Both kibbutzim and moshavim adopted to be governed through democratic principles that were voted by all members in the process of decision-making (Rosenthal& Eiges, 2013).

2.1 Structural Features of Kibbutzim

Kibbutz system prescribed a new social and economic life model. There was a comprehensive model that covered members' studies, child raising, their period of old age and different dimensions of their life. The founders of Kibbutzim wanted to cultivate in deserted land, to build the national presence of the Jews in Israel and to create a fair society. The ideology of Kibbutz had an approach, which integrated Zionist, socialist, humanistic value. Kibbutz was considered as a self-sufficient model, which was based on social ownership. The founders of kibbutz who regarded themselves as an indispensable part of Jewish worker movement and aimed at making the Jews establish a society that works on the ground of cooperation accepted a paradigm which aims at;

a) settling in desert, enabling border security,

b) creating a cooperative society based on social ownership and being an indispensible part of worker class in Israel,

c) creating a society which is cooperative, equalitarian, fair in production-consumption and education with a self sufficient labour force (Palgi,1998).

Settlement plan for most of Kibbutzim was similar: there were communal facilities such as the houses of the members; children houses, playgrounds for different age groups, dining hall, auditorium, library, swimming pool, tennis court, medical clinic, laundry (The Kibbutz & Moshav, 2016).

The members of Kibbutzim shared the responsibilities, did not receive salary but used the sources of kibbutz based on their needs. Kibbutz offered to their members such services in the areas of as accommodation, childcare, education and health. It allocated houses to its members; provided childcare in children's home by separating them from their families with the help of its female members, founded its own school and provide medical education for some of its members to provide healthcare in kibbutz. Kibbutz members did not have the ownership for production tools. Members were provided with many personal needs such as cloths from the kibbutz store free of charge. Members worked in this store in rotation

and recruitment for the store was decided in communal meetings. All members had their meals together in communal dining room and shared the jobs such as preparing meal and hygiene (Rosenthal& Eiges, 2013).

Until 1990s, traditional running was observed in all kibbutzim. It is noted that tendency for emphasizing personal preferences and individual autonomy more increased in the following process while Kibbutz maintained its effort of protecting its social identity. In the following periods, it is observed that the concept of mutual cooperation and the approach of cooperative ownership of economic assets continued in a limited level; so trend of de-communalization increased by abolishing communal institutions completely or partially.

Table 1: Changes in the structure of Kibbutz

	The Conventional Kibbutz (Until the 1990s)	Communal Re-institutionalization	De-communalization
Consumption	Overall communal household, Mutual responsibility Equal distribution of commodities and services, partly according to personal needs	Coexistence of communal and Private household. Mutual responsibility. Distribution of money considering needs mainly based on categories of family size and age.	Privatization of Communal household. Limited mutual aid. Economic independence of individuals
Work	Work place allocation based on collective needs and individual preferences. Kibbutz work institutions have decision-making authority	Individual autonomy of work place choice, also outside the kibbutz. Kibbutz work institutions have advisory role. Monetary sanctions for deviations.	Individual work place choice. Differential salaries based on labour market value or partial differential component
Ownership	Communal and social.	Communal ownership during normal functioning. Privatization in case of dismantling.	Privatization of ownership of consumption assets. Distribution of shares of economic assets

Source: Menahem Rosner (2000), *Future Trends of the Kibbutz - An Assessment of Recent Changes,* University of Haifa, The Institute for Study and Research of the Kibbutz, Publication no. 83

In recent years, there have been changes in social structures of kibbutzim; family unit has become more important in kibbutz society. While children stayed in communal children's houses in the past, they stay with their parents now and spend only some of their time with their peers. From the playschool level, education system focused on children to learn cooperation in their daily lives and conceive the importance of work and fulfil the works in their scope. In high school, young people take over some works in kibbutz and work for kibbutz economy on one day of the week. Kibbutzim that adopts the development of potential of all members and requests their contribution to welfare of society, offers more options to their members as compared to past for clothing, choice of household goods, decision of their members where and when they will spend their holidays (The Kibbutz & Moshav).

In 1980s, the Kibbutz were influenced deeply in terms of manufacturing sector in the economic crisis that put the Israeli economy into a bottleneck, and they also faced a demographic crisis when a great majority of the members left the community. When the Kibbutz faced a debt crisis and young people started to leave them, they tried to adopt themselves to the new economic and social conditions. In this context, nearly 190 Kibbutz (72% of the total number of the Kibbutz) have adopted the "Renewed Kibbutz Model" today. The "Communal Kibbutz", on the other hand, who are devoted to traditional ideas, constitute 25% of kibbutzim (KIA, 2016).

In Communal Kibbutzim, income is distributed communally. Despite the fact that size and seniority of family is taken into consideration in income distribution, there is no direct relation between distributed kibbutz income and individual's contribution to social welfare. In "Renewed Kibbutz" model that is defined as "Reformers", some basic needs and services that was covered free in the past by the kibbutz was

privatised and they have been raised to pay for them. However, to protect the weaker members of society and to establish a system that guarantees mutually such needs of members as health, education, pension funds, "security net" was founded. In "Renewed Kibbutz" in which there is differential salary, members contribute through taxes to communal fund in order to maintain mutual guarantee system. A specific percentage of each member's gross salary is transferred to kibbutz to meet the needs of community. In renewed kibbutz, members are paid less as compared to city (69% of members earn less than 7000 IS monthly). However, some services are still free even in these kibbutzim; kibbutz members do not pay for rent. In addition, all the kibbutz members receive dividends from the profits of the kibbutz companies. (KIA, 2016).

Kibbutzim works with direct democracy. General Assembly consisting of all members; produces policy, selects officers, gives the budget authority and approves new members. The General Assembly is not only the decision-making unit but it is also a platform for members to express their opinions. In Kibbutz, daily jobs are carried out through committees elected in such areas as housing, finance, production planning, health and culture. In kibbutzim in which working is accepted as a value, women participate in the workforce equally and status is not received based on work; members are appointed to the positions that are changing at certain times and rotation is applied for such routine tasks as kitchen and dining hall jobs. In charge of each economic unit, there is an elected president, which is changed every 2-3 years; works in different branches are coordinated by an economic coordinator, investment and production plans are carried out. Kibbutz's executives are composed of committee presidents and kibbutz secretary. While secretary, treasurer and coordinator work as full-time as a rule, other committee members serve for kibbutz in addition to their regular jobs. In some kibbutzim, it is seen that it began to professionalize in management positions increasingly without sacrificing the mutual responsibility and sense of equality in work (The Kibbutz & Moshav, 2016).

2.1.1 Kibbutz Economy

Nearly 93% of the land belongs to the state in Israel and agricultural cooperatives perform approximately 80% of agricultural production and services in Israel. (Rosenthal&Eiges, 2013) Kibbutz members work in agricultural branches in kibbutzim, in other businesses owned by kibbutz or out of kibbutz. Each of the agricultural branches generally joins to the related cooperative union.

Table 2: Distribution of Kibbutz members based on their sector

Branch	%
Agriculture & Fisheries	24
Industry & Quarries	24
Tourism, Commerce & Finance	11
Transportation & Communication	5
Building & Utilities	1
Public & Community Services	18
Personal Services	17

Source: "The Kibbutz & Moshav: History & Overview"
http://www.jewishvirtuallibrary.org/jsource/Society_&_Culture/kibbutz.html

Since the founding of kibbutzim, the government in Israel followed a supportive policy for agricultural cooperatives, through tax deductions, protectionism against imports, subsidies, financial investments for developing agricultural technology and positioned them as the basic dynamics of agricultural production. However, since the late 1970s liberalization process began in Israel, the effort for minimizing state intervention in the market emerged and the state encouraged competition by reducing financial support to agricultural cooperatives. Industrial activities that increased in kibbutzim in 1970s mainly financed with debt from the banks, in 1985 the majority of agricultural cooperatives experienced the debt crisis.

Oil crisis in the world in 1970s, inflation rate of 110% caused by the government that issued money to finance the budget deficit and delay of most cooperatives in adapting to the new conditions have important role in the emergence of the financial crisis. Since the end of 1980s, the state has developed a series of policies for the protection of cooperatives and the stability of Israeli economy; it tried to determine the repayment capacity of kibbutzim and enabled banks to delete 35% of debts of kibbutzim (which is about $ 6 billion). In addition, many kibbutzim transferred their rights to local businesses in order to pay their debts, more individualized with structural changes and specialized (Rosenthal&Eiges, 2013).

It is observed that kibbutz industry started to grow in the years of World War II by establishing necessary industrial plants for meeting the emerging need of repair for tractors and irrigation systems. However, there was no significant industrialization in kibbutzim until 1960s. When it comes to 1981, it is noteworthy that only 34% of the existing 320 industrial plants were established in 1960. Economic and demographic changes in 1960s accelerated industrial development by disrupting agricultural development. Therefore; a) saturation level of the market for agriculture members, b) experienced shortages in resources such as land and water to increase agricultural production, c) government policy that supports industrialization through such mechanisms as long-term loans and grants, especially in border settlements, d) some kibbutz members who search for alternative locations due to unfavourable physical conditions in agriculture, e) young kibbutz members who especially have technological skills look for other jobs in which they can use these skills, f) development of the concept of efficient work which is one of the main emphasises of kibbutz system as including the industry, are among the factors affecting the growth of kibbutz industry. At that time, the kibbutz industry's main objectives are adopted as; 1) improve the welfare of members, 2) profitability and maximum profitability is not the only target, kibbutz industry serves to strengthen the economies of kibbutz and country, 3) protection of kibbutz principles such as the decision-making process through direct democracy, 4) achieving national economic objectives by making current production potential to the maximum, creating an alternative to imports, promoting exports, (Palgi,1998).

Today, there are nearly 300 kibbutz companies under the umbrella of Kibbutz Industries Association (KIA). Kibbutz industry has a very wide range of products such as metal and electronics, plastics and rubber, processed food, optics and glass, textiles, pharmaceuticals and chemicals, printing and paper products, quarry products, construction materials. There is an intense employee loyalty and motivation in these companies since an important part of the workers is the owner of the company that they work for. Kibbutzim which is 1.7% of the Israeli population realizes Israel's domestic sales of 8%, more than 7% of exports and 7% of investments through enterprises that they own or have share. 42 thousand people working in kibbutz industry constitutes 11.5% of the industrial workforce in Israel. As of 2009 total sales of Kibbutz industry is $ 10 billion; exports and overseas operations is $ 5 billion and exports increased 150% between 2000 and 2009. As the leading sectors of kibbutz industry, plastic and rubber industry has 45% share in total sales, whereas food industry has 17% and metal industry has 12.5% (KIA, 2010). As of 2012, it is seen that important part of kibbutz industry exports (36.1%) was to the EU. Other major export partners are North America (25.1%) and Asia (11.8%) (KIA, 2012).

As seen in Figure 1 industrial enterprises in kibbutz grew faster than agricultural branches. While in the past kibbutz initiatives belonged to one individual kibbutz totally or a joint venture of several different kibbutzim where the direct owners were kibbutz members, most of them privatised and the share of kibbutzim in these companies decreased. Costs of growth, marketing and modernization leaded kibbutzim a partnership with the private sector. As of 2010, it is noteworthy that more than 100 industrial companies were established with the partnership of private and communal companies (KIA, 2010).

Figure 1: Production Growth from Industrial and Agricultural Activity in Kibbutzim
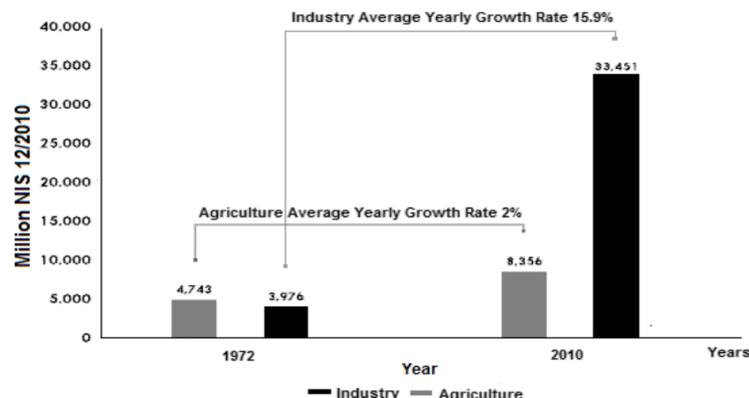
Source: *Kibbutz Industries Association – Yearly Review (2010), p. 10 retrieved from* Rosenthal, Gadi ve Hadas Eiges (2013), *Agricultural cooperatives in Israel,* FAO Regional Office for Europe and Central Asia, Policy Studies on Rural Transition No. 2013-5

Despite kibbutzim recorded significant breakthroughs in industrial activities, the fact that there is a small number of members in each kibbutz (from 50 up to thousand, but mostly between 300 and 400) prevented them to establish larger industrial facilities (Palgi, 1998).

It is seen that a growing number of kibbutzim in recent years is an attraction venue in terms of entertainment/social facilities such as guesthouses, swimming pools, horseback riding, tennis courts, museums, exotic animal farms and water parks as well as tourism. It is clear that young volunteers, who want to learn language, see kibbutzim in its place and work are interested in kibbutzim. With the help of expanding urban centres due to growing population of Israel, some kibbutzim has become almost the suburbs of cities and this situation led kibbutzim to the possibility of providing services in such areas as child care, summer camps, catering. Insufficient number of personnel revealed in kibbutzim for tourism services, factories, agricultural works and other services and despite the fact that it is contrary even to the self-sufficiency principle of kibbutzim, paid workers were employed (The Kibbutz & Moshav, 2016).

Employing wage workers by outsourcing due to the wearout of the concept of being self-sufficient because of inadequate number of personnel; the damage done on the egalitarian understanding with differential wages; the inclinations towards professionalization in administration and the increase of inclination towards individualism-privatization are among the developments that make Kibbutz Principles face a difficult situation today.

In addition, understanding of productive working that is accepted one of the important building blocks of kibbutz also internalized of its limits in a sense due to the paradigm of equitable sharing. Efficiency is not just a parameter related to the innate skills; it is also connected with giving effort. Some members may be said to have motivation problem for working more efficiently and risk taking in kibbutzim, which adopts an equalitarian sharing and does not establish a direct connection between distribution and individual's contribution to the community.

Education level of kibbutz members is higher than non-kibbutz Israeli population; this encourages trained, high skill members to get out of the community. However, communal ownership of local public goods such as, swimming pool, basketball and tennis courts, cultural facilities, parks may have an effect of reducing the demand of withdrawing from the community by increasing the cost of withdrawing/abandonment from kibbutz. (Abramitzky, 2011). Differential salaries that created disparities and income gap between the members are adopted by a great majority (in 1999 21%, in 2011 76%) of kibbutzim today (Leviatan, *Lessons from…*) and it is curiosity how deeper will the effect be that created in "egalitarian" utopia of kibbutzim.

3. CONCLUSION

"Kibbutz" which has a history of almost a century is a very different and important example as an economic-social life model and business organization. It is a model that claims to perform an ideal of a self-sufficient and egalitarian society which is based on common property, social justice and solidarity in the rural settlements with integration of market economy, in the capitalist world economy, in a capitalist country and by overlapping with the orientation of original organization in that country; also by influencing socialist ideology. It is out of the scope of this study to discuss how overlaps kibbutzim with socialist ideology / economy in theoretical context and facto.

Kibbutzim was not only agricultural communities based on common ownership, with the effect of economic and physical conditions it also gave emphasis to industrial development. And perhaps this has become just as important as other factors in structural changes of kibbutzim. It is understood that how industrial attempts forced kibbutzim in terms of the concept of self-sufficiency, direct democracy approach in management and the principle of equalitarian.

It is certainly difficult to request kibbutzim to stay as "communal" islands, which are isolated from the effect of market dynamics in a capitalist country and developing neo liberal politics (As adopted in the rhetoric of organization). Moreover kibbutzim was tested with motivation problems that all egalitarian, corporatist models may face with, charm of social and economic life of individualism, and the harmony of collective formulations for the positions where maybe necessary.

There are important achievements in the history of kibbutz, such as work is a value itself, not to get status in society based on the work, community members are directly involved in the decision-making process, self-government, social benefits and non-profit motivations are the base for economy, foundation of the economy taken the motive and the role of solidarity and social justice.

Today under the motto of sustainable development new alternatives are searched in market economy and solidarity economy is discussed again; as to say with today's rhetoric; kibbutzim can be seen as an important example of social innovation. Together with their original ideals and development, kibbutzim are structures to be drawn lesson as a radical version of the solidarity economy. It is beyond the scope of this study to answer if "third sector" is possible or not essentially in market economy as social and solidarity economy argument prescribes, and "solutions" that collectivist kibbutz experience finds for its own problems.

REFERENCES

Abramitzky, Ran (2011). *Lessons from the Kibbutz on the Equality–Incentives Trade-off,* Journal of Economic Perspectives—Volume 25, Number 1—Winter—Pages 185–208

Alcorta, Juan Alfredo (2009). *Neoliberal Cycles and Solidarity Economies: – A comparative study of Argentina and Japan –*
http://dspace.lib.niigata-u.ac.jp/dspace/bitstream/10191/8409/1/09_0004_JAA.pdf%20

ILO (2011), *Social and Solidarity Economy: Our common road towards Decent Work*, In support of the Second edition of the Social and Solidarity Economy Academy, 24-28 October, Montreal, Canada

JNF, *1901: it all started with a dream,* http://www.jnf.org/about-jnf/history/

KIA (2010), http://www.bdicode.co.il/CodeFiles/Company/profiles/kibbutz%20industry_eng.pdf

KIA (2012*), 2012 Annual Review,* http://www.kia.co.il/eng/info/KIA_in_English.pdf

KIA (2016), *Commemorating 100 Years of the Kibbutz,* http://www.kia.co.il/infoeng/kibbutz.htm

Leeser, David and Judith Zatlsman (1990), *Economic Socialization in The Kibbutz and the Town in Israel,* Journal of Economic Psychology 11, 557-565 North-Holland

Leviatan, Uriel. *Lessons from the Kibbutz as a Real Utopia,*
http://www.ssc.wisc.edu/~wright/ASA/Leviatan%20--%20lessons%20from%20the%20kibbutz%20as%20real%20utopia.pdf

Miller, Ethan (2010). *Solidarity Economy: Key Concepts and Issues,* Published in Kawano, Emily and Tom Masterson and Jonathan Teller-Ellsberg (eds). Solidarity Economy I: Building Alternatives for People and Planet. Amherst, MA: Center for Popular Economics.

Palgi, Michal (1998). Organization in Kibbutz Industry in Leviatan, U. Oliver, H. and J. Crisis in the Israeli Kibbutz: Meeting the Challenge of Changing Times, Praeger Publishers. in Michal Palgi "Organization in Kibbutz Industry"

Rosenthal, Gadi ve Hadas Eiges (2013), *Agricultural cooperatives in Israel,* FAO Regional Office for Europe and Central Asia Policy Studies on Rural Transition No. 2013-5

Rosner, Menahem (2000), *Future Trends of the Kibbutz - An Assessment of Recent Changes,* University of Haifa, The Institute for Study and Research of the Kibbutz, Publication no. 83

Simons, Tal & Paul Ingram (2000), *The Kibbutz for Organizational Behaviour*, Research in Organizational Behaviour, Volume 22, p.283-343

TFSSE (2014). *Social and Solidarity Economy and the Challenge of Sustainable Development,* A Position Paper by the United Nations Inter-Agency Task Force on Social and Solidarity Economy, June

The   Kibbutz   &   Moshav: History   &   Overview
http://www.jewishvirtuallibrary.org/jsource/Society_&_Culture/kibbutz.html

Utting, Peter. Nadine van Dijk and Marie-Adélaïde Matheï (2014), *Social and Solidarity Economy Is There a New Economy in the Making,* UNRISD, Occasional Paper 10 Potential and Limits of Social and Solidarity Economy August.

THE FUTURE OF PRIVATE PENSION FUNDS IN ALBANIA

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Abstract

Providing for senior citizens is a constant problem for every society. In a time when the average life expectancy has increased and the number of new-borns has decreased, the population is aging and the number of people belonging to "the elderly age group" had increased significantly and much more that the rates of employment. In this context, the old system of social security "Pay as you Go", hereafter referred to as PAYG, starting over 100 years ago is becoming more and more unable to fulfil the needs of the elderly age population.

During the 90s, many Countries have faced problems in their Pension System. At first, to address these problems they begun modifying their existing social security system, maintaining the same financial balances, through reviewing the level of contributions and extending the retirement age. In fact, during the implementation phase, with grandfathering ensuring a gradual change, these reforms faced many deviations. Hence, they not only didn't improve the situation but added more contradiction between generations by overburdening the younger generation.

While looking for a way to solve these issues, it was suggested a reform based on an alternate system, which would combine together the financial participation in the country social security scheme based on the principle of solidarity PAYG and the financial participation in a private, self-capitalized social security scheme where individuals are accountable to provide for their own retirement through their earnings.

Therefore, taking into account the evolvement of the social security schemes applied in Albania, focusing only on the retirements programs, including the implemented reform undertaken in 2014, in this paper I will present, identify and analyse the gaps and problems faced in the past in order to envision an adequate and a more comprehensive scheme for the development of the social security system, by relying more on the private pensions funds.

Keywords: private pension, PAYG, contribution rates, state pension
JEL classification: G23, H55, J32.

1. INTRODUCTION

It is a generally recognised fact that retirements schemes are a focal point in many countries due to the pace of population aging, firstly, as a result of increased life expectancy of the population and secondly, as a result of decreases in birth rates.

In these circumstances, where the average life expectancy of people has extended and the number of babies born has decreased, the population is aging rapidly. Therefore, the old retirement scheme- "Pay As You Go" (PAYG), started over 100 years ago, the foundation of which is the principle of solidarity and continuity of generations, where the benefits are directly tied to the contributions or taxes paid by individual participants, is becoming more and more unable to fulfil the needs of the elderly age population.

Despite numerous attempts to create facilities within the existing system, it was concluded that the modification of the present scheme will not lead to a comprehensive reform, which will address society's problems in this regard. Thus, there was the need to establish a rotation system which contained the element of the PAYG scheme but also gave to individuals the flexibility to self – manage their future funds.

This situation has imposed the necessity for a retirement reform in developing countries. One of the successful systems being applied today, even in Macedonia and Kosovo, is the retirement scheme composed of two important components, a public system with a consolidated base and a developed private system, mandatory for the new generation and voluntary for all those who want a higher retirement benefit.

Albania has already made its first steps in applying the above mentioned scheme by using the two pillar scheme since 2006. Although, not a developed scheme yet, with the adoption of the pension reform in 2014, it was intended to move forward with this vision.

In order to design an applicable and viable vision of inherent development of private pension funds and plans, this paper is presented as follows: Firstly, the author starts with the literature review and analyses the relevant legal acts in order to identify the amendments made in the legislation during the years. Secondly,

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the author presents and continues with the analysis of the previous system and that of the new reform which was adopted in 2014. Lastly, the paper presents the author's findings and recommendations which contribute to the discussion aimed at finding the best solutions for a more appropriate retirement scheme for Albania.

2. LITERATURE AND LEGISLATION REVIEW

The first Albanian legal act regarding pension schemes, known by the Social Insurance Institute (SII), was law no. 129, dated 28.10.1927 "On Civil Pension", which included state employees and military administration as pension beneficiaries.

It wasn't until 1947 that a proper social security system in Albania was established. After that year, the social security was developed in two parallel schemes, initially for the employees of the public sector and after the year 1972 for the members of agricultural cooperatives. These social security systems, designed after the "Soviet" experience, formally were too generous, while essentially failed to provide a comprehensive social protection.

The profound changes and development that underwent the political, economic and social system after the year 1991, extended its influence on the social security system as well. Of course, these developments required a review of the present system, with the aim to match the short and long term development of the entire economic system and in particular to ensure a more efficient social protection of citizens. On the overall context of developments, the Law no. 7703, dated 11.05.1993 "On Social Insurance in the Republic of Albania" was drafted and adopted. This law made a fundamental change in the system, shifting from a unique system, where only a public pension scheme was functioning, to a system comprised of two schemes, the public pension scheme **pay as you go** (hereafter refered as PAYG) and a voluntary supplementary scheme. During the time frame 1994 - 1996 the legal framework for the supplementary schemes was adopted.

Regarding PAYG pension scheme, many authors (Gusman et al 1993, Packard 2001, Schmid- Hebbel 1999)- have brought timely examples in order to confirm that PAYG pension scheme influenced people's decision to retire (Coile and Gruber 2000). Pursuant to this scheme, individuals pay instalments of their expected tax liability in order to provide for the retirees for the current year. Hence it encourages individuals to retire early or reduce their working hours as long as their retirement benefits will be conditional to the next generation contributions rather than their actual contributions.

Regarding the supplementary pension schemes, since the adoption of the legislative act until July 2014, only one government decision was adopted, which established the authority responsible for licensing and overseeing the activities of private pension funds in Albania. This unmotivated break in the creation of the private pension funds was justified only by the fact that this activity was not considered in any case as a solution to the problem of pensions in Albania. However, after 2005, some concrete measures were taken to develop the private pension funds. The Inspectorate of Private Pension Institutes" was established. The non-banking financial market was later reorganized. The Albanian Financial Supervisory Authority (AFSA) was established in 2006 as a public independent institution responsible for the regulation and supervision of non-banking financial system and the operators of the sector. Hence, the necessary regulatory infrastructure was established and first three new companies begun to operate and offer supplementary private pension plans.

3. PENSION SYSTEM ANALYSIS
3.1. The Previous System and Its Flaws
a) Public mandatory scheme (first pillar)

The mandatory pension scheme is regulated by Law No. 7703, dated 11.05.1993 "On Social Insurance in the Republic of Albania" and includes all employed or self-employed individuals. This system works on the principle Pay As You Go, which means that the benefits paid in a year, are financed by the contributions collected that year. This system is obligatory, public and has universal coverage. The retirement age is 65 years for men and 60 years for women. In order to be eligible for the full old age pension benefit, an individual must contribute for a period of 35 years. In 2015, the public pension schemes in Albania had over 585 thousand members, representing 20.1% of the population living in Albania, an indicator that showed a positive trend. The social insurance contribution rate was 24.5 percent, out of which, 21.6 percent was paid to the pension branch. The following table is a breakdown of the social insurance and health insurance rate.

Table 1: Contributions in the Social Insurance System (as % of wage)

Insurance branches	Total contribution rate	Employer	Employee
Pension branch	21.6	12.8	8.8
Sickness branch	0.3	0.2	0.1
Maternity branch	1.4	0.8	0.6
Work related accidents branch	0.3	0.3	0
Unemployment branch	0.9	0.9	0
Total percentage of social security contribution	24.5	15	9.5
Health insurance	3.4	1.7	1.7
Total	27.9	16.7	11.2

Source: (The Pension Policy Paper, 2014)

The monthly benefits are calculated according to the following legal formula:

Pp = Pb + Sh

Pp = the full pension benefit

Pb = the amount of the basic pension benefit given to all insurees. This component is annually corrected with the price index of some selected commodities, as provided in the Regulation of the SII and is annually defined by a decision of the Council of Ministers.

Sh = the supplement to the basic pension benefit is 1 % for each year of insurance, multiplied by the average assessable base. The average assessable base is calculated as the average wage received by the employee based on which the contributions are paid. The Council of Ministers approves annually the basic indexation coefficient of the assessment base using the growth rate of the average individual contributions of the respective year with that of the previous year.

b) Supplementary schemes (second pillar)

Supplementary schemes are regulated by two legal acts. Law no. 8097, dated 21. 03. 1996 "On the supplementary public insurance of persons performing Constitutional functions and for the employees of the public administration". Pursuant to this law, the public administration employees receive additional benefits in relation to the amount of time and position they held in the public administration, conditional to paying a supplementary contribution, which varies according to functions in administration from 3-5% of the gross salary. Law no.8087, dated 13.03.1996 "On the social supplementary insurance of the military" gives additional benefits for seniority, diseases and service time served. The number of persons participating in supplementary schemes is 14 798 persons in 2014 which have made a contribution in the amount of 722 million ALL. While the number of beneficiaries of these schemes for 2015 has been 31 478 people and the benefits amount have reached 4,707 million ALL, forming quite a generous supplementary scheme. The high level of coverage by public subventions and the special treatments for 80% of the target groups in the supplementary schemes such as the military, miners, veterans, MPs, ministers, burdens the contributory scheme because is directly financed from the state budget.

c) Voluntary scheme (third pillar)

Voluntary pension scheme is regulated by law no.10197, dated 10.12.2009 "On Voluntary Pension Funds". The purpose of this law is to provide for people whom are not eligible for public pension benefit, wish early retirement, or higher pension benefits. After 2006, an important role in the financial market played also the private voluntary pensions plans. Currently this activity is under development and occupies only a small percentage of market, 5-7%, but the problems and the missions that has is very important and very broad. We can simply take a look of the pensions funds in the world today, in order to understand their importance as they cover 55% of the world financial market and it's showing a growing trend.

3.2. The Pension System Reform

In August 2014, the Albanian Parliament adopted the Law no. 104/2014 "On some amendments to the Law No. 7703, dated 11.05.1993 "On Social Insurance in the Republic of Albania". Its purpose was to

encourage individuals to participate in the new pension scheme by offering a chance for higher pension benefits if higher contributions are paid. In this context it focused on two fundamental issues:

1. Consolidation of the current public pension scheme through a parametric reform.

2. The establishment and functioning of new schemes such as those of social pension, professional pensions for difficult professions, the development of private voluntary schemes etc. The new pension system that has been applied since 1 January 2015 in Albania, established a universal system with five functioning insurance scheme: First scheme: Social Pension provides social pension to all people over 70 years, whom have been resident in Albania for the last 5 years and are not eligible for pension benefits; Second scheme: Social Security System Pension PAYG provides for those who have contributed over 15 years in the scheme, on the basis of contributions paid, removing restrictions on the amount of pension; Third scheme: Professional Pension for difficult professions provides for employers and workers in difficult professions to contribute jointly in order to benefit from early retirement until the legal age required by the basic scheme is reached, or additional supplementary pension; Fourth scheme: Supplementary Pension for employees working in the public administration; and the Fifth scheme: Voluntary Pension for all those who want a higher pension benefit than what the public scheme provides.

Regarding the reform in the public scheme, the main changes were as follows:

- Changing the calculating formula of the pension including the social pension (SP) as a component, this serves as e base for each person that retires, in positive correlation with the versed contribution, by removing the ceiling-pension.

P = PS + Sh,

Where:

P = the amount of the monthly pension benefit

PS = the social pension

SH, **Sh**- = the supplement to the social pension benefit, calculated 1 % for each year of insurance, multiplied by the average contribution base. The Council of Ministers approves every year the coefficient of the contribution rate indexation based on the minimal wage increase

- The gradual increase of the normal pension age.
- The gradual increase of the necessary years of service from 35 to 40 within 2025
- The removal of the ceiling pension.
- The growth of pensions due to indexation.
- The revision of rural pension plan in order to match the urban plan until 2018
- The revision and amending of the legislation about the supplementary pension plan regarding state officials.
- The revision of the budgetary transfers regarding the public plan of social security

The reform of the private pension plan focuses on three main issues:

1. Developing the voluntary contribution scheme through tax relief
2. Establishing Professional pensions for difficult professions
3. Establishing mandatory private pensions for younger contributors by dividing 5% of the contribution using two alternatives.
   - Funded pension plans offered by a public governing body (public management) based on indexation
   - Funded pension plans offered by a private management body based on profit.

The mandatory private pension plan is supposed to divide the contribution flow in 2 parts:
- Social contributions PAYG (Pay as you go) which is paid to the insurance fund
- Individual contribution, which is paid by every active contributor under the age of 40 and is capitalized from a private fund.

3.3. Analyses on prior models, addressing issues and future vision of their development

Referring to prior experiences regarding the development of these systems, mainly in developing countries with a heritage on pension plans, 2 models or tendencies emerge:

The first model is the most thorough. The system consists of 3 columns (in accordance with the World Bank definition). The first column represents the mandatory pension plan, a basic public plan PAYGO, which covers approximately 35-40% of the substitution rate (average rate pension-wage). The second

column consists of the private mandatory system, where a part of the contribution goes to a personal account in the name of the beneficiary. This system covers 20-25% of the pension. And the last column represents the voluntary private pension plan which covers 10-15%. This model is used in Poland, Bulgaria; Hungary, Croatia, Estonia, Rumania, Slovakia, FYROM etc.

The second model refers to a 2 column system, consisting of a basic public plan which can bear 50-55% of the pension burden and a private insurance plan. The private plan in addition to tax relief is intended to create the opportunity to include the totality of the active population thus to bear 15-20% of the pension. An example of a good administration of this system is the Czech Republic and Slovenia. On the contrary Albania, Bosnia and Serbia are not to set as an example. The Czech Republic has a population of 10 million inhabitants, where half of it is active, and 4.3 million are included in the private pension plan. In other terms, 83% of the active population is part of the private pension plan. While in Albania the figure is under 4% meaning less than 9 thousand contributors.

We must admit that the private pension plan is considered to be a necessity for the current times. We can say that the solidarity scheme has fulfilled its mission, this system is effective in young populations where the majority contributes and the few benefit. But as the population gets older, and the ratio between contributors and beneficiaries changes, (since 1982 in developed countries and 1995 in developing countries), a new component has emerged, the private pension plan.

The private pension plan gives an answer to more than one problem created in time, thus:
- It resolves the contradiction between generations, by making the new generation more interested in contributing.
- It solves the problem of employment market distortion, such as informal economy, by connecting in a more direct way contributions and benefits created by the investment.
- It offers more favorable conditions on the matter of age and years of service.
- It offers a higher rate of benefit than the solidarity plan.
- These systems are transparent and a more favorable form of taxation whereby contributions are exempt, investment income and capital gains of the pension fund are also exempt from taxes independently of whom pays the contributions.

These are the reasons why nowadays private pension plan are spreading significantly fast all over the world. The reason why these systems are becoming more and more dominant, along for the demographic factor is the fact that they show significant advantages compared to the public plan. For instance:
1. Functioning Principles. The public scheme PAYGO functions based on solidarity among generations, where each active member has to contribute more and more in order to bear the burden of an increasing number of pension beneficiaries. On the other hand, this individual will benefit the amount available depending by the active community in the time of his retirement. By contrast, the private plan, which is based on the premise of self capitalization, guaranties not only the paid contributions over the years but even a surplus consisting of the investment income.
2. Advantageous conditions for beneficiaries. In the public system, in order to benefit a partial or a normal pension you have to meet 2 requirements: attain the age of pension (not less than 65 years for men and not less than 60 for women) and not less than 15 years of service for both genders. Whilst in the private system you can start to benefit 5 years earlier and there is no requirement regarding years of service or contributive years.
3. The private system offers higher benefits compared to the public system, for the same amount of contribution and the same period of time.
4. They have a more advantageous form of taxation.

The private schemes are dictated by the necessity of a gradually transition from a solidarity system to a self capitalized scheme. Thus, by establishing a system which alternates both components: a solid public plan and a developed private plan we create the ground, firstly to gradually improve the financial situation of the pension system by convincing contributors to pay more in order to have a higher benefit later. Secondly it helps the economy by mobilizing savings through their contributions. Taking into consideration the Albanian situation this Hybrid system seems to be the most adequate and convenient. Albania as a country aiming to enter the European Community is required to approximate its legal framework with European legislation. Furthermore, these schemes, because of their structure, help the country's economy

by mobilizing the savings and increasing investments in long term (3-10 year) financial instrument (State Bonds).

4. CONCLUSIONS

In 1993 the pension system of Albania was reformed, transforming from a system uniquely budgetary to a complex contributive system. After almost 22 years from the reform, from an overall point of view, 2 phenomena were identified:

1. Until 2005, as a result of a series of parametric reforms, the pension system in Albania was balanced enough so that the income from the system covered the costs and a reserve fund was set in place, which aloud the enterprise of different policies.
2. After 2005, the scheme started to create a deficit that worsened in the following years until 2014 when the budget funding reached 42% of the total expenses.

The experts on this field agree that 3 are the main factors that have contributed to this phenomenon:

1. The demographic process. During this period the number of retired persons has increased almost 7-8 % every year, because this age group corresponds to a period of very high nativity rate. On the contrary the number of new entries in the system (new contributors) has been 2 to 3% each year. This means that the costs of the pensions have been increased by 7-8 % annually against a 2-3% annual increase of the income which translates on a great increase of the budgetary financing up to 42% of the total expenses.
2. The poor policies during this past decade such as:
   - The drastic reduction of the contribution to social insurance from 42.5% in 2005, to 24.5% in fin 2014. This decrease not only did not justify the purpose of raising the number of contributors but increased the budgetary subsidies in the same amount (42 %)
   - The rise of contributed wage ratio from 1 to 3 to 1 to 5 (19.400 ALL the minimal wage and 97.000 ALL the maximal wage) and not changing the 1 to 2 ratio of the pensions (11.500 ALL the minimal pension benefit, 23.000 ALL the maximal pension benefit) detached the relation of contributing more in order to have a higher pension and created a great amount of evasion to the insurance system. This evasion resulted mostly for wages above the average.
3. The dysfunction of the Private Pension Fund for a period of 15 years has reduced the replacement rate significantly, therefore, the pension- wage ratio dropped from 70% to 35%.

The topic of Social Insurance and especially the pension problematic is quite wide and complex. This complexity takes a crucial significance because of the fact that these issues are connected directly and indirectly to the economic interests of a considerable part of the population. In this context, the right and moderate solutions through the development of private schemes that serve best the final purpose - an increased opportunity for an economic stable life for the senior citizens.

We must admit that private pension plans are a necessity nowadays. We can say that the solidarity plan achieved its purpose because it was very effective in the circumstances of a young population. But in the context of a population growing old where the proportions have changed, it is a widely spread occurrence to introduce the private scheme as a component of the pension plan.

Taking into consideration the fact that private schemes are dictated by the necessity to gradually make the transition from the solidarity system to a self-capitalized system, concerning Albanian circumstances, addressing the issues of social insurance and especially the matter of pension can be realized with an alternating system, which has shown to be more suitable and functional.

REFERENCES:

Bencivenga, V. R. and B. D. Smith; 1991; Financial Intermediation and Endogenous Growth; Review of Economic Studies; Vol. 58;

Coile, Curtney, and Jonathan Gruber. 'Social Security and Reteirment'. Nber working paper series 7830 (2000): n. pag. Web. 19 June 2015.

Disney, R; 2003; Are public pension contributions a tax on employment? Presented at the fourth annual conference of CeRP, Turin; September 16.

Gustman, A. L., O. S. Mitchell and T. L. Steinmeier; 1993; The Role of Pensions in the Labour Market; Working Paper No. 4295; National Bureau of Economic Research.

James, E.; 1996; Providing Better Protection and Promoting Growth: A Defence of Averting the Old Age Crisis; International Social Security Review; Vol. 49 No 3.

James, E.; 1997; Public Pension Plans in International Perspective: Problems, Reforms and Research Ideas; in The Economics of Pensions; ed. Valdes-Prieto, S; 1997; Cambridge University Press.

Levine R. and S., Zervos; 1998; Stock Markets, Banks, and Economic Growth; The American Economic Review; Vol. 88; No. 3; June.

Law no. 129, dated 28.10.1927 "On Civil Pensions"

Law no. 7703 dated 11.05.1993 "On Social Insurance in the Republic of Albania"

Law no.1097, dated 10.12.2009 "On Voluntary Pension Funds"

Law no.8087, dated 13.03.1996 "On Supplementary social insurance for the Military"

Law no. 8097, dated 21.03.1996 "On Supplementary State Security for persons performing Constitutional Functions and for Public Employees"

Law no.104/2014 "On some amendments to the law no.7703, dated 11.5.1993On social insurance in the Republic of Albania"

Ministry of Youth and Social Welfare. (2014). The Pension Policy Paper. In http://www.sociale.gov.al/. Retrieved 07/07/2016,

Packard, T. G.; 2001; Is There a Positive Incentive Effect from Privatizing Social Security? A Panel Analysis of Pension Reform in Latin America; The World Bank.

Schmidt-Hebbel, K.; 1999a; Does Pension Reform Really Spur Productivity, Saving and Growth; The World Bank.

Singh, A.; 1996; Pension Reform, the Stock Market, Capital Formation and Economic Growth: A Critical Commentary on the World Bank's Proposals; International Social Security Review; Vol. 49 No 3.

Smith, M. P.; 1996; Shareholders Activism by Institutional Investors; Evidence from CalPERS; The Journal of Finance; Vol. 51; No. 1. March.

Woidtke, T.; 2002; Agents Watching Agents? Evidence from Pension Fund Ownership and Firm Value; Journal of Financial Economics; Vol. 63(1).

TRADE OPENNESS, INEQUALITY AND POVERTY IN LATIN AMERICAN COUNTRIES

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Abstract

Globalization process has been accelerated especially as of mid-1980s due to technological, legal and political developments in the world. In this process, many countries reduced or removed the barriers on the cross-country flows of goods, services and capital and in turn global trade volume increased substantially. This study investigates the impact of trade openness on both poverty alleviation and income inequality in 11 Latin American countries employing panel data analysis. We found that trade openness and financial development had negative impact on both income inequality and poverty in the long run, while income inequality had positive impact on poverty.

1. INTRODUCTION

Trade liberalization is one of the important reflections in the globalization process. In the globalization process, many countries have removed the constraints on flows of goods, services and capital considering its positive implications for economic growth and economic development through increasing effectiveness and competitiveness, technology transfer and provision of funds in better conditions especially as of mid-1980s. However, some costs generally result from the process of trade liberalization such as decreases in output, job losses and balance of payment problems and income inequality. One of the mostly discussed topics in the literature of trade liberalization is about the impact of trade openness on income inequality and poverty. Income inequality and poverty are related closely, because both depend on income. But poverty refers to the people below a minimum living standard, while inequality is about the income distribution (United Nations, 2012). However, theoretical and empirical literature on the interaction between trade openness, income inequality and poverty has stayed inconclusive.

Trade has potential to affect poverty through changes in prices of commodity and factors, factors income, government revenues and expenditures. However, these channels are also interrelated and the net impact on poverty depends on the relative strength of negative and positive forces (See McCulloch et al. (2010), Santos-Paulino (2012)). On the other hand trade openness also may affect intra-national inequality and international inequality. The biggest impact of trade openness on income inequality is through economic growth. In this regard, Kuznets (1955) proposed that the relationship between economic growth and income inequality follows an inverted U curve. On the other hand Kaldor (1957) suggested that income inequality is necessary for economic growth, because the rich save more when compared to the poor, in turn redistribution in favor of the rich fosters more savings for investment and economic growth.

Latin America and Africa have been the most unequal and poor regions in the globalized world (World Bank, 2016a). However, Latin American countries have experienced decreases both in income inequality and poverty during recent past decades. This study investigates the role of trade openness and financial development on the decreases in income inequality and poverty alleviation in 11 Latin American countries (Argentina, Brazil, Colombia, Costa Rica, Dominican Republic, El Salvador, Honduras, Panama, Paraguay, Peru and Uruguay) during the period 2001-2013 employing panel data analysis. The rest of the paper is structured as follows: The next section overviews the literature on the impact of trade openness and financial development in income inequality and poverty. Section 3 gives data and method; section 4 conducts the empirical analysis and presents major findings. Finally, the study is completed with the Conclusion.

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2. LITERATURE REVIEW

2.1. Trade Openness, Income Inequality and Poverty

The empirical studies about the impact of trade openness on both income inequality and poverty have mixed findings as seen in Table 1A. Some studies found that trade openness had negative impact on income inequality or poverty (See Agenor (2004), Tsai and Huang (2007), Bucciferro (2010), Ncube et al. (2013), Salimi et al. (2014)), while some studies revealed that trade openness had positive impact on income inequality or poverty (See Khan and Bashir (2013), Wahiba (2013)). On the other hand relatively few studies have reached there have been no statistically relationship among trade openness, income inequality and poverty (See Khan and Bashir (2013), Trabelsi and Liouane (2013)).

Table 1A: Literature summary about the impact of trade openness on income inequality and poverty

Study	Countries and Study Period	Method	Main Findings
Agenor (2004)	16 countries	Panel regression	Trade openness had negative impact on poverty after a threshold value of globalization.
Tsai and Huang (2007)	Taiwan, 1964–2003	Johansen cointegration test and regression analysis	Trade openness decreased the poverty.
Ornek and Elveren (2010)	Turkey, 1980-2001	Engle-Granger cointegration test and Granger Causality Test	Bidirectional causality between trade openness and income inequality.
Bucciferro (2010)	19 Latin America countries, 1985-2010	Panel regression	Trade openness had negative impact on poverty and inequality.
Faustino and Vali (2011)	24 OECD countries, 1995-2007	Panel regression	There was a negative relationship between trade openness and inequality.
Castilho et al. (2012)	Brazil, 1987-2005	Panel regression	Trade openness had negative impact on poverty and inequality in urban areas, but no significant impact on poverty and positive impact on inequality in rural areas.
Székely and Samano (2012)	Latin American countries, 1980-2010	Panel regression	Panel regression had positive impact on income inequality.
Ncube et al. (2013)	MENA countries, 1985-2009	Panel regression	Trade openness decreased the poverty.
Khan and Bashir (2013)	Pakistan, 1975-2010	Johansen cointegration test	Trade openness had no impact on poverty, but had positive impact on inequality.
Wahiba (2013)	Tunisia, 1984-2011	Regression	Trade openness had positive impact on inequality.
Trabelsi and Liouane (2013)	106 developing countries, 1980-2010	Panel regression	Trade openness had no significant impact on inequality and poverty.
Salimi et al. (2014)	30 developed and developing countries, 2000-2011	Dynamic panel regression	Trade liberalization had negative impact on income inequality.
Lim and McNelis (2014)	42 low to middle income countries, 1992-2007	Panel regression	Trade openness decreased income inequality depending on development level of the countries.
Gulmez and Altıntas (2015)	Turkey, 1981-2011	Johansen cointegration test and vector error correction model	Unidirectional causality from trade openness to income inequality

Source: own elaboration based on literature review

2.2. Financial Development, Income Inequality and Poverty

One important dimension of the globalization is financial globalization. Financial globalization and the wide consensus on the positive impact of financial development on economic growth caused the researchers to investigate the impact of financial development on income inequality and poverty. The empirical studies have generally suggested that financial development contributes to the poverty alleviation as seen in Table 1B. However, the findings on finance-income inequality have been stayed inconclusive. Some studies such as Beck et. al. (2004 and 2007), Batuo et al. (2007), Shahbaz and Islam (2011) revealed that financial development decreased income inequality, while some recent studies such as Batabyal and Chowdhury (2015), Denk and Cournède (2015) have found that financial development increased the income inequality. Furthermore, some studies suggested that the relationship between finance and income inequality follows a U or inverted U curve (See Greenwood and Jovanovic (1990) and Mansour and Wendel (2015))

Table 1B: Literature summary about the impact of financial development on income inequality and poverty

Study	Countries and Study Period	Method	Main Findings
Honohan (2004)	China, Korea, Russia and the United Kingdom, 1960-2000	Panel regression	Financial development had negative impact on poverty.
Beck et al. (2004)	58 developing countries, 1980-2000	Panel regression	Financial development had negative impact on income inequality and poverty.
Jalilian and Kirkpatrick (2005)	26 developing and 16 developed countries, 1960-1995	Panel regression	Financial development had negative impact on poverty.
Beck et al. (2007)	Different groups of countries and period	Panel regression	Financial development had negative impact on income inequality.
Batuo et al. (2010)	22 African countries, 1990-2004	Dynamic panel regression	Financial development had negative impact on income inequality.
Odhiambo (2010)	Kenya, 1968-2006	Causality test	Unidirectional causality from financial development to poverty reduction
Inoue and Hamori (2010)	India, 1973-2004	Dynamic panel regression	Financial development had negative impact on poverty.
Guillaumont-Jeanneney and Kpodar (2011)	65 developing countries, 1966-2000	Dynamic panel regression	Financial development had negative impact on poverty.
Perez-Moreno (2011)	35 developing countries, 1970-1998	Granger causality test	Unidirectional causality from financial development to poverty reduction
Ellahi (2011)	Pakistan, 1975-2010	Johansen cointegration test	Unidirectional causality from financial development to poverty reduction.
Shahbaz and Islam (2011)	Pakistan, 1971-2005	ARDL cointegration	Financial development had negative impact on income inequality.
Azra et al. (2012)	Pakistan, 1981-2010	ARDL cointegration	Financial development had negative impact on poverty.
Fowowe and Abidoye (2013)	African countries	Dynamic panel regression	Financial development had negative impact on poverty.
Odhiambo (2013)	Tanzania, 1988-2011	ARDL cointegration and Granger causality test	Unidirectional causality from financial development to poverty reduction
Uddin et al. (2014)	Bangladesh, 1975-2011	ARDL cointegration	Financial development had negative impact on poverty.
Chemli (2014)	8 MENA countries, 1990-2012	ARDL cointegration	Financial development had positive impact on poverty depending on upper income countries.
Batabyal and Chowdhury (2015)	30 Commonwealth countries, 1995-2008	Panel regression	Financial development had positive impact on income inequality at higher corruption.
Denk and Cournède (2015)	33 OECD countries, 1974-2011	Panel regression	Financial development had positive impact on income inequality.

Study	Countries and Study Period	Method	Main Findings
Mansour and Wendel (2015)	13 ASEAN+3 countries, 1960-2012	Panel regression	The impact of financial development on inequality is like a U curve. First financial development decreases inequality, but it increases inequality after once achievement of a certain financial development level.
Sehrawat and Giri (2016)	11 south Asian countries, 1990-2013	Pedroni panel cointegration test and panel Granger causality	Financial development had negative impact on poverty, while rural–urban income inequality had positive impact on poverty.

Source: own elaboration based on literature review

3. DATA AND METHOD

In this study, we examined the impact of trade openness and financial development on inequality and also investigated the impact of trade openness, financial development and inequality on poverty with two models in selected Latin American countries employing Basher and Westerlund (2009) cointegration test.

3.1. Data

We used Gini coefficient as a proxy for inequality in the first model and the ratio of population below $1.25 (PPP) per day as a proxy for poverty in the second model. On the other we used the sum of export and import as a percent of GDP as trade openness and domestic credit to private sector as a percent of GDP as financial development. Our sample and study period were dictated by data availability. The variables used in the econometric analysis and their symbols were presented in Table 2. We benefited from statistical packages of E-views 9.0, WinRATS Pro. 8.0 and Gauss 11.0 for econometric analysis in the study.

Table 2: Data description

Variables	Symbol	Source
Inequality (Gini coefficient)	GINI	World Bank (2016a)
Poverty headcount ratio at $1.25 (PPP) per day	HECO	United Nations (2016)
Trade openness (sum of exports and imports (% of GDP))	OPEN	World Bank (2016b)
Financial development (domestic credit to private sector (% of GDP))	DCRD	World Bank (2016c)

Source: own elaboration

3.2. Method

In the econometric analysis, first we tested cross-sectional dependency by CD_{LM1} test developed by Breusch and Pagan (1980) and LM adj. test of Pesaran et al. (2008), then analyzed the homogeneity of the cointegrating coefficients by delta test developed by Pesaran and Yamagata (2008). The stationarity of the variables was tested with PANKPSS (Panel Kwiatkowski, Phillips, Schmidt and Shin) test of Carrion-i-Silvestre et al. (2005) considering both cross-sectional dependency and structural breaks. Finally we analyzed cointegrating relationship in both models with Basher and Westerlund (2009) cointegration test regarding cross-sectional dependency and structural breaks and estimated cointegrating coefficients with panel AMG (Augmented Mean Group) method of Eberhardt and Bond (2009). We also analyzed short run relationship among the variables with use of error correction term.

4. EMPIRICAL ANALYSIS

4.1. Cross-sectional dependency and homogeneity test

Cross-sectional dependency and homogeneity is important for the selection of panel unit root test and cointegration test. In our both dataset, we used Breusch and Pagan (1980) LM test and $LM_{adj.}$ test of Pesaran et al. (2008), because time dimension of the datasets are higher than the cross-section dimension of the datasets. On the other hand we tested the homogeneity with delta tilde and adjusted delta tilde test of Pesaran and Yamagata (2008). The results of cross-sectional dependency and homogeneity tests were presented in Table 3. The results indicated that there was cross-sectional dependency and heterogeneity among the variables.

Table 3: Results of cross-sectional dependency and homogeneity tests

		Cross-Sectional Dependency Test			
		CD_{LM1} test		LM adj. test	
		Test statistic	P value	Test statistic	P value
Model 1	GINI	8.632	0.001	11.997	0.000
	OPEN	7.044	0.015	9.147	0.028
	DCRD	8.291	0.009	8.668	0.001
	Homogeneity Test				
	Test	Test statistic		P value	
	$\tilde{\Delta}$	13.71		0.013	
	$\tilde{\Delta}_{adj.}$	19.45		0.001	
Model 2		Cross-Sectional Dependency Test			
		CD_{LM1} test		LM adj. test	
		Test statistic	P value	Test statistic	P value
	HECO	12.643	0.001	0.001	0.000
	OPEN	9.046	0.016	0.016	0.025
	DCRD	8.225	0.002	0.002	0.008
	GINI	11.346	9.705	0.025	0.013
	Homogeneity Test				
	Test	Test statistic		P value	
	$\tilde{\Delta}$	21.67		0.000	
	$\tilde{\Delta}_{adj.}$	25.62		0.004	

Source: own elaboration based on cross-sectional dependency and homogeneity test

4.2. Panel unit root test

We used the PANKPSS panel unit root test to examine integration levels of the variables in our study considering the cross-sectional dependency among the variables and the crises in the study period. We selected the model which allows for structural breaks in both the constant term and trend, when applying the test. Critical values were obtained by Monte Carlo simulations with 1,000 simulations. The results of the test indicated that variables were not stationary at their level, but became stationary after the first differencing. We presented the results of test with first-differenced variables and the dates of structural breaks in Table 4A and 4B. In the dates of structural breaks, we saw that there existed 2000 Paraguay economic crisis, 2000 Russian crisis, 2002 Uruguay economic crisis, 2002 Argentina economic crisis, 2008 global financial crisis and the Eurozone sovereign debt crisis during our study period.

Table 4A: Results of PANKPSS panel unit root test for Model 1

Country	DGINI		DOPEN		DDCRD	
	P value	Dates of Structural Breaks	P value	Dates of Structural Breaks	P value	Dates of Structural Breaks
Argentina	0.142*	2002, 2009	0.153*	2002, 2009	0.179*	2002, 2009
Brazil	0.191*	2003, 2009	0.185*	2003, 2009	0.123*	2003, 2009
Colombia	0.147*	2001, 2009	0.232*	2001, 2009	0.131*	2001, 2010
Costa Rica	0.127*	2001, 2009	0.219*	2001, 2008	0.156*	2001, 2008
Dominican Republic	0.179*	2003, 2010	0.217*	2003, 2009	0.115*	2003, 2009
El Salvador	0.190*	2001, 2009	0.226*	2001, 2009	0.133*	2001, 2010
Honduras	0.175*	2001, 2009	0.214*	2001, 2009	0.192*	2001, 2009
Panama	0.162*	2001, 2009	0.173*	2001, 2009	0.177*	2001, 2009
Paraguay	0.092*	2001, 2009	0.103*	2001, 2009	0.092*	2002, 2009
Peru	0.273*	2001, 2009	0.140*	2001, 2009	0.116*	2001, 2009
Uruguay	0.173*	2002, 2009	0.152*	2002, 2009	0.151*	2002, 2009
Panel	0.197*		0.184*		0.146*	

Source: own elaboration based on PANKPSS panel unit root test
* Stationary at 5% significance level

Table 4B: Results of PANKPSS panel unit Root test for Model 2

Country	DHECO		DOPEN		DDCRD		DGINI	
	P value	Dates of Structural Breaks	P value	Dates of Structural Breaks	P value	Dates of Structural Breaks	P value	Dates of Structural Breaks
Argentina	0.156*	2002, 2009	0.145*	2002, 2009	0.161*	2002, 2009	0.137*	2002, 2009
Brazil	0.181*	2003, 2009	0.156*	2003, 2009	0.134*	2003, 2009	0.161*	2003, 2009
Colombia	0.186*	2001, 2009	0.193*	2001, 2009	0.137*	2001, 2010	0.129*	2001, 2009
Costa Rica	0.137*	2001, 2010	0.203*	2001, 2008	0.142*	2001, 2008	0.171*	2001, 2009
Dominican Republic	0.182*	2003, 2009	0.216*	2003, 2009	0.153*	2003, 2009	0.126*	2003, 2010
El Salvador	0.158*	2001, 2010	0.217*	2001, 2009	0.168*	2001, 2010	0.139*	2001, 2009
Panama	0.126*	2001, 2009	0.131*	2001, 2009	0.144*	2001, 2009	0.129*	2001, 2009
Paraguay	0.092*	2002, 2009	0.176*	2002, 2009	0.182*	2002, 2009	0.164*	2001, 2009
Peru	0.152*	2001, 2009	0.142*	2001, 2009	0.179*	2001, 2009	0.142*	2001, 2009
Uruguay	0.183*	2002, 2009	0.1730	2002, 2009	0.153*	2002, 2009	0.118*	2002, 2009
Panel	0.172*		0.182*		0.174*		0.167*	

Source: own elaboration based on PANKPSS panel unit root test
* Stationary at 5% significance level

4.3. Panel cointegration test

We investigated the long run relationship among the variables in both models with Basher and Westerlund (2009) cointegration test which considers cross-sectional dependency and structural breaks. We selected the model that allows structural breaks in both the constant term and trend for the cointegration test and results are presented in Table 5. Critical values were obtained by Monte Carlo simulations with 1,000 simulations. The results demonstrated that null hypothesis (there is cointegrating relationship among the variables) was rejected in both models in case the structural breaks were not considered. On the other hand the null hypothesis was accepted when the structural breaks were considered and we concluded that there was cointegrating relationship among the variables in both models under the structural breaks.

Table 5: Results of Basher and Westerlund (2009) cointegration test

Model 1			
	Test Statistics	P Value	Decision
Exclusion of structural breaks in the constant term and trend	1.672	0.001	There is no cointegration
Consideration of structural breaks in the constant term and trend	23.981	0.272	There is cointegration
Model 2			
	Test Statistics	P Value	Decision
Exclusion of structural breaks in the constant term and trend	1.725	0.005	There is no cointegration
Consideration of structural breaks in the constant term and trend	21.992	0.196	There is cointegration

Source: own elaboration based on Basher and Westerlund (2009) cointegration test

4.4. Estimation of cointegrating coefficients

We applied the panel AMG method for estimating cointegrating coefficients and the results were presented in Table 6. Autocorrelation and heteroscedasticity problems were eliminated with Newey-West method. Findings demonstrated that trade openness and financial development had a negative impact on income inequality and poverty, but the impact of financial development on income inequality was larger compared to the impact of trade openness considering the coefficients. On the other hand trade openness and financial development had negative impact on poverty, while income inequality had positive impact on poverty, but income inequality had the largest impact on the poverty.

Table 6: Results of cointegrating coefficients estimation

Model 1		
Variables	Coefficient	P value
OPEN	-0.092*	0.002*
DCRD	-0.116*	0.004*
Model 2		
Variables	Coefficient	P value
OPEN	-0.082*	0.001*
DCRD	-0.125*	0.013*
GINI	0.273*	0.000*

Source: own elaboration based on panel AMG estimation
* Stationary at 5% significance level

4.5. Short-run analysis

Short run relationships among the variables were analyzed with the use of error correction term. We estimated the short run relationships among the variables by panel AMG in both models and the results were presented in Table 7. We found that the coefficients of error correction terms were negative and

statistically significant. This verified that deviations among series in the short run were eliminated and series converged to their long run equilibrium values. On the other hand, the small coefficients of error correction terms showed that the equilibrating velocity of variables was low.

Table 7: Results of error correction model

Model 1			
Variables	Coefficient	P Value	Coefficient of Error Correction Term
DOPEN	0.083*	0.002	-0.015*
DDCRD	0.105*	0.017	-0.036*
Model 2			
Variables	Coefficient	P Value	Coefficient of Error Correction Term
DOPEN	0.071*	0.016	-0.025*
DDCRD	0.096*	0.005	-0.036*
DGINI	0.195*	0.003	-0.014*

Source: own elaboration based on panel AMG estimation
* Stationary at 5% significance level

5. CONCLUSIVE REMARKS

The impact of trade openness on poverty and income inequality is one of the most discussed issues in the rapidly globalizing world. However, theoretical and empirical literature have been inconclusive about the impact of trade openness on poverty and income inequality. The empirical studies showed that the impact of trade openness on poverty and income inequality has changed depending on development level of the countries, period and country specific characteristics. This study examined the impact of trade openness and financial development on poverty and income inequality in selected Latin American countries employing Basher and Westerlund (2009) cointegration test. Our findings indicate that trade openness and financial development had negative impact on income inequality in the long run. On the other hand trade openness and financial development also had negative impact on poverty, while income inequality had positive impact on poverty.

Our findings and some studies in the literature indicated that trade openness and financial development contribute to the decreases in poverty and income inequality. But some studies also showed that especially trade openness had positive impact on poverty and income inequality. At this point, the factors such as development level and country specific characteristics exhibit importance for the interaction among trade openness, poverty and income inequality. Future studies can be conducted to reveal the determinants which are important for the interaction among trade openness, poverty and income inequality. In this way, policymakers also can estimate the possible impact of trade openness and financial development on poverty and inequality and implement right policies to decrease both poverty and income inequality.

REFERENCES

Agenor, P.R. (2004). Does globalization hurt the poor? International Economics and Economic Policy, 1, 1-31.

Azra, E.A., Khan, A.D. & Jan, W.U. (2012). Financial development and poverty alleviation: Time series evidence from Pakistan. World Applied Sciences Journal, 18(11), 1576-1581.

Banerjee, A. & Newman, A. (2004). Inequality, growth and trade policy. Massachusetts Institute of Technology, Department of Economics, and University College London, Department of Economics. Unpublished Manuscript.

Basher, S.A. & Westerlund, J. (2009). Panel cointegration and the monetary exchange rate model. Economic Modelling, 26(2), 506-513.

Batabyal, S. & Chowdhury, A. (2015). Curbing corruption, financial development and income inequality. Progress in Development Studies, 15(1), 49-72.

Batuo, M.E., Guidi, F. & Mlambo, K. (2010). Financial development and income inequality: Evidence from African countries. Retrieved from https://mpra.ub.uni-muenchen.de/25658/ (02.06.2016)

Beck, T., Demirgüç-Kunt, A. & Levine, R. (2004). Finance, inequality and poverty: Cross-country evidence. National Bureau of Economic Research Working Paper No. 10979.

Beck, T., Demirguc-Kunt, A. & Levine, R. (2007). Finance, inequality and the poor. Journal of Economic Growth, 12(1), 27–49.

Breusch, T.S. & Pagan, A.R. (1980). The Lagrange multiplier test and its applications to model specification tests in econometrics. Review of Economic Studies, 47(1), 239-53.

Bucciferro, J. (2010). Economic restructuring and poverty/income inequality in Latin America. Consilience: The Journal of Sustainable Development, 4(1), 1-16.

Castilho, M., Menendez, M. & Sztulman, A. (2012). Trade liberalization, inequality, and poverty in Brazilian states. World Development, 40(4), 821–835.

Chemli, L. (2014). The nexus among financial development and poverty reduction: An application of ARDL approach from the MENA region. Journal of Life Economics, 2, 133-148.

Carrion-i-Silvestre, J.L., del Barrio, T. & López-Bazo, E. (2005). Breaking the panels: An application to the GDP per capita. Econometrics Journal, 8(2), 159–175.

Denk, O. & Cournède, B. (2015). Finance and income inequality in OECD countries. OECD Economics Department Working Papers, No. 1224, OECD Publishing, Paris. http://dx.doi.org/10.1787/5js04v5jm2hl-en

Eberhardt, M. & Bond, S. (2009). Cross-section dependence in nonstationary panel models: A novel estimator, Retrieved from http://mpra.ub.uni-muenchen.de/17692/ (15.03.2015)

Ellahi, N. (2011). How development of finance contributes to poverty alleviation and growth: A time series application for Pakistan. African Journal of Business Management, 5(30), 12138-12143.

Faustino, H. & Vali, C. (2011). The effects of globalization on OECD income inequality: A static and dynamic analysis. School of Economics and Management Department of Economics WP 12/2011/DE, Retrieved from https://ideas.repec.org/p/ise/isegwp/wp122011.html (15.05.2016)

Fowowe, B. & Abidoye, B. (2013). The effect of financial development on poverty and inequality in African countries. The Manchester School, 81(4), 562–585.

Greenwood, J. & Jovanovic, B. (1990). Financial development, growth, and the distribution of income. Journal of Political Economy, 98(5), 1076-1107

Guillaumont-Jeanneney, S. & Kpodar, K. (2011). Financial development and poverty reduction: Can there be a benefit without a cost? Journal of Development Studies, 47(1), 143–163.

Gulmez, A. & Altıntas, N. (2015). Türkiye'de ticari açıklık ve enflasyonun gelir dağılımına etkisi: ekonometrik bir analiz. Kafkas Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, 6(9), 31-44.

Honohan, P. (2004). Financial development, growth, and poverty : How close are the links? Retrieved from https://openknowledge.worldbank.org/handle/10986/14439 (05.04.2016)

Inoue, T. & Hamori, S. (2010). How has financial deepening affected poverty reduction in India? Empirical analysis using state-level panel data. Institute of Developing Economies Discussion Paper, No.249.

Jalilian, H. & Kirkpatrick, C. (2005). Does financial development contribute to poverty reduction? Journal of Development Studies, 41(4), 636 656.

Kaldor, N. (1957). A model of economic growth. Economic Journal, 57, 591-624.

Khan, R.E.A. & Bashir, H.D. (2013). Trade, poverty and inequality nexus: The case of Pakistan. Middle-East Journal of Scientific Research, 13 (Special Issue of Economics), 11-15.

Kuznets, S. (1955). Economic growth and income inequality. American Economic Review, 45(1), 1-28.

Lim, G.C. & McNelis, P.D. (2014). Income inequality, trade and financial openness. RES-SPR Conference on Macroeconomic Challenges Facing Low-Income Countries. Washington, 30-31 January 2014.

Mansour, M.S. & Wendel, M. (2015). Finance and inequality – evidence from East Asia. Eurasian Journal of Economics and Finance, 3(3), s1-16.

McCulloch, N. & Winter, L.A., Cirera, X. (2010). Trade liberalization and poverty: A handbook. Center for Economic Policy Research. London.

Ncube, M., Anyanwu, J. & Hausken, K. (2013). Inequality, economic growth, and poverty in the Middle East and North Africa (MENA). African Development Bank Group Working Paper, No.195.

Odhiambo, N.M. (2010). Is financial development a spur to poverty reduction? Kenya's experience. Journal of Economic Studies, 37(3), 343-353.

Odhiambo, N.M. (2013). Is financial development pro-poor or pro-rich? Empirical evidence from Tanzania. Journal of Development Effectiveness, 5(4), 489-500.

Ornek, I. & Elveren, A.Y. (2010). Trade liberalization and income inequality in Turkey: An empirical analysis. Ç.Ü. Sosyal Bilimler Enstitüsü Dergisi, 19(2), 62-70.

Perez-Moreno, S. (2011). Financial development and poverty in developing countries: A causal analysis. Empirical Economics, 41, 57-80.

Pesaran, M.H. & Yamagata, T. (2008). Testing slope homogeneity in large panels. Journal of Econometrics, 142(1), 50–93

Pesaran, M.H., Ullah, A. & Yamagata, T. (2008). A bias-adjusted LM test of error cross-section independence. Econometrics Journal, 11(1), 105-127.

Salimi, F., Akhoondzadeh, T. & Arsalanbod, M.R. (2014). The triangle of trade liberalization, economic growth and income inequality. Communications on Advanced Computational Science with Applications, 1-15.

Santos-Paulino, A.U. (2012). Trade, income distribution and poverty in developing countries: A survey. UNCTAD Discussion Papers, No.207

Sehrawat, M. & Giri, A.K. (2016). Financial development, poverty and rural-urban income inequality: evidence from South Asian countries. Quality & Quantity, 50, 577–590.

Shahbaz, M. & Islam, F. (2011). Financial development and income inequality in Pakistan: An application of ARDL approach. Journal of Economic Development, 36(1), 35-58.

Székely, M. & Samano, C. (2012). Did Trade Openness Affect Income Distribution in Latin America? Evidence for the years 1980–2010. United Nations University World Institute for Development Economics Research Working Paper, 2012/03.

Trabelsi, M.A. & Liouane, N. (2013). Trade liberalization and fight against poverty. International Journal of Economics and Financial Issues, 3(2), 370-375.

Tsai, P.L. & Huang, C.H. (2007). Openness, growth and poverty: The case of Taiwan. World Development, 35(11), 1858–1871.

Uddin, G.S., Shahbaz, M., Arouri, M.& Teulon, F.. (2014). Financial development and poverty reduction nexus: A cointegration and causality analysis in Bangladesh. Economic Modelling, 36, 405-412.

United Nations (2012). Trade and development report 2012, New York: United Nations.

United Nations (2016). Millennium development goals indicators-Population below $1.25 (PPP) per day, percentage, Retrieved from http://data.un.org/Data.aspx?d=MDG&f=seriesRowID%3a580 (07.05.2016)

Wahiba, N.F. (2015). Trade openness and inequality. Journal of Knowledge Management, Economics and Information Technology, 3(6), 1-12.

World Bank (2016a) Gini index (World Bank estimate), Retrieved from http://data.worldbank.org/indicator/SI.POV.GINI (01.02.2016)

World Bank (2016b). Trade (% of GDP), Retrieved from http://data.worldbank.org/indicator/NE.TRD.GNFS.ZS (01.02.2016)

World Bank (2016c). Domestic credit to private sector (% of GDP), Retrieved from http://data.worldbank.org/indicator/FS.AST.PRVT.GD.ZS (17.05.2016)

ENVIRONMENT AND SUSTAINABLE CITIES

RE-EVALUATION OF CREATION AND DISSEMINATION OF POLLUTION: PRODUCTION, CONSUMPTION, TRADE AND INVESTMENT ASPECTS IN SELECTED OEDC COUNTRIES

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Abstract

Regarding key concepts of sustainable development, achieving sustainability requires balancing all economic, social and environmental factors in equal harmony. Especially rising globalization and rapid growth rates of 1990s required more attention of the environmental/ecological side of economic activities. Therefore, pollution and environmental sustainability links became a popular theme in economic literature and after 1990s; various approaches generally aimed identifying the correlation between pollution and economic activities with considering the industrial migratory behavior in the scale and structural aspects. Existing researches do not directly address the problem that creating pollution may not be determined only production side and also changing consumption patterns of dirty industrial products are important as well. We seek to contribute to the debate over creation and dissemination of pollution for selected The Organization for Economic Co-operation and Development (OECD) countries for the 2000-2015 periods by using a multidimensional perspective. From 2000 to 2014, while production and trade of polluted products still remain high in OECD countries and the most notable point is that demands by consumer in OECD for dirty industrial products have an increasing trend as well.

Keywords: sustainability, environment, dirty industries in OECD, dissemination of pollution
JEL classification: Q01, Q56, F18, F63, F64

1. INTRODUCTION

Environmental sustainability is one of the most important issues of Millennium Development Goals. The main targets of ensuring environmental sustainability can be listed as integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources; reduce biodiversity loss; halve the proportion of the population without sustainable access to safe drinking water and basic sanitation and achieve, by 2020, a significant improvement in the lives of at least 100 million slum dwellers (UN, 2013).

Analyzing economic, social and environmental interlinkages is essential to achieve a sustainable life and produce effective policy instruments to fight against the factors which have resulted in imbalances between human and nature. As United Nations Conference on Sustainable Development (Rio+20) have emphasized the need to further sustainable development at all levels, integrating economic, social and environmental factors in an equal harmony.

Especially rising globalization and rapid growth rates of 1990s required more attention of the environmental/ecological side of economic activities and environmental sustainability has become an important issue. Therefore, pollution and environmental sustainability links has become a popular theme in economic literature and after 1990s; various approaches generally have aimed identifying the correlation between pollution and economic activities with considering the industrial migratory behavior in the scale and structural aspects.

Environmental pollution measured generally with increasing trend of CO_2 emission and increasing global average air temperature anomalies (Figure 1) which have hampered ecological sustainability and also optimal pattern of production.

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Figure 1. Global average air temperature anomalies between 1850 and 2014
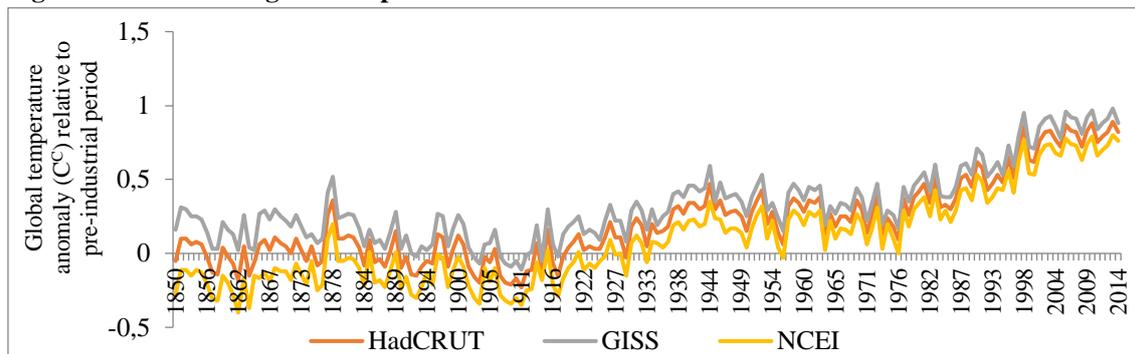
Figure 2. Greenhouse gases (GHG) **Figure 3. Total Greenhouse gases per capita,**
(Total, Index 1990=100) **Thousands**
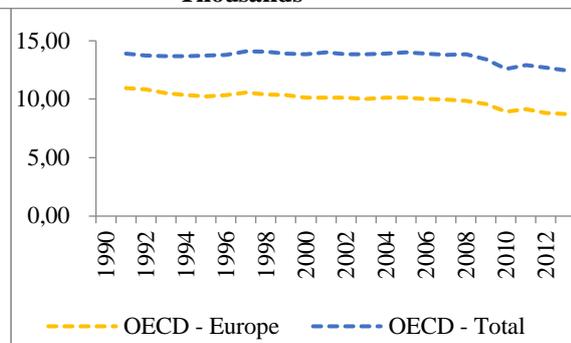
OECD Environmental Outlook to 2050 (OECD, 2011) showed that since the early 1970s global greenhouse emissions have doubled because of the rapid industrialization and growth process, increasing trend of fossil energy use especially in developing countries. This ratio was 58% higher compared with the industrial level. Increasing trend of global greenhouse emissions have required to take actions against the upward trend of pollution level all over the world. One of most important regulations is Kyoto Protocol which was an international agreement aimed to regulate the concentration of all GHGs have enacted in 2005. On the basis of key findings of the OECD projections, the contribution of OECD countries to global GHG emissions is predicted as %23 in 2050 that will be lower than 2011 ratio. But, the predictions have showed that OECD countries will continue to have the highest emissions per capita by 2050.

Mainstream economics which has been focused organizing supply side has begun questioned after 1990. And now, there is a tendency to question about production patterns as well as consumption patterns of households. Hence, we seek to contribute to the debate over creation and dissemination of pollution for selected OECD countries by investigating production of dirty industrial products, demands by consumer in OECD for dirty industrial products (consumption patterns), trade flows of dirty industries, dissemination of pollution by means of FDI flows by industry and country, stringency in environmental standards in a multidimensional perspective.

2. THEORETICAL BACKGROUND

Pollution and environmental sustainability links became a popular theme in economic literature and after 1990s; various approaches generally aimed identifying the correlation between pollution and

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[3]HadCRUT: Met Office Hadley Centre and Climatic Research Unit (Morice et al. 2012)
  NCEI: National Center for Environmental Informatıon, National Climatic Data Center (Smith et al. 2008)
  GISS: Goddard Institute for Space Studies (Hansen et al. 2010)

economic activities with considering the industrial migratory behavior in the scale and structural aspects. Most of works focused on analyzing correlation between the industrial migratory behavior and the stringency in environmental standards in the host or home country with the frame of "pollution haven hypothesis"[4]. And also, there is a rich literature on the relationship between pollution and environmental sustainability regarding trade patterns and FDI flows with the same theoretical framework. Some of these researches have proved the pollution haven hypothesis are valid, and some other not.

One of the most important works in literature Mani and Wheeler's which has the main dirty industry definition that we will be used in our work. In this research, using data for the period 1960-1995 the authors found that the displacement of pollution to developing countries has not been a major phenomenon. The authors argue that "pollution havens have apparently been transformed as low wage havens". In addition to this, rapid growth rate process resulted in generating some countervailing effects like improving technical expertise and forcing the firms to increase investment for cleaner production. (Mani and Wheeler, 1997)

Cave and Blomquist have supported pollution haven hypothesis by analyzing European Union (EU) countries. The purpose of their study was to determine whether the European Union (EU) has increased its imports of "dirty" goods from poorer, less democratic countries during a period of more stringent environmental standards. They have found an increased amount of EU energy intensive trade with poorer countries during the period with more stringent EU environmental standards. (Cave and Blomquist, 2008)

Panayotou (2000) analyzed the impacts of economic globalization on the environment and sustainable development through primary areas of globalization that are trade liberalization, investment and finance, and technology diffusion and intellectual property rights. Author concluded that trade linkages and agreements between countries have become more important with globalization and integration framework. The more integrated environmental and trade policies are, the more sustainable economic growth will be and the more globalization can be harnessed for the benefit of the environment. (Panayotou, 2000).

Morelli (2011) emphasized that a creating sustainable environment is a prerequisite to a building sustainable socioeconomic system. In this respect, the actions which will be taken by a government, a firm or an individual should aim to remove threats and contribute fostering environmental sustainability.

As we mentioned before, existing researches do not directly address the problem that creating pollution may not be determined only production side and also changing consumption patterns of dirty industrial products are important as well. We seek to contribute to the debate over creation and dissemination of pollution for selected OECD countries regarding changing consumption patterns which are also important to construct more inclusive and sustainable development.

3. METHODOLOGY

Mani and Wheel (2007) focused to determine high pollution ranking sectors which have high actual emissions intensity (emissions per unit of output) for USA manufacturing industry. Mani and Wheeler have used Standard Industrial Classification (SIC) level to determine high-ranking polluted sectors on the basis of creation of air, water, metals and overall pollution creation. Dirty industries are identified as follows on the basis of one of the most referred works in the literature, Mani and Wheeler's classification, considering overall pollution level of each sector. We have considered the sectors according to STIC (Standard International Trade Classification, Rev 3) which create relatively high overall pollution level.

Table 1. Classification of selected sectors

Standard Industrial Classification (SIC)	STIC (Standard International Trade Classification, Rev 3.)
371 Iron and Steel	67 Iron and steel
372 Non-Ferrous Metals	68 Non-ferrous metals
351 Industrial Chemicals	5 Chemicals and related products
353 Petroleum Refineries	59 Chemical materials and products
369 Non- Metallic Mineral Production	33 Petroleum, petroleum products and related materials
341 Pulp and Paper	66 Non-metallic mineral manufactures
352 Other Chemicals	25 Pulp and waste paper
355 Rubber Products	62 Rubber manufactures
323 Leather Products	61 Leather, Leather Goods
381 Metal Products.	69 Manufactures of Metals

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[4] According to the 'pollution havens' hypothesis, the result should have been more rapid growth of dirty industries in unregulated economies which were open to international trade.

OECD countries will be analyzed in a comparative manner in terms of creation and dissemination of pollution. Manufacturing value added of the countries have been given in order from the highest to the lowest for the year in which our study took place as the starting point, 2000, and for the last year (generally 2014) for which the data could be obtained. In this study, we have used Carbon dioxide emissions (CO_2) as an indicator of overall pollution level because today, CO_2 still have the biggest share of global GHG emissions (approximately 75 %).

Ten countries that have the highest values among the other countries were selected. In addition to this; the average values of the variable in the OECD countries are also given. Selected OECD countries can be listed as follows:

Table 2. Manufacturing Value Added, CO2 emissions

Manufacturing, value added (Share of the world production, %)					CO2 emissions (metric tons per capita)
	2000	**2005**	**2010**	**2013**	**2011**
USA	22.4	22	20.7	20.3	17.02
Japan	12.4	12.1	12.2	11.6	9.29
Germany	8.3	7.8	7.6	7.8	8.91
Korea, Rep.	2.5	3.1	3.8	4.2	11.84
France	3.7	3.5	3.2	3.1	5.18
Italy	4.4	3.8	3.3	3	6.7
UK	4	3.4	3	2.8	7.08
Mexico	2.1	1.9	1.8	1.9	3.87
Spain	2.2	2.2	1.8	1.6	5.79
Turkey	1	1.1	1.2	1.4	4.38
OECD	75.4	73.5	71.1	70	9.9

Source: World Bank, Authors' calculation.

Selected ten OECD countries produce 75,4% of world manufacturing value added in 2000, this ratio goes down by 70% in the world production, but this ratio is strongly prove that these ten countries still have the biggest share of production capacity in OECD countries. Not surprisingly, producing 29% of the world's total value added, the USA is the top value added creator in manufacturing industry and has relatively high CO_2 emissions metric tons per capita.

Figure 4: CO2 embodied in final demand per capita[5]   **Figure 5: CO2 emissions per capita based on production**
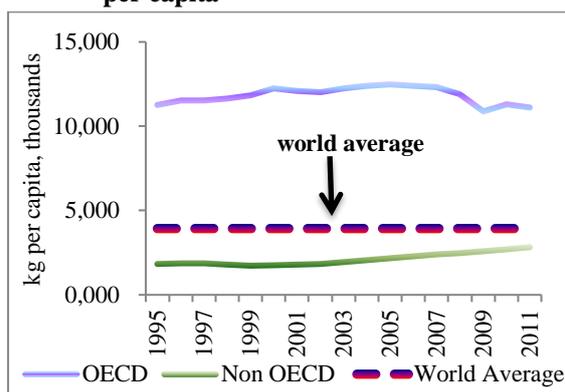
Source: OECD
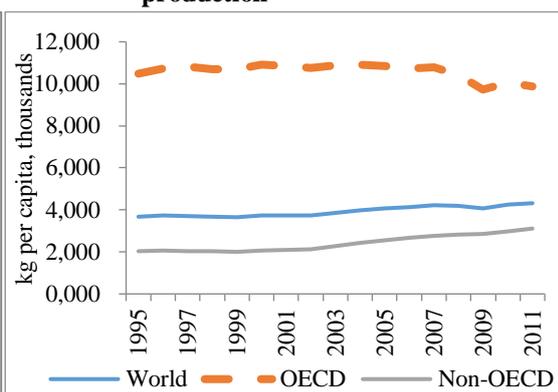
According to OECD data, CO_2 emission based on production of the world increases considerably after 2000. In OECD countries, in 1995-2011 period there is no dramatic change, but in non-OECD CO_2 emission based on production goes up, Figure 4 and Figure 5 strongly support that both CO_2 emissions based on production and CO_2 embodied in final demand per capita are high compared with the world

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[5]CO_2 embodied in final demand per capita is calculated for each country, by dividing CO_2 embodied in final demand by the country's population

average level. This condition indicates that OECD countries have great impact on creating pollution in the world and non-OECD countries. In addition, the main and shared viewpoint of the works and reports from international economic institutions is that OECD countries will be still main contributors to the CO2 emissions in the near future. Regarding the OECD report, CO2 emissions are projected to remain the largest contributor to global Green House Gas emissions, driven by economic growth based on fossil fuel use in the energy and industrial sectors (OECD, 2013). Considering all these reasons, the main focus of this paper is to understand of selected OECD countries' position within the frame of the environmental sustainability.

4. ANALYSING CREATION AND DISSEMINATION OF POLLUTION IN SELECTED OECD COUNTRIES

Analysing creation and dissemination of pollution requires a multidimensional perspective which includes production, trade, consumption, investment aspects. In this context, firstly, the general condition of the OECD countries for today and near future within the framework of selected variables will be investigated in a comparative manner. The analysis has been made on the trade, consumption, investment, environmental stringency and carbon market indicators basis; however, due to the limitations in terms of the data availability, the study has been limited with the variables that are available and mostly emphasized in the literature.

4.1. Trade

Analysing trade channels for polluted industries shows both the production capacity of polluted products in a country and the transferring polluted products to other countries. Increasing polluted industry exports of countries indicate rising of the import (demand) of another country. Hence, trade data can be accepted as a proxy for industrial production (consumption).

Figure 6: Dirty Industry Export Value of OECD Countries, Million $
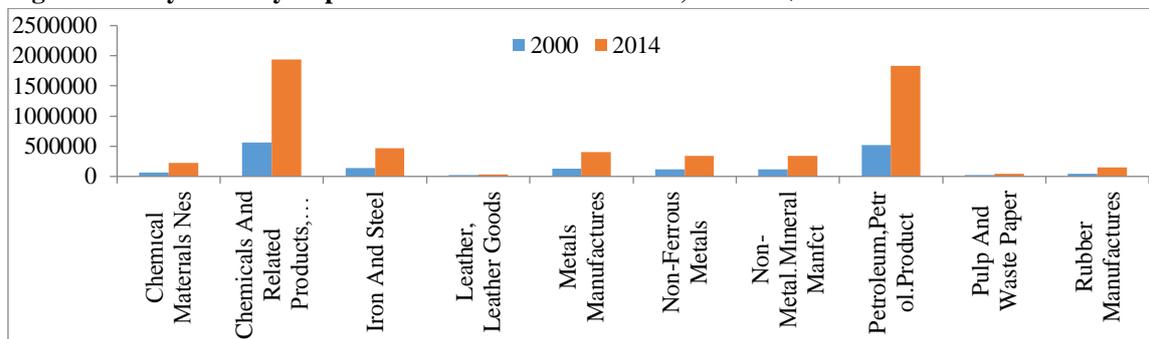
Source: OECD, Authors' calculation.

The increasing trend of total dirty industry exports for the period 2000-2014 is presented in Figure 6. While chemicals and related product exports are increased by 247%, petroleum and petroleum products increased by 254%. Leather and leather goods export which have the lowest growth ratio during 2000-2014 raised by 74%.

Table 3 shows that trade flows of dirty industries among OECD countries largely take place between the same OECD countries. Analyzing pattern and distribution of dirty industrial product trade shows OECD plays a crucial role in producing and demanding of dirty products. The idea of "industrialization for development" results in promoting specialization in dirty industries, which have a great impact on environmental damage in a direct or indirect way. After 1990s, new wave of globalization and liberalization affect the pattern of production and consumption as both trade and consumption volume increased substantially in the whole world. Although, the impact of trade liberalization on pollution levels is not clear, in a global world, both production and consumption patterns changed because of the increasing scale of integration. In light of the trade data, demand for pollution intensive products undoubtedly continued to increase during 1995-2014.

Table 3. OECD Intra-Group Trade of Dirty Industries

OECD Intra-group Export					
	1995	**2000**	**2005**	**2010**	**2014**
Iron and Steel	73.5	78.7	74.1	68.3	71
Pulp and Waste Paper	86.8	83.1	72.1	59.9	54
Petroleum, petroleum prod.	82.5	86.8	85	76.2	72.8
Chemicals and related prod.	75.6	78.8	79.3	75.3	74.4
Chemical mat. and prod.	76.1	76	74.3	69.5	69.3
Leather, leather manufactures	63.5	61.8	60.3	55.1	55.8
Rubber manufactures	82.8	85.7	84.5	78.6	78.6
Non-metallic mineral manufac.	75.6	77.3	72.8	65.3	65.1
Non-ferrous metals	81.5	81.3	77.7	70.8	70.5
OECD Intra-group Import					
	1995	**2000**	**2005**	**2010**	**2014**
Iron and Steel	79.6	78.6	73.6	73.4	70.8
Pulp and Waste Paper	86.6	83.7	81.1	75.4	75.1
Petroleum, petroleum prod.	34.5	36.1	33.5	33.5	38.6
Chemicals and related prod.	90.1	91	89.2	85.5	84.1
Chemical mat. And prod.	91.7	92.1	91.1	86.5	85.8
Leather, leather manufactures	66.1	66	58.4	52.8	52.3
Rubber manufactures	91.1	88.8	82.9	76.1	71.9
Non-metallic mineral manufac.	72.8	73.9	66.8	63.5	60.1
Non-ferrous metals	70.2	66.6	67.4	68.4	68.1

Source: UNCTAD

Table 4 shows that how changed the ratio of OECD exports for each sectors for 2000 and 2014. While total dirty industry sectors exports have been increasing for 2000-2014 period, except petroleum, petrol products and pulp and waste paper sectors, general tendency indicates that there is a decreasing share of exports of polluted industries in OECD countries, although the USA has been the biggest exporter of dirty industrial products. One of the most important points is that 2008 global economic crisis transmitted through trade linkages and when we have compared trade volume of pre and after crisis era, there was a trade contraction all over the world.

Table 4. OECD Exports of Dirty Industries (% of total sector exports)

	Export		Import		2000 Top Exporter	2000 Top Importer	2014 Top Exporter	2014 Top Importer
	2000	**2014**	**2000**	**2014**				
Chemical Materials	64.5	52.3	46.2	34.5	USA	USA	USA	France
Chemicals And Related Prod.	55.5	45.8	48.7	34.5	USA	USA	Germany	Germany
Iron And Steel	48.6	41.8	47.5	55.3	Japan	USA	Germany	USA
Leather, Leather Goods	47.2	37.5	43	25.1	Italy	Italy	Italy	Spain
Metals Manufactures	54.4	42.1	52.8	40.7	USA	USA	Germany	USA
Non-Ferrous Metals	35.1	32.6	58.3	50.9	Germany	USA	Germany	USA
Non-Metal. Mineral	42.6	29.5	47.1	29.2	USA	UK	USA	UK
Petroleum, Petrol Prod.	14.9	20	58.5	49.6	UK	USA	UK	USA
Pulp And Waste Paper	27.2	32.2	59.5	43	USA	USA	USA	Germany
Rubber Manufactures	64	44.2	53	36.3	USA	USA	Germany	USA

Source: UNCTAD, Authors' calculation[6].

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[6] $\frac{EXi,t}{EXw,t} * 100; \frac{IMi,t}{IMw,t} * 100$, EX: Export, IM: Import, i: county (OECD total), t: industry, w: total world export or import

4.2. Consumption trend for selected countries

Although the impacts of consumption pattern changes on environmental pollution in the world have addressed in a few studies[7], environmental pollution is generated not only through the production process but also through the consumption process of goods and services. As Lee and Park (2007) pointed production pattern is induced mainly by consumption. This requires paying a special attention on the consumption activities in environmental pollution. We need to develop an inclusive understanding which takes fully into account and pay special attention to current imbalances in patterns of consumption and production on a global scale.

As we mentioned before, mainstream of economics considers only production side of environmental sustainability. On the other hand, countries in which experienced rapid growth rates, there was an increasing income inequalities led by industrialization and in the light of neo-liberal paradigm. The gap between the poorer and the richer countries has not significantly decreased. In addition to this, it is expected that the inequality in the OECD countries in terms of earnings expected to rise more than 30% in 2060 in the near future. This point again pointed out the importance of inclusive growth strategies and direct relationship between economic, social and environmental aspects of regional/national/international policies.

Ensuring environmental sustainability is not only about economic activities, but also social side of everyday life. Basically, Alan Durning categorized the world's population by three broad socio-ecological classes based on consumption patterns and the degree of environmental impact at Table 5 in order to identify differences between countries.

Table 5: World Consumption Classes

Consumption type	High Consumers (1.3 billion)	Middle Income Consumers (3.9 Billion)	Under-Consumers (1.3 Billion)
Diet	meat, packed food, soft drinks	grain, clean water	insufficient grain, unsafe water
Transport	private cars	bicycles, buses	walking
Materials	throwaways	durables	local biomass

Source: Hubacek, K., Guan, D. and Barua, A. (2007) Modified from Alan Durning, 1992.

Table 5 is not enough to be able to understand capitalist form of society today because it does not cover the most recent data available about high consumers-middle income consumers-under consumers. However, categorizations of Durning's are very useful to understand the consumption patterns of society. As the income rises, as the potential of consume more polluted products increases. In the frame of this analysis, we have considered exports of dirty industrial product for household consumption. We have used export data in this section obtained from OECD Stan data base aggregate value of Chemical, Rubber, Plastics and Fuel Products and Basic Metals and Fabricated Metal Products Exports.

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[7]See, Lee, J. W., & Park, S. B. (2007). Impact of Consumption Pattern Changes on Environmental Pollution in Korea. Korea and the World Economy, 8(1), 69-90.
Lahiri, S., Babiker, M. H., & Eckaus, R. S. (2000). The effects of changing consumption patterns on the costs of emission restrictions. Cambridge, MA: MIT Joint Program on the Science and Policy of Global Change.
Hubacek, K., Guan, D. and Barua, A. (2007) Changing lifestyles and consumption patterns in developing countries: A scenario analysis for China and India, Futures, Volume 39 (9), 1084-1096.

Figure 7: OECD Chemical, Rubber, Plastics and Fuel Products (million $) Export to World for Household Consumption
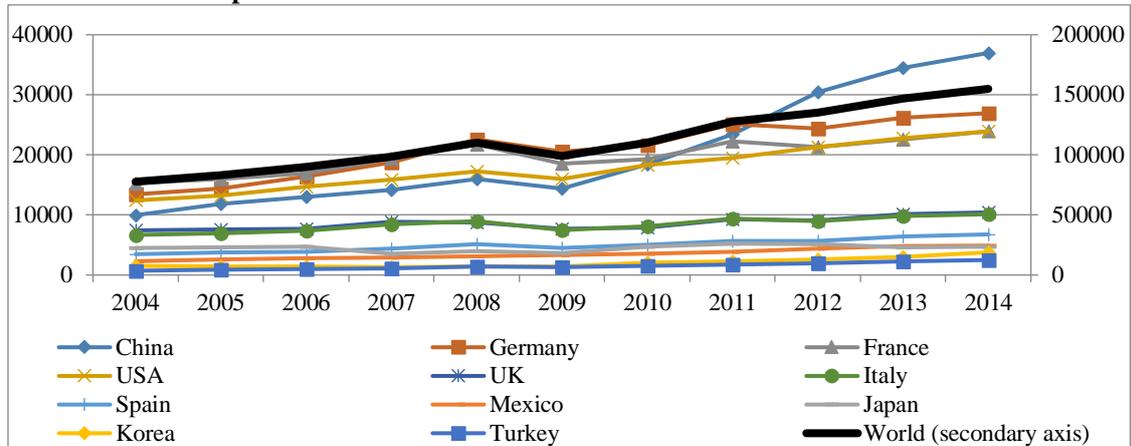
Source: OECD STAN database.

First remark is that for all countries exports to world for household consumption has increased within a decade, especially as a non-OECD country China's export to world has increased considerably. Turkey is the one of the countries which has lowest exports to world for household consumption because of the structure of trade which has specialized in low skill labor intensive industries.

Figure 8: OECD Basic Metals and Fabricated Metal Products Exports to World, $ million $
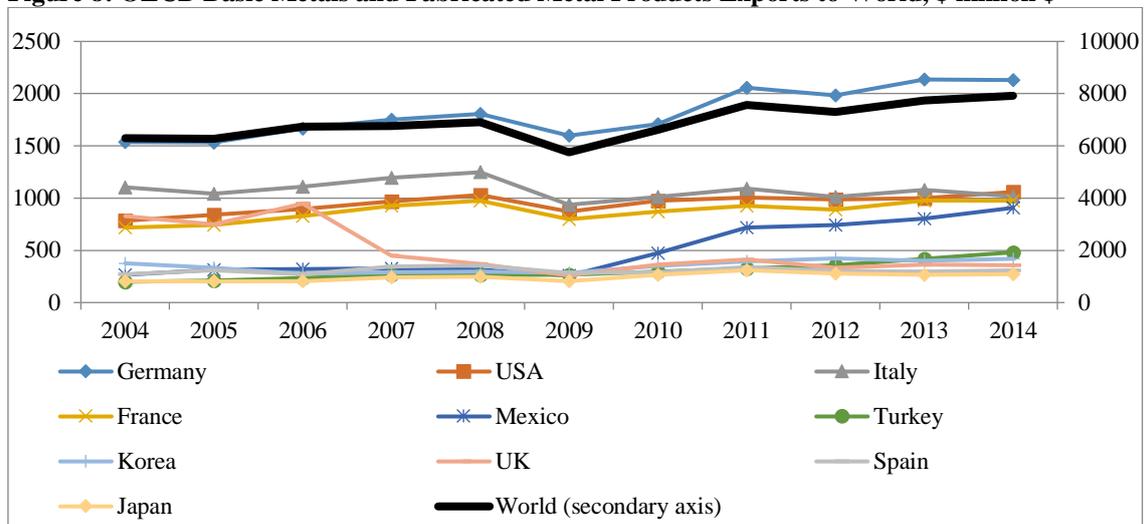
Source: OECD STAN database.

Although, the demand of main polluted products has still an increasing trend, basic -metals and fabricated metal products export to world for household consumption especially have increased after 2008. But, except Mexico other countries have had lower export volume compared with pre 2008 period.

4.3. Foreign Direct Investment and Environmental Stringency

Economic theory suggests that "*trade between countries with differing levels of environmental protection could lead pollution-intensive industry to concentrate in the nations where regulations are less stringent*" (Gallagher and Ackerman, 2000). In this respect, FDI movements can be accepted as the good indicator to measure the concentration of industrial migratory behavior.

When we have investigated the distribution of FDI flows, OECD countries attracted 82% of world total FDI flow in 1990, this ratio goes down below 77,6 % in 2000 and 42,2% in 2014. Compared with 1990, today OECD countries are less attractive for FDI inflows. By 2014, the most attractive county is China where has approximately 11% of total FDI flows and second country is Hong Kong by attracting 8,4 % of world total FDI flows. This means that the capital accumulation processes are restructured, the directions and the sources of the global accumulation movements change. On the other hand, OECD countries have still the biggest share (61% of world total value) of FDI outflows. But the interesting point is that regarding value of announced Greenfield FDI projects by sector/industry, there could not find any strong evidence to prove dirty industrial migratory behavior of OECD countries. The distribution of FDI projects across countries concentrate in motor vehicles and other transport equipment, business services and electricity, gas and water (12%-9%) sectors all over the world.

The share of finance have also increased from 2,9 % to 5,2 % between 2003-2014. These key findings has again pointed out that the capital accumulation process has been changed in the world. Service and finance sector have started to rise relative to other basic industrial activities. Considering share of cross border M&A purchases in the world, the share of manufacturing in total cross border M&A purchases value is %46 in 1990 this ratio decreased by %36 in 2010 because of the effects of global economic crisis in 2008. But by 2014 the ratio of manufacturing M&A purchasing accelerated and achieved the approximate value of pre-crisis era (%44). In 2014, in chemicals and chemical products sector has the highest value of M&A purchases and sales (respectively, %11,6 of total purchases and %6,29 of total sales).

Table 6: The share of announced Greenfield FDI projects, by sector/industry, 2003-2014

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Motor vehicles and other transport equipment	9.9	9.3	8.5	8.3	8.5	7	7.1	11.4	9.9	12.1	8.7	11.6
Business services	3.7	4.4	6.6	7.3	9.4	11.3	7.5	7.6	7.7	9.3	15.9	10.4
Mining, quarrying and petroleum	18.6	13.4	18.4	7.7	7.2	10.3	12.5	7.3	8.6	4.3	3.9	6.1
Chemicals and chemical products	7.9	7.7	4.8	6.4	5	5	5.3	6.4	8	7.5	6.1	5.8
Finance	2.9	3.5	4.1	4.6	5.8	4.3	4.5	5.2	5.5	7	5.1	5.2
Coke, petroleum products and nuclear fuel	11.8	7.9	7.3	11.1	5.8	7	7.2	7.8	7.1	3	2.8	4.6
Metals and metal products	3.8	4.8	7.2	4	6.6	5.6	2.4	5.8	5.6	4.5	2.5	3.1
Machinery and equipment	0.8	0.9	1.4	1	1.1	1.3	1.5	1.7	2	1.9	1.5	2
Other manufacturing	0.6	0.8	0.7	0.8	1.1	0.9	1.2	1.3	1	1.8	1.9	1.7
Rubber and plastic products	1.8	2.3	1.8	1.5	1.5	1	1.4	2.6	2.7	2.1	2.3	1.7
Non-metallic mineral products	1.1	1.6	1.9	2.3	2.3	2.5	1.1	1.3	1.9	1.2	1.8	1.3

Source: UNCTAD, Authors' calculation.

OECD countries are the biggest source of announced FDI project, from 2003 to 2014 the share of OECD countries decreased but still considerably high. But, as a non-OECD country China emerged as top FDI destination surpassing the other OECD countries. The USA, UK, Mexico, India, Vietnam can be accepted as the top destinations for FDI flows.

Table 7: The share of announced Greenfield FDI projects, by destination, 2003-2014

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
OECD	36,28	36,33	34,20	37,34	36,31	32,25	37,53	37,39	36,13	42,18	37,88	38,65
China	17,30	18,61	12,15	14,41	12,13	8,98	11,21	11,64	11,95	12,45	10,71	11,13
USA	3,94	4,59	5,33	4,94	5,49	4,28	7,87	7,64	8,58	9,75	7,77	8,35
UK	2,34	3,16	2,47	3,84	3,28	4,57	5,68	3,36	3,91	7,31	4,29	5,51
Mexico	1,82	1,25	0,97	2,12	1,66	2,60	2,69	1,95	2,33	2,81	4,32	4,79
India	2,26	4,25	3,62	7,37	4,92	4,83	5,43	5,03	5,40	4,96	2,67	3,59
Viet Nam	1,59	1,32	1,79	1,87	4,66	4,25	3,59	2,63	1,05	0,98	2,22	3,43
Malaysia	1,24	1,03	0,56	0,62	0,87	1,73	1,22	1,86	1,47	0,95	0,99	2,76
Canada	3,48	2,40	4,33	1,87	1,04	1,27	1,67	2,42	3,43	1,88	2,31	2,73
Australia	2,88	4,11	1,30	4,61	2,37	1,75	2,16	5,01	1,82	2,82	1,80	2,25
Korea	2,61	1,73	1,13	0,89	1,17	0,83	0,49	0,46	1,10	0,98	0,84	1,56
Spain	2,18	1,68	1,39	2,14	2,48	1,82	1,34	1,67	1,11	1,63	1,66	1,55
Turkey	1,15	0,67	0,73	1,41	1,83	1,44	2,01	1,15	1,27	1,43	1,37	0,69

Source: UNCTAD, Authors' calculation.

According to pollution haven hypothesis, developed countries relocate their industry to developing world where have low environmental stringency. In this respect we are expected, countries which produce more dirty industrial products and have CO2 emission should relocate your investments towards developing countries or less developed countries where have low environmental stringency.

Table 8: Environmental Stringency Index[8]

	1990	2000	2005	2010	2011	2012
Denmark	0.90	2.60	3.13	4.36	4.32	4.18
Netherlands	1.67	1.35	2.80	4.13	3.51	3.63
Finland	0.83	1.60	2.44	3.21	3.48	3.35
UK	0.96	0.94	2.23	3.65	3.50	3.33
Switzerland	2.00	2.60	2.38	3.08	3.29	3.29
Norway	0.60	1.15	1.88	3.19	3.19	3.26
France	0.71	1.40	2.71	3.15	3.33	3.19
Australia	0.88	0.98	1.17	1.82	2.65	3.12
Sweden	0.90	1.98	2.71	3.09	3.23	3.10
Germany	1.21	2.06	3.05	3.02	3.14	3.01
United States	0.52	1.10	0.96	2.28	1.99	2.55
Greece	0.65	1.52	2.50	2.33	2.33	2.13
Portugal	0.85	1.27	2.71	2.54	2.27	2.13
Ireland	0.52	0.85	1.88	2.23	2.43	2.05
Turkey	0.83	0.65	1.08	1.73	1.88	1.83
China	0.25	0.48	0.52	0.52	0.52	1.21

Source: OECD

Regarding both Environmental Stringency Index and distribution of FDI flows; in general, low environmental stringency policy tends to attract more capital inflow from the other countries. For example in the USA, where is the biggest exporter of polluted industry and has high FDI attractiveness, environmental stringency is lower compared with countries like Denmark, Netherlands and Finland. Considering China has the lowest environmental stringency value and highest FDI attractiveness, we can

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[8]Stringency is defined as the degree to which environmental policies put an explicit or implicit price on polluting or environmentally harmful behaviour. The index ranges from 0 (not stringent) to 6 (highest degree of stringency). The index is based on the degree of stringency of 14 environmental policy instruments, primarily related to climate and air pollution.

claimed that there might be a strong relationship between industrial migratory behavior and environmental stringency, but regarding the ratio of dirty industrial FDI flows of the world, this migratory behavior is not deepened contrary to pollution haven hypothesis.

Mani and Wheeler (2007) claimed that any tendency toward formation of a pollution havens seems to have been self-limiting. The authors conclude that economic growth brings countervailing pressure to bear on polluters through some channels such as increasing regulation level and forcing producers towards 'clean sector' production. Hence, in practice, regarding wage scales of different countries, pollution havens have apparently been as transient as low-wage havens. From this point of view, when we analyzed the wages by using OECD wage data, the most attractive countries for FDI except the USA and UK like China, Mexico, Vietnam, and India have relatively lower wages, compared with Canada, Australia, Korea and Spain, between 2000-2014 periods. (OECD Database)   Hence, we could determine a correlation between low wage and industrial migration

5. TOWARDS A GREEN GROWTH: WHAT SHOULD OECD DO?

When the global nature of the greenhouse gas release is considered, the struggles to decrease this release will have to be coordinated at global level. OECD projections suggest pursuing radical policy changes regarding climate change, integrating adaptation into development co-operation with the help of national governments and donor agency, setting clear, credible, more stringent and economy-wide GHG-mitigation targets, putting a price on carbon, supporting policies for renewable energy, fostering innovation and support new clean technologies and developing policies complement carbon pricing with well-designed regulations (Marchal et al, 2011)

Figure 9: Government R&D budget related to energy and environment[9]
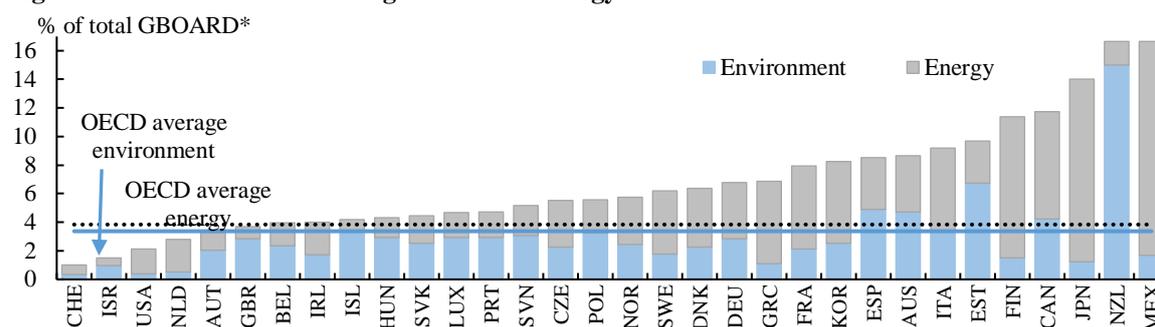
Source: OECD (2013), Research and Development Statistics (database)
*Government budget appropriations or outlays for R&D

According to OECD statistics, development of environment-related technologies will tend to increase but in a slower rate. This ratio was %6.13 as a percentage of all technologies in 1990, and increased by %11 in 2010. In this respect, fostering innovation and supporting new clean technologies are also important for building green production strategies.

Carbon pricing and carbon trading are becoming increasingly common as a policy suggestion to address climate change at a global level. But, "put price on carbon" or "trade the emissions that you didn't use" ideas are questioned by groups which are supporting sustainable life concept instead of the mainstream idea of sustainable development. Emissions trading systems (ETS) and carbon taxes are two main types of

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[9]R&D for environment includes: the control of pollution, aimed at the identification and analysis of the sources of pollution and their causes, and all pollutants, including their dispersal in the environment and the effects on man, species (fauna, flora, microorganisms) and biosphere; development of monitoring facilities for the measurement of all kinds of pollution; the elimination and prevention of all forms of pollution in all types of environment. It also includes R&D related to protection of atmosphere and climate; protection of ambient air; solid waste; protection of ambient water; protection of soil and groundwater; noise and vibration; protection of species and habitats; protection against natural hazards; radioactive pollution.

carbon pricing system. In general, regarding economic conditions, carbon trading can be accepted as the best way to limit carbon emissions.

Figure 14 shows that the relationship between freely allocated allowances and verified emissions. After 2012, the balance of allocated allowance-verified emission deteriorates, and the countries began to use/create pollution much more than freely allocated allowance. Thinking of emissions trading has increased dramatically in the last five years and over the next five years the trading of carbon emissions is expected to become the world's largest commodity market, we should consider a new kind of "carbon trading competition (!)" between firms and countries to create pollution in a legal framework.

Figure 10: Carbon market: Freely allocated allowances[10] and verified emissions[11]- All stationary installations (1000000 emission unit - Mt CO2-eq)
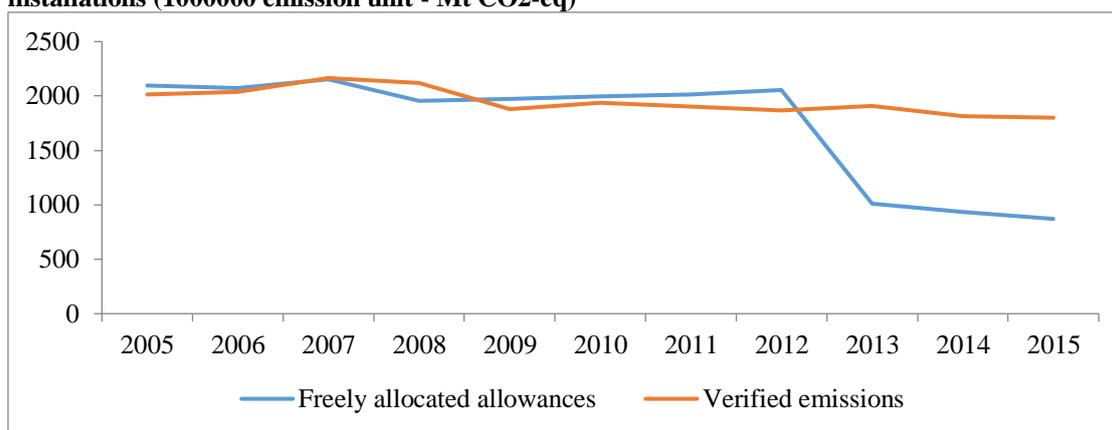
Source: European Environment Agency.

Carbon market which accepted as a best solution to combat environmental pollution in view of current CO2 emissions and projections could not be an effective way so far. We need to more integrate and interpenetrating policy tools which could organized both production side of the market and consumption of individuals.

In addition to this, from 1994 to 2014, environmentally related tax revenue in % GDP has not increased in OECD countries. In 2014, environmentally related tax revenue is only %1,6 of total GDP, while environmentally related tax revenue is %7 of total tax revenue (OECD, 2013)

CONCLUSION

Environmental dependencies based on the climate changes will also continue their existence as an ever-increasing threat on both growth rates and the sustainable life all over the world. Our analysis indicates that OECD countries have created pollution not only producing polluted products, but also demanding these kinds of products in an increasing number and even at a decreasing rate compared to the past they still managed to transfer their production facilities towards other countries. In addition to these, one of the most important points of this study is that rising trend of production and consumption value for non-OECD countries, especially China. In these circumstances, we need to more integrated and inclusive policy instruments to build a sustainable life.

Increasing globalization resulted in more environmental damages which require an analysis in a multidimensional perspective regarding the interaction of countries in different ways such as trade, consumption, environmental regulations. Rapid industrialization process in OECD countries entails to develop an inclusive understanding which covers dissemination of pollution by international fragmentation of production and division of labour.

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[10]Amount of free allocation received (does not include allowances bought, e.g. through auctioning)
[11]Emissions of installations which have been testified by a verifier; for each tonne of CO2-eq. emitted operators have the obligation to surrender one emission trading unit.

The total greenhouse gases emissions showed that the market-based policies of carbon pricing and trading have resulted in relocating of pollution instead of fighting with the environmental problems up to now.

The main policies of ensuring environmental sustainability and controlling pollution may be suggested as following: Supporting ecological living with the help of sustainable city concepts and developing green building programs, empowering civil society and subsidising building a direct relationship consumer-producer and consumer-land with the help of consumer-producer educational/training programmes which will basically contribute to change in patterns of consumption, increasing government R&D expenditure on energy and environment, subsidising individual firms to produce by using green technology, putting an environmental tax of green or brown field investment considering whether the firms will operated in a dirty industrial sector or not.

National governments and other national agencies should take actions by empowering civil society. Moreover, all scientists and researchers from all disciplines, politicians, non-governmental organizations, and every kind of marginal movement must form a mutual platform and discuss the issues about sustainable human development and produce a strategy with mutual mind. The capacity of developing regional policies for each country which is considered international changes and transformations will became more and more important in near future to construct a sustainable development-environment framework. We need to more integrate and interpenetrating policy tools which could organized both production side of the market and consumption of individuals.

Key findings of this study has pointed out that the capital accumulation process has been changed in the world. Service and finance sector have started to rise relative to other basic industrial activities. Future research can also analyze the effects of "Industry 4.0 revolution" on environmental pollution.

REFERENCES

Cole, M.A. and Elliott, R.J.R., (2005). FDI and the Capital Intensity of 'Dirty' Sectors: A Missing Piece of the Pollution Haven Puzzle. *Review of Development Economics*, 9(4), 530-48, Retrieved from http://onlinelibrary.wiley.com/doi/10.1111/j.1467-9361.2005.00292.x/abstract

Dellachiesa, A. E., & Myint, A. P. Water Pollution from Industrial Sources: Is Dirty the New Clean?. Retrieved from http://www.bates.edu/economics/files/2010/05/7-Water-Paper-v264-1.pdf

Hubacek, K., Guan, D. and Barua, A. (2007) Changing Lifestyles and Consumption Patterns in Developing Countries: A scenario analysis for China and India. *Futures*, Volume 39 (9), 1084-1096.

Gallagher, K., & Ackerman, F. (2000). Trade Liberalization and Pollution Intensive Industry in Developing Countries: A Partial Equilibrium Approach. Assessing the Environmental Effects of Trade Liberalisation Agreements: Methodologies. Paris: OECD, 267-277.

Lee, J. W., & Park, S. B. (2007). Impact of Consumption Pattern Changes on Environmental Pollution in Korea. Korea and the World Eonomy, *The Journal Of The Korean Economy*, 8(1), 69-90. Retrieved from http://www.akes.or.kr/akes/downfile/4_1.pdf

Mani M. and Wheeler, D. (1997). In Search of Pollution Havens? Dirty Industry in The World Economy 1960-1995. OECD Workshop 3: Pollution Havens and Pollution Halos, Retrieved from http://www.oecd.org/dataoecd/25/4/2076285.pdf

Marchal, V., Dellink, R., Van Vuuren, D., Clapp, C., Chateau, J., Magné, B., & van Vliet, J. (2011). OECD environmental outlook to 2050. Organization for Economic Co-operation and Development., (Pre-Release Edition) Retrieved from https://www.oecd.org/env/cc/49082173.pdf

Morelli, J. (2013). Environmental sustainability: A Definition for Environmental Professionals. *Journal of Environmental Sustainability*, 1(1), 2.

Panayotou, T. (2000). Globalization and Environment, Center for International Development at Harvard University, CID Working Paper No.53, Environment and Development Paper No.1, 1-50, Retrieved from http://www.hks.harvard.edu/content/download/69302/1250018/version/1/file/053.pdf

OECD (2013), Research and Development Statistics (database), http://dx.doi.org/10.1787/1996305x

United Nations Environment Programme (1992). Agenda 21, Retrieved from https://docs.google.com/gview?url=http://sustainabledevelopment.un.org/content/documents/Agenda21.pdf&embedded=true

United Nations (2015). Millennium Development Goals and Beyond 2015 Fact Sheet, Retrieved from http://www.un.org/millenniumgoals/pdf/Goal_7_fs.pdf

THE ENVIRONMENTAL KUZNETS CURVE FOR TURKISH NUTS-3 REGIONS: A SPATIAL ECONOMETRIC ANALYSIS

Mehmet Güçlü [1]

Abstract

This study aims to test the validity of the environmental Kuznets curve (EKC) for Turkish NUTS-3 regions for the period 2008-2013. The EKC is based on the hypothesis that environmental quality deteriorates at the early stages of economic growth and subsequently improves at the later stages. In other words, it is asserted that there is an inverted U-shape relationship between per capita GDP and environmental quality. The empirical results reported in this paper don't support the traditional EKC relationship for Turkey, but claim that there is a linear monotonically decreasing relationship. Besides, it is detected that the positive effect of regional economic growth on environmental quality is very weak. In testing the EKC relationship for Turkey, spatial dependence is detected. The presence of spatial dependence indicates that the environmental quality of a certain region is also affected by the environmental quality of the neighboring regions. The spatial interaction effect on environmental quality is greater than the effect of those regions' regional economic growth. Eventually, the empirical evidence suggests that a certain region's environmental quality is affected by the economic growth of the neighboring regions (spillover effect), yet this effect is very weak.

Key Words: *Environmental Kuznets Curve, Spatial Panel Econometrics, Spatial Autocorrelation*
Jel Code*: R11, R12, C23, C33*

1. INTRODUCTION

The rapid increase in environmental degradation has led many researchers to become worried about this issue, and to investigate the factors that cause this degradation. Economists began to study this subject in the early 1990s, when they started noticing a relationship between environmental degradation and economic growth. Empirically, this relationship was first analyzed by Grossman and Krueger (1991). Then, researchers obtained some empirical evidence in the 1992 World Bank report, which supported the findings of the previous study. The third empirical study that confirmed the preceding results was conducted by Panayotou (1993). Panayotou named this relationship between environmental degradation and economic growth as "Environmental Kuznets Curve (EKC)", since this relationship is similar to the one between economic growth and income inequality built by Kuznets (1955). In his study, Kuznets asserted that there is an inverted U-shaped relationship between economic growth and income. The environmental Kuznets curve claims that there is a similar relationship between environmental degradation and economic growth. This implies that environmental degradation increases in the early phases of economic growth, and will decrease after a certain level of income is achieved (Figure 1).
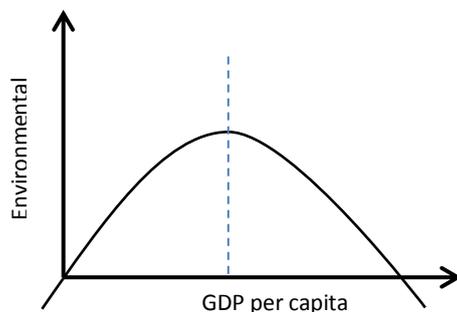

Figure 1: Environmental Kuznets Curve

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Grossman and Krueger (1991) argue that economic growth affects the environment in three different channels: Scale effects, composition effects and technical effects. The scale effect asserts that an increase in production will lead to a greater use of natural resources and result in environmental degradation, even though the technology and structure of the economy do not change. Moreover, the increase in the production scale will produce more waste and cause more harmful emissions to be released into the environment. Thus, there is a negative relationship between production scale and environmental degradation. The second effect results from structural transformation in an economy. This postulates that growth will lead to a structural transformation in the economy, and this transformation will have a positive effect on the environment since the economic structure will move from agriculture towards heavy manufacturing industries; with this change, the environmental degradation will most likely increase. In the later phases of economic growth, the economic transformation will be from heavy manufacturing industries towards the services and light manufacturing sectors, and the degradation will most likely decrease. The last effect is the technical effect. According to the last effect, economic development will be accompanied by technological advancement, and these new technologies will be both environmentally-friendly and allow more effective production. Thus, the environmental quality will be enhanced despite the increase in production. The increasing part of the EKC is explained by the scale effect, while the decreasing part is explained by structural and technical effects. Stern (2004) claimed that the scale effect would be stronger than the technological effect in fast-growing middle income countries, and the technical effect would be stronger than the scale effect in high income countries.

There have been many empirical studies conducted to determine whether the EKC is also valid for Turkey. As the studies in the international literature, the studies focusing on Turkey have delivered varied results. Stern (2004) asserted that this resulted from the lack of appropriate econometric methods in a considerable number of the studies of EKC. Spatial econometricians suggest that regional analyses should employ an econometric estimation method that takes into consideration the spatial interaction between regions, since the administrative borders do not make regions become completely independent of each other. Regions are essentially affected by the neighboring regions in terms of environmental quality. The only regional EKC analysis of Turkey was conducted by Akbostancı, Türüt-Aşık and Tunç (2009). This study also has an important limitation, since it did not take into consideration the spatial interaction between the regions. In other words, this study analyzed only the effect of a region's growth on the environmental quality of that region, and disregarded the effect of the growth of the neighboring regions.

Our study aimed to analyze the relationship between the environmental degradation and economic growth in Turkey, and find more accurate results by eliminating the estimation problems that emerged when the suitable econometric estimation methods in the literature were not used. Thus, the study will analyze the relationship between the environmental degradation and economic growth in the NUTS-3 regions of Turkey (81 provinces) using the spatial panel econometric method. Thanks to this method, the study will be able to determine the EKC relationship (the effect of a region's growth on environmental degradation), in addition to the assessment of two more effects, which is in contrast to the previous studies: i) the level of the interactions between regions (spatial dependence); ii) the effect of neighboring regions' economic growth on the environmental degradation of a certain region (spillover effect).

2. LITERATURE REVIEW

Subsequent to pioneering studies by Grossman and Krueger (1991), World Bank (1992) and Panayotou (1993), there have been many studies investigating the validity of the EKC relationship. These studies also varied as a result of the environmental degradation indicators, research models, analysis methods, and the periods and countries that were analyzed. The studies by Fotourehchi and Şahinöz (2016) provide a comprehensive summary of the relevant literature. In the literature, there are many studies confirming the existence of a relationship with the shape of an inverted U (Selden and Song, 1994; Holtz-Eaikin and Selden, 1995; Cole, Rayner and Bates, 1997; Suri and Chapman, 1998; Torras and Boyce, 1998; Kaufman et al. 1998; Dinda, Coondoo and Pal, 2000; Stern and Common, 2001; Hill and Magnani, 2002; Cole, 2004; Diao et al., 2009 and, Fodha and Zaghdoud, 2010), as well as the studies claiming that this relationship has the shape of an N (Grossman and Krueger, 1995; Selden and Song, 1994; De Bruyn and Opschoor 1997; Egli and Steger, 2007; Diao et al., 2009; Park and Lee, 2011). There are also some empirical studies in the literature claiming that this type of a relationship does not exist at all (Seppala et al. 2001; Luzzati and Orsini, 2009; Halkos and Tzeremes, 2009).

In Turkey; Saatçi and Dumrul (2011), Bölük and Mert (2015), and Fotourehchi and Şahinöz (2016) suggested that there is a relationship with the shape of U or inverted U, while Başar and Temurlenk (2007), Dam, Karakaya and Bulut (2013), and Yavuz (2014) claim that there is a relationship with the shape of an inverted N. Vita et al. (2015) found that this relationship is a monotonically increasing one in Turkey. All of the studies mentioned above have been conducted at the national level, and the only study at the regional level was conducted by Akbostancı, Türüt-Aşık and Tunç (2009). That study was conducted using traditional panel data analysis in 58 provinces during the 1992-2001 period, and its empirical findings indicated that the EKC relationship was not valid at the regional level.

In recent years, advances in econometric methods have helped the development of spatial models that can be used for regional analyses. These spatial econometric analysis methods have eliminated the deficiencies of the previous traditional estimation methods, and made it possible to obtain more accurate empirical results. Many researchers, including Rupasingha et al. (2004), McPherson and Nieswiadomy (2005), Tevie, Grimsrud and Berrens (2011), and Wang et al. (2013) tested the validity of the EKC using these methods, and found more robust results concerning the validity of this relationship. Our study aimed to fill the gap in the literature by testing the validity of the EKC relationship at the regional level in Turkey (81 provinces) using the spatial panel econometrics.

3. DATA AND MODEL

This study used sulphur dioxide (S02) as a sign of environmental degradation. The data on the indicator is provided by TurkStat (Turkish Statistical Institute) until October 2007, and after this by the air pollution website of the Ministry of Environment and Urbanization. The pre-2007 dataset of TurkStat does not provide the S02 values for all provinces. For this reason, the study considered only the post-2008 data of the Ministry of Environment and Urbanization. TurkStat does not provide the income per capita (GDP) data at the region level. Thus, we used the GDP per capita estimations of Başıhoş (2016) as the income data. The GDP data at provincial levels are available until 2013. Considering the availability of the data, the analysis in this study covered the period 2008 to 2013,

The econometric model identifying the functional structure of EKC is described below:

$$S02_{it} = \beta_0 + \beta_1 GDP_{it} + \beta_2 GDP_{it}^2 + \beta_3 GDP_{it}^3 + \varepsilon_{it} \tag{1}$$

where β, *i and t denotes* the coefficients, regions and time, respectively; and ε represents the error term.

Depending on the statistical significance of the β coefficients above, the functional form of the relationship between the environmental degradation and economic growth of the region will be one of the following:

i) $\beta_1 = \beta_2 = \beta_3 = 0$ means that there is no linear relationship between environmental degradation and economic growth.

ii) $\beta1 > 0$, $\beta2 = \beta3 = 0$ means that there is a linear monotonically increasing relationship between environmental degradation and economic growth. (Linear).

iii) $\beta1 < 0$, $\beta2 = \beta3 = 0$ means that there is a linear monotonically decreasing relationship between environmental degradation and economic growth. (Linear).

iv) $\beta1 < 0$, $\beta2 > 0$, $\beta3 = 0$ means that there is a U-shaped relationship between environmental degradation and economic growth. (Quadratic).

v) $\beta1 > 0$, $\beta2 < 0$, $\beta3 = 0$ means there is an inverted U-shaped relationship between environmental degradation and economic growth. (Quadratic).

vi) $\beta1 > 0$, $\beta2 < 0$, $\beta3 > 0$ means that there is an N-shaped relationship between environmental degradation and economic growth. (Cubic).

vii) $\beta1 < 0$, $\beta2 > 0$, $\beta3 < 0$ means that there is an inverted N-shaped relationship between environmental degradation and economic growth. (Cubic)

4. ECONOMETRIC METHOD AND EMPIRICAL RESULTS

As stated previously, the administrative borders do not make a clear separation between regions. It is highly probable that neighboring regions affect each other in terms of environmental pollution. For this reason, regional analyses should not disregard this interaction (spatial autocorrelation). Anselin and Griffith (1988) assert that neglecting the spatial autocorrelation (spatial dependence) leads to biased empirical results and misleading conclusions.

Spatial econometric models are specified in two general forms: Spatial Lag Model (SAR) and Spatial Error Model (SEM). SAR considers spatial dependence across observations on the dependent variable. Elhorst (2010) defines panel spatial lag mode as follows:

$$SO2_{it} = \rho \sum_{j=i}^{N} W_{ij} SO2_{jt} + \alpha + X_{it}\beta + \mu_i + \lambda_t + \varepsilon_{it} \qquad (2)$$

i = an index for the cross-section dimension (i.e regions in Turkey), with $i = 1, \ldots, 81$
t = an index for the time dimension, with $t = 2008, \ldots., 2013.$
ρ = spatial autoregressive coefficient.
W= spatial weight matrix W (binary contiguity matrix, which takes a value of 1 if regions are neighbours and 0 otherwise)
α = the constant term parameter.
X = the matrix of the independent variables,
β = the vector of unknown parameters.
μ_i = a region-specific effect;
λ_i = time-period specific effect.
ε_{it} = an independently and identically distributed error term for i and t with zero mean and variance σ^2,

SEM considers spatial dependence across error terms. Elhorst (2010) defines the model considering such a dependency as follows:

$$S02_{it} = \alpha + X_{it}\beta + \mu_i + \lambda_t + \emptyset_{it} \qquad \emptyset_{it} = \delta \sum_{J=1}^{N} W_{ij}\emptyset_{it} + \varepsilon_{it} \qquad (3)$$

where the parameters are the same as before but $\emptyset_{it}$ reflects the spatially autocorrelated error term and δ is called the spatial autocorrelation coefficient.
The econometric estimation is carried out in several steps:
  i)   Estimate the non-spatial model in order to determine whether the model is a one-way panel data model or two-way panel data model through LR.
  ii) Check the residuals of the regression determined in the first step in order to decide the form of spatial dependence process (SAR or SEM model) by means of LM test.
  iii) Decide whether spatial fixed effects model or spatial random effects model is more appropriate via Hausman test.
  iv) Obtain direct and indirect effects.

Table 1 presents the results of the non-spatial panel data model. The LR statistics on the third column are statistically significant at 1%, which indicates that the time-fixed effects model (one way panel data model) is appropriate. The significantly robust LM_{lag} statistics on the same column show that the form of spatial process is spatial lag. Taking the results of both tests into consideration, the appropriate model appears to be the time-fixed effects SAR model,

Table 1: The Environmental Kuznets Curve: Non-Spatial Panel Data Models

Variables	1 Pooled OLS			2 Panel with Cross-Section Fixed Effects			3 Panel with Time-Period Fixed Effects			4 Panel with Cross-Section and Time-Period Fixed Effects		
GDP	-0.002	*0.000*	***	-0.005	*0.001*	***	-0.002	*0.000*	***	0.004	*0.026*	**
GDP2	3.8e⁻⁰⁸	*0.007*	***	8.3e⁻⁰⁸	*0.009*	***	3.5e⁻⁰⁸	*0.012*	**	-5.1e⁻⁰⁸	*0.156*	
GDP3	-2.2e⁻¹³	*0.022*	**	-3.7e⁻¹³	*0.024*	**	-2.1e⁻¹³	*0.032*	**	2.1e⁻¹³	*0.243*	
constant	29.228	*0.000*	***									
R²	0.151			0.187			0.212			0.205		
LMlag	107.8	*0.000*	***	5.0	*0.025*	**	96.587	*0.000*	***	3.789	*0.052*	*
Robust LMlag	8.2	*0.004*	***	15.2	*0.000*	***	6.761	*0.009*	***	0.084	*0.772*	
LMerror	100.1	*0.000*	***	2.8	*0.095*	*	90.191	*0.000*	***	4.015	*0.045*	**
Robust LMerror	0.5	*0.482*		12.9	*0.000*	***	0.365	*0.546*		0.310	*0.578*	
Likelihood Ratio				75.2	*0.662*		868.098	0.000	***			

Note: *p* values in parentheses
***, ** and * significant at 1%, 5% and % 10, respectively.

Table 2 shows the estimation results of the spatial panel data models (time-fixed effects, and random effects models). Since the Hausman test statistic is significant, the time-fixed effects model is preferred over the random effects model. All the explanatory variables of the non-spatial model in Table 1 are statistically significant. However, only the coefficient of the GDP variable of the spatial model in Table 2 is statistically significant and negative. In other words, the non-spatial model suggests that the Kuznets curve has an inverted N shape, while the spatial model suggests that this relationship has a monotonically decreasing trend. A monotonically decreasing relationship means that environmental quality will be enhanced with an increase in income. A majority of the studies conducted at national level for Turkey claimed that this was an inverted N-shaped relationship. This means that the environmental quality would first improve with the increase of the income level, then it would deteriorate, and would improve again, eventually. The study by Akbostancı, Türüt-Aşık and Tunç (2009), which made a regional analysis, claimed that this type of relationship did not exist. Thus, Stern's (2004) argument, claiming that the use of incorrect econometric methods might lead to incorrect results, is also valid for Turkey.

Table 2: The Environmental Kuznets Curve: Spatial Panel Data Models

Variables	SAR$_{FE}$	*p-value*	SAR$_{RE}$	*p-value*
GDP	-0.001	*0.017* **	*-0.001*	*0.027* ***
GDP2	1.9e^{-08}	*0.120*	2.4e^{-08}	*0.146*
GDP3	-1.2e^{-13}	*0.154*	-1.2e^{-13}	*0.257*
ρ	*0.541*	*0.000* ***	0.254	*0.000* ***
R²	0.283		0.321	
Hausman	962.2	*0.000* ***		

Note: *p* values in parentheses
***, ** and * significant at 1%, 5% and % 10, respectively.

The coefficient of significant spatially lagged variables (spatial autocorrelation coefficient ρ) is statistically significant. A coefficient of 0.54 indicates the presence of an important spatial interaction. In other words, it implies that the environmental degradation in a certain region is significantly affected by the degradation in the neighboring regions. The coefficient being positive shows that the regions with high (or low) environmental degradation have a tendency for clustering. The spatial autocorrelation (0.54) is bigger than the GPD per capita coefficient (0.001). This means that a region's environmental degradation is affected by the neighboring regions' environmental degradation more than the region's own economic growth.

Table 3: Direct and Indirect Effects

	Direct Effects			Indirect Effects			Total Effects		
GDP	-0.001	*0.004*	***	-0.001	*0.009*	**	-0.002	*0.005*	**
GDP2	2.1e^{-08}	*0.083*	*	2.2e^{-08}	*0.104*		4.3e^{-08}	*0.090*	*
GDP3	-1.3e^{-13}	*0.124*		-1.4e^{-13}	*0.148*		-2.7e^{-13}	*0.133*	

Note: *p* values in parentheses
***, ** and * significant at 1%, 5% and % 10, respectively.

LeSage and Pace (2009) stated that making a direct interpretation of the coefficients obtained from spatial models would be wrong, and suggested a partial derivative approach instead. This method enables computation of direct effects and indirect effects. Direct effects express the effect of an explanatory variable in region A on the dependent variable of region A. Indirect effects (that is, spillover effects) express the effect of an explanatory variable in region A on the dependent variable of neighboring regions. The value of the GDP coefficient in the first column in Table 3 shows that the income rise in a certain region has a very small effect on reducing the environmental pollution of that region. When the direct effect value (spillover effect) in the second column is the same as the indirect effect value, this means that the economic growth in this region has a very small effect on the environmental degradation of the neighboring regions,

5. CONCLUSION

An inverted U-shaped EKC indicates that the economic growth has an improving effect on environmental degradation in the final stage. For policy-makers in particular, the validity of this type of a relationship is important, since it is both a new reason to achieve economic growth and a chance to claim that economic growth is also sustainable in terms of environment. There are big differences between the studies investigating the validity of this argument for Turkey. There have been studies supporting that this relationship is U-shaped, inverted U-shaped and inverted N-shaped. There are also studies claiming that this type of relationship does not exist at all. The results of these studies being different from each other create a dilemma for policy-makers. Stern (2005) stated that the main underlying reason for these differences was that these studies did not use appropriate econometric models. To avoid this problem, this study conducted a regional analysis using spatial panel econometrics. The results of the econometric analyses support that there is a positive relationship between regional economic growth and environmental quality in Turkey. However, this relationship is very weak. It was also found that there is a relationship between a region's environmental degradation and the growth of its neighboring regions, but this relationship was also very poor. Another finding that is important for policy-makers is that the environmental degradation of neighboring regions can cause a considerable effect on the environmental degradation of a certain region. Thus, enhancing the measures taken to improve the environmental quality of a region will affect not only that region, but also its neighboring regions.

REFERENCES

Akbostanci, E., Türüt-Aşık, S. ve Tunç, İ. (2009). The Relationship Between Income and Environment in Turkey: Is There an Environmental Kuznets Curve*?, Energy Policy*, 37, 861-867.

Anselin, L., D. A. Griffith (1988), " Do Spatial Effects Really Matter in Regression Analysis?", *Papers in Regional Science*, 65 (1), 11–34.

Başar, S. ve Temurlenk (2007), Çevreye Uyarlanmış Kuznets Eğrisi: Türkiye Üzerine Bir Uygulama, *Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi*, 21 (1), 1-12.

Başıhos, S. (2016), *Gelişmişlik Göstergesi Olarak Gece Işıkları: Ulusal Ölçekte ve İl Bazında GSYH Tahmini*, TEPAV, Tartışma Metni No: 201617,

Bölük, G. ve Mert, M. (2015), The renewable energy, growth and environmental Kuznets curve in Turkey: An ARDL approach, *Renewable and Sustainable Energy Reviews*, 52, 587–595.

Cole, M.A. (2004). Trade, the Pollution Haven Hypothesis and the Environmental Kuznets Curve: Examining the Linkages. *Ecological Economics*, 48 (1), 71–81.

Cole, M.A., Rayner, A.J. and Bates, J.M. (1997). The Environmental Kuznets Curve: An Empirical Analysis. *Environ. Dev. Econ*, 2, 401–416.

Dam, M. M., Karakaya, E. ve Bulut, Ş. (2013), Çevresel Kuznets Eğrisi ve Türkiye: Ampirik Bir Analiz, *Dumlupınar Üniversitesi Sosyal Bilimler Dergisi*, EYİ 2013 Özel Sayısı, 85-98.

De Bruyn, S. and Opschoor, J. (1997). Developments in the through Put-Income Relationship: Theoretical and Empirical Observations. *Ecological Economics*, 20 (3), 255-268.

Diao, X.D., Zeng, S.C., Tam, C.M. and Tam, V.WY. (2009). EKC Analysis for Studying Economic Growth and Environmental Quality: A Case Study in China. *Journal of Cleaner Production*, 17, 541-548.

Dinda, S., Coondoo, D. and Pal, M. (2000). Air Quality and Economic Growth: An Empirical Study. *Ecological Economics*, 34 (3), 409–423.

Egli, H. and Steger, T.M. (2007). A Dynamic Model of the Environmental Kuznets Curve: Turning Point and Public Policy. *Environmental and Resource Economics*, 36 (1), 15–34.

Elhorst, J. P. (2010), "MATLAB Software for Spatial Panels". https://www.rug.nl/research/portal/files/15643137/Matlab_paper.pdf

Fodha, M., and Zaghdoud, O. (2010). Economic Growth and Pollutant Emissions in Tunisia: An Empirical Analysis of the Environmental Kuznets Curve. *Energy Policy*, 38 (2), 1150–1156.

Fotourehchı, Z. ve Şahinöz, A. (2016), Çevresel Tahribatın Belirleyicileri: Çevresel Kuznets Eğrisinin Ampirik Bir Analizi, *Ekonomik Yaklaşım Dergisi*, 27 (99), 139-164.

Grossman, G. and Krueger, A.B. (1995). Economic Growth and the Environment. Quarterly. *Journal of Economics*, (May), 353-77.

Grossman, G. M. and Krueger, A.B. (1991). *Environmental Impacts of the North American Free Trade Agreement*. In NBER (Ed.), Working paper 3914.

Halkos, G.E. and Tzeremes, N.G. (2009). Exploring the Existence of Kuznets Curve in Countries Environmental Efficiency Using DEA Window Analysis. Ecological Economics, 68 (7), 2168-2176.

Hill, R.J. and Magnani, E. (2002). An Exploration of Conceptual and Empirical Basis of Environmental Kuznets Curve. Australian Economic Paper, 41 (2), 239-54.

Holtz-Eakin, D. and Selden, T.M. (1995). "Stoking the Fires? CO2 Emissions and Economic Growth. *J. Public Econ*, 57, 85-101.

Kaufman, R.K., Davidsdottir, B., Garnham, S., and Pauly, P. (1998). The Determinants of Atmosphric SO2 Concentration: Reconsidering the Environmental Kuznets Curve. *Ecological Economics*, 25, 209-220.

Kuznet, S. (1995), Economic Growth and Income Inequality, The American Economic Review, XLV (1), 2-28.

LeSage, J. P. and R. K. Pace (2009), *Introduction to Spatial Econometrics*, Boca Raton, Taylor and Francis.

Luzzati, T. and Orsini, M. (2009). Investigating the Energy-Environmental Kuznets Curve. Energy Journal, 34 (3), 291-300.

McPherson, M. A. and Nieswiadomy, M. L. (2005), Environmental Kuznets Curve: Threatened Species and Spatial Effects, *Ecological Economics*, 55, 395–407.

Panayotou, T., 1993. *Empirical Tests and Policy Analysis of Environmental Degradation at Different Stages of Economic Development*, Working Paper WP238, Technology and Employment Programme, ILO, Geneva.

Park, S. and Lee, Y. (2011). Regional Model of EKC for Air Pollution: Evidence from the Republic of Korea. *Energy Policy*, 39, 5840–5849.

Rupasingha, A., Coetz, S. J., Debertin, D. L and Pagoulatos, A. (2004), The Environmental Kuznets Curve For US Counties: A Spatial Econometric Analysis With Extensions, *Papers in Regional Sciences*. 83, 407-424.

Saatçi, M. ve Dumrul, Y. (2011) Çevre Kirliliği ve Ekonomik Büyüme İlişkisi: Çevresel Kuznets Eğrisinin Türk Ekonomisi İçin Yapısal Kırılmalı Eş-Bütünleşme Yöntemiyle Tahmini, *Erciyes Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 37, 65-86.

Selden, T.M. and Song, D. (1994). Environmental Quality and Development: Is There a Kuznets Curve for Air Pollution Emissions? *Journal of Environmental Economics and Management*, 27, 147-62.

Seppala, T., Haukioja, T. and Kaivı-Oja, J. (2001). "The EKC Hypothesis does not Hold for Direct Material Flows: Environmental Kuznets Curve Hypothesis Tests for Direct Material Flows in Five Industrial Countries", *Population and Environment*, 23, 2, 217-38

Stern, D. I., and Common, M. S. (2001). Is There an Environmental Kuznets Curve for Sulfur? *Journal of Environmental Economics and Management*, 41, 162–178.

Stern, D.I., 2004. *The Rise and the Fall of Environmental Kuznets Curve*. World Development 32 (8), 1419–1439.

Suri, V., and Chapman, D. (1998). Economic Growth, Trade and Energy: Implication for the Environmental Kuznets Curve. *Ecological Economics*, 25, 195-208.

Tevie, J., Grimsrud, K. M. and Berrens, R. P., Testing the Environmental Kuznets Curve Hypothesis for Biodiversity Risk in the US: A Spatial Econometric Approach, *Sustainability*, 3, 2182-2199.

Torras, M., and Boyce, J. K. (1998). Income, Inequality and Pollution: A Reassessment of the Environmental Kuznets Curve. *Ecological Economics*, 25, 147-160.

Vita, G., Katircioglu, S., Altinay, L., Fethi, S. and Mercan, M. (2015), Revisiting the Environmental Kuznets Curve Hypothesis in a Tourism Development Context, *Environmental Science and Pollution Research*, 22, 16652 – 16663.

Wang, Y., Kang Y., Wu, X. and Xiao, Y. (2013), Estimating the Environmental Kuznets Curve For Ecological Footprint att The Global Level: A Spatial Econometric Approach, *Ecological Indicators*, 34, 15–21.

World Bank (1992). *World Development Report 1992: Development and the Environment*. TheWorld Bank. Washington, DC.

Yavuz, N. Ç. (2014). CO2 Emission, Energy Consumption, and Economic Growth for Turkey: Evidence from a Cointegration Test With a Structural Break, *Energy Sources, Part B: Economics, Planning, and Policy*, 9:3, 229-235.

DYNAMICS OF SUSTAINABLE CITIES: A PANEL APPROACH

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Abstract

More than half of the world's population now live in urban areas. Urbanization occurs in both different speeds and different forms in countries. Also, rapid urbanization brings lots of facts which change from one country to another. As the rate of urbanization increase, United Nations put the goal of making cities sustainable in the 2030 Agenda for Sustainable Development. In this paper, we focus on dynamics of sustainable cities under the perspective of urban concentration. We use a panel approach to investigate dynamics of sustainable cities. Furthermore, we deal with why the rate of urbanization show differences between developed and developing countries. We consider a larger set of explanatory factors includes economic, environmental, geographical and administrative factors. Therefore, our methodological choice allows us not only put forward to dynamics of sustainable cities but also provide explanation on why rate of urbanization show differences among countries.

Keywords*: Sustainable Cities, Urbanization, Panel Approach, Sustainable Development, Population Growth*
JEL classification: *C33, Q01, Q56*

1. INTRODUCTION

Cities are the heart of economic and social activities. More than half of the world's population now live in urban areas. According to United Nations Habitat State of World Cities 2010/2011 report, world population that lives in urban areas will rise to %75 by 2050. Urbanization occurs in both different speeds and different forms in countries. Furthermore, rapid urbanization brings lots of facts change from one country to another. High urbanization rates lead to irreversible changes in the economic, social, cultural and political structures of cities, regions and countries. As the urbanization increase, United Nations put the goal of making cities sustainable in the 2030 Agenda for Sustainable Development. Most of the studies about sustainability have been focusing on the role of cities on sustainable development since the late 1980s. This issue gain serious popularity in 21st century. Rapid urbanization also means that these cities produce and consume more, so they create new job opportunities and facilities. Therefore, attractiveness of these cities also goes up both for firms and for households. This concept creates a cycle: as the urbanization increase, the attractiveness of these ones increases. Thus, sustainability of these cities becomes an important concept for all over the world.

In this paper, we focus on dynamics of sustainable cities under the perspective of urban concentration. We use a panel approach of 274 cities between the years of 2003 to 2012 in order to investigate dynamics of sustainable cities. Furthermore, we deal with why the rate of urbanization show differences between developed and developing countries. Therefore, we divide the data in two parts: cities in developing countries and cities in developed countries. We consider a larger set of explanatory factors includes economic, environmental, geographical and administrative factors. Thus, our methodological choice allows us not only put forward to dynamics of sustainable cities but also provide explanation on why rate of urbanization show differences among countries.

2. DYNAMICS OF SUSTAINABLE CITIES

Sustainable cities are one of the most important concepts of 20th and 21st centuries. Dynamics of sustainable cities have been examined by academicians, planners, governments, institutions, and NGOs with different aspects.

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Allan (2001) highlighted that urban sustainability depends on five dimensions: economic sustainability, social sustainability, ecological sustainability, sustainability of the built environment and political sustainability (Allan, 2009: 2-3).

Mori and Christodoulu (2012) mention common features of sustainability:

-   "Subject focus on relationship between humans and nature
-   Orientation towards the long term and inherently uncertain future
-   Normative foundation in the idea of justice, between humans of present and future generations as well as between humans and nature
-   Concern for economic efficiency, understood as non-wastefulness, in the allocation of natural goods and services as well as their human-made substitutes and complements"

Definition of sustainability or characteristics of sustainability can be found easily in different sources because they are globally defined. Although we have some indexes that measure sustainability of cities such as European Green City Index (Economists Intelligence Unit of Siemens), Indicators for Sustainability (Sustainable Cities International), STAR Community Rating System (Sustainability Tools for Assessing and Rating Communities), China Urban Sustainability Index (Urban China Initiative), there are no global indicators or indexes that can measure sustainability of cities because of lack of data on city level and confusion of measurement methods.

Despite lack of data or a common measurement method for sustainability of cities, generally most of the studies on this issue use economic, social and environmental indicators to show the effects of rapid urbanization and sustainability of cities. For example, Canadian Development Agency (2012) defines indicators for sustainability by using three dimensions: economic (unemployment and economic growth rate), environment (green spaces, energy efficiently, water and air quality, recycling), social (compact city, housing, education and sanitation…)

On 1 January 2016, United Nations puts 17 goals in the 2030 Agenda for Sustainable Development. Making cities inclusive, safe, resilient and sustainable is one of these goals. Outstanding targets for this goal are reducing urban poverty, increasing living standards, accessing to secure and affordable basic urban services (like housing, water, sanitation, waste management), reducing gas emissions, increasing the efficiency of land and resource use, and protecting to the environment. After setting of this goal and targets, new studies and projects have begun to introduce by governments, institutions and academicians. United Nations Habitat's Global Urban Observatory has created a new UN Global Sample of Cities to monitor and report on world urbanization developments. They also provide open source data for sample of 200 cities between 1990 and 2015. Therefore, in the next decades we will be able to study on new empirical models, indicators and indexes by using these comprehensive data sets.

3. DATA AND THE MODEL

The aim of this paper is to identify the dynamics of sustainable cities under the perspective of urban concentration for 25 OECD countries by city level using panel data analysis. We use balanced panel data analysis for 274 cities from 2003 to 2012. All the data are gathered from OECD stat metropolitan areas data set.

This paper presents four steps (cases) analyses: Firstly, we use entire data set to represent the dynamics of sustainable cities. Secondly, by using latest country classification of United Nations, we divide the data in two parts: cities in developing countries (45 cities), and cities in developed countries (229 cities). Thus, we can focus on why the rate of urbanization show differences between developed and developing countries. Lastly, the majority of the cities in our data set belong to USA (70 cities). In order to avoid from overestimation we exclude the cities in USA from the developed countries data and again we consider the new results. We consider a larger set of explanatory factors includes economic, environmental, geographical and administrative factors.

Table 1: Variables	
Demographic Variables	*Geographic and Administrative Variables*
Wpop: working age population (15-64)	Meta: metropolitan land share of national value
Economic variables	Gov: average population size of local government
GDP: gross domestic production	*Environmental Variables*
EMP: employment	Green: green area per million people
	CO: CO2 emissions per capita
Source: own elaboration	

We use working age population as dependent variable. Because, as the urbanization increases, production increases so new opportunities arise both for the firms and households. This dependent variable represented by working age population also explains the attractiveness of the cities. All variables in four cases are in logarithmic form to show the changes.

4. RESULTS

This paper searches for dynamics of sustainable cities under the perspective of urban concentration for 25 OECD countries by city level using panel data analysis. We analyse the data in four cases. To begin with we check the unit roots for all cases and we take the first difference of all variables. The important point of the panel data analysis is the decision of using fixed effect or random effect models. Fixed effects are generally used for analysing the impact of variables that vary over time. Unlike fixed effects, random effects allow for time invariant variables to play a role as explanatory variables. Theoretically Hausman Test is applied in order to identify the appropriate effect model. In the first case (for all data contains 274 cities) and the third and fourth cases (for developed countries cases-with and without US cities), Hausman Test results indicated that the random effect model is more suitable for the model of this study, on the other hand for the second case (for developing countries-45 cities) results show that fixed effect model is more suitable for the model of this study. However, although fixed effect models can control time-invariant variables such as gender, and common language, they cannot estimate them. Therefore, we decided to use random effect model for all the cases to allow the investigation of the effects of time-invariant variables, such as metropolitan land share of national value and green area per million people (changes in these variables are very small) (Gujarati and Porter, 2012: 606-607).

In our first case, we use all data that covers 274 cities of both developing and developed countries to represent the dynamics of sustainable cities. The estimation results of the first case are shown in the Table 2.

Table 2: Case 1 - Results of 274 cities							
Variables	*1*	*2*	*3*	*4*	*5*	*6*	*7*
Constant (c)	9,22***	2,63***	2,75***	3,07***	6,23***	6,50***	3,29***
GDP	0,41***	0,07***	0,07***	0,12***	0,13***	0,13***	0,13***
Emp		0,76***	0,76***	0,65***	0,41***	0,40***	0,64***
Meta			0,03*	0,04*	0,07*	0,07*	0,04*
Gov				0,05**	0,11**	0,10**	0,04**
Green					-0,12~	-0,11*	
CO						-0,05***	-0,07***
R^2	0,43	0,82	0,82	0,78	0,65	0,65	0,78
*,** and *** signs show that respectively significant at the %10, %5, %1 level. ~ sign represents that being insignificant.							
Note: All variables are in natural logs.							
Source: Authors' calculations.							

The first three columns of the Table 2 give the effects of economic factors on attractiveness of the cities. The signs of these variables are as expected and significant for all models. Economic agents prefer cities that have high income and more employment facilities. The third and fourth columns of this table add

geographic and administrative variables. According to these results, generally firms and households settle in larger metropolitan areas. However, when it comes to environmental variables, results become complicated. In the fifth and the sixth columns, the green area per million people variable has negative sign. This is an unexpected result. Furthermore, when this variable adds in the model, the explanatory power of the model is decreasing. However, this variable is insignificant in the fifth column and significant at the %10 level in the sixth column. Thus, we can evaluate these results as insignificant for the entire data of 274 cities. On the other hand, CO_2 emission variable is significant both columns sixth and seventh and the sign of this variable is negative as expected.

In our second case we estimate the 45 cities of developing countries in order to investigate the rate of urbanization and dynamics of sustainability for developing cities. Table 3 shows the estimation results.

Table 3: Case 2 - Results of 45 cities (developing countries)							
Variables	*1*	*2*	*3*	*4*	*5*	*6*	*7*
Constant (c)	7,96***	1,57***	1,47***	2,55***	4,18***	4,22***	2,54***
GDP	0,57***	0,04***	0,05***	0,09***	0,08***	0,08***	0,09***
Emp		0,88***	0,88***	0,58***	0,54***	0,53***	0,58***
Meta			-0,01~	0,19**	0,10**	0,10**	0,19**
Gov				0,22**	0,18**	0,18**	0,23**
Green					-0,12*	-0,13*	
CO						0,007*	0,008*
R^2	0,63	0,85	0,86	0,78	0,78	0,79	0,78
*,** and *** signs show that respectively significant at the %10, %5, %1 level. ~ sign represents that being insignificant. Note: All variables are in natural logs.							
Source: Authors' calculations.							

Same as the first case economic variables are significant and have positive sign. Metropolitan land share of national value variable is insignificant in the third column, but after that when we add new variables it becomes significant. We have two unexpected results in this case. The first one is the same problem in the first case for green area per million people variable. Surprisingly, the effect of this variable is negative also for developing countries' cities. In addition to these, CO_2 emission variable has positive sign and significant for the level of %10.

Table 4 gives us the results for our third case: the estimation results of 229 cities located in developed countries. These results are included USA cities, too.

Table 4: Case 3 - Results of 229 cities (developed countries)							
Variables	*1*	*2*	*3*	*4*	*5*	*6*	*7*
Constant (c)	9,08***	3,42***	3,55***	3,83***	7,73***	7,93***	4,31***
GDP	0,42***	0,16***	0,17***	0,18***	0,15***	0,13***	0,17***
Emp		0,63***	0,61***	0,55***	0,28***	0,31***	0,55***
Meta			0,04**	0,05**	0,08*	0,06**	0,04*
Gov				0,05***	0,10***	0,08***	0,04***
Green					-0,11~	-0,08*	
CO						-0,13***	-0,11***
R^2	0,43	0,76	0,77	0,72	0,52	0,55	0,71
*,** and *** signs show that respectively significant at the %10, %5, %1 level. ~ sign represents that being insignificant. Note: All variables are in natural logs.							
Source: Authors' calculations.							

Again GDP and employment variables are significant and positive. This time geographic and administrative variables are also significant for all columns. Green area per million people variable is negative and insignificant in the fifth column. As we exclude this variable from the model, the explanatory power of the model is rising up considerably. However, before explaining the differences between developing and developed countries, we have to consider this analysis for developed countries by excluding

data of US cities. Because, 70 cities of 229 developed countries' cities is belong to USA. This may cause over estimation. Table 5 shows the result of 159 cities located in developed countries which is our last case.

Variables	1	2	3	4	5	6	7
Constant (c)	10,08***	5,19***	5,42***	6,90***	8,36***	8,46***	7,08***
GDP	0,32***	0,11***	0,10***	0,07***	0,07***	0,06***	0,07***
Emp		0,54***	0,53***	0,29***	0,28***	0,28***	0,29***
Meta			0,08**	0,19**	0,20**	0,21**	0,19*
Gov				0,19~	0,12~	0,12*	0,19~
Green					-0,11~	-0,11~	
CO						-0,03**	-0,04**
R^2	0,34	0,62	0,64	0,47	0,49	0,49	0,47

Table 5: Case 4 - Results of 159 cities (developed countries-without USA cities)

*,** and *** signs show that respectively significant at the %10, %5, %1 level. ~ sign represents that being insignificant.
Note: All variables are in natural logs.
Source: Authors' calculations.

When we exclude USA cities from the data, the explanatory power of models are decreasing. The coefficient of CO_2 emission variable becomes smaller. Furthermore, both the green area per million people and average population size of local government is insignificant for all models.

5. CONCLUSION

Sustainability of cities is a complex issue. Lots of different mechanisms have to be considered. As the rate of urbanization increases, the economic, social, cultural, political structures of cities are changed irreversibly. Furthermore, the interactions between cities within this rapid urbanisation process influence also the structure of cities. This is a dynamic process, so that the characteristics of the cities or indicators of the sustainability or the effects of rapid urbanization can change permanently. During this dynamic process, we need more information/data to find out and solve the dynamics of sustainable cities. Therefore, it is not surprising issue that the rate of urbanization show differences between developed and developing countries.

This paper focuses on the concept of dynamics of sustainable cities. For this aim, we use balanced panel data analysis for 274 cities of 25 OECD countries between the years of 2003-2012. The results show us, not only the economic factors determine the sustainability of cities but also geographic and administrative and environmental variables play key role for sustainability of the cities, as expected. Then we separate the data of cities located in developing countries and cities located in developed countries. For 45 cities belong to developing countries, the most important variable is employment. The environmental variables are significant but they have opposite signs than expected. For 229 cities of developed countries all variables are significant and have expected sign except green area per million people variable. However, we know that 70 cities of these 229 cities are within the orders of USA. Therefore, in order to avoid overestimation, we exclude these 70 cities from our cities in developed countries data set. This time the explanatory power of models become smaller, on the other hand, results are the same as former ones in general.

Although definition and the main characteristics of the sustainability can be found easily in various sources, there are no universal indicators or indexes that measure sustainability of cities. The most important problem for studying on this issue is lack of data and a common measurement methodology. Luckily, after United Nations sets 17 goals in 2030 Agenda for Sustainable Development, United Nations Habitat's Global Urban Observatory has created a new UN Global Sample of Cities to monitor and report on world urbanization developments. This project also presents open source data sets for sample of 200 cities between the years of 1990 and 2015. Thus, it is not difficult to guess that there will be new indicators, indexes and empirical analysis show up during next decades.

REFERENCES

Allan, A. (2001). The five Dimension of Sustainable Cities. "Urban Sustainability Under Threat: The Restructuring of The Fishing Industry in Mar del Plata, Argentina". Development in Practice, vol 11, no 2&3. Pp 152-173.

Allan, A. (2009). Perspective, Pallete ULC's Journal of Sustainable Cities, summer 2009.

Canadian Development Agency (2012). Indicators for Sustainability.

Gujarati, D. and Porter, D. (2012). Temel Ekonometri. Çeviren: Ümit Şenesen, Gülay Günlük Şenesen. Birinci baskı. Literatür Yayıncılık: İstanbul.

Mori, K. and Christodoulou, A. (2012). Review of Sustainability Indices and Indicators: Towards a New City Sustainability Index (CSI). Environmental Impact Assessment Review, 32, pp 94-106.

UN HABİTAT: State of World's Cities 2010/2011, Nairobi, United Nations Human Settlements Programme 2007, p 12.

AN INPUT-OUTPUT ANALYSIS OF MIGRATION IN TURKEY: DISPLACEMENT EFFECT OF ARRIVING FOREIGNERS

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Abstract

This study examines how changes in arrival of foreign immigrants changes interregional migration patterns in Turkey. The study has two important contributions. Firstly, the adopted methodology is based on a conceptual corollary of the input-output models. Put forward by Vazquez et al. (2011), the method is relatively new and unexplored for both Turkey and the migration literature. Secondly, the study contributes by presenting population displacement effects for regions of Turkey. Such findings can be used by policy makers to formulate action plans to locate immigrants and maintain sustainability in regional labor markets; an issue made more important by EU and Turkey's recent agreements regarding refugees.

Keywords: *Input-Output analysis, Regional Migration, displacement effect, Demographic movements.*
JEL classification: *C67, F22, J15, R23.*

1. INTRODUCTION

Arab Spring has created turmoil, the worst of which is in Syria. One result of the Arab Spring has been the displacement of a large population, and refugee flows through Turkey and towards Europe have numbered in hundreds of thousands. These flows have triggered policy debates on where the refugees will be placed and what economic impacts they might have on host countries. Immigration, rather than refugee inflows have been the subject of research in economics. Main focus of conducted analysis is the impact of immigrants on labor market outcomes. Following this line of questioning, conducted studies imply that the most disadvantaged parts of the labor part, i.e. informally employed, uneducated women will be most adversely effected (Carpio and Wagner, 2015; Ceritoğlu et al. 2015; Morales 2016; Borjas et al. 1997; Liu 2010).

Studies without adverse implications for natives are limited. In one of the few examples, Labanca (2014) finds that inflow of migrants in Italy causes offsetting displacement effects across sectors in Italy, with little net displacement of native workers. On the other hand, Fakih and Ibrahim (2016) report that Syrian refugees have negligible impact on the Jordanian labor market due to strict mobility restrictions imposed on refugees and possible imperfect substitutability of native labor and immigrant labor in Jordanian economy.

Immigrants can have positive effect on international trade; see Bratti et al. (2014) for an analysis on Italy and a comprehensive survey on the subject. For the case of Turkey, it has been found that Syrian refugees who have chosen to reside in Turkey are creating links to Syria through their networks and are enhancing bilateral trade between Syria and Turkey, especially along the border regions (Özpınar et al., 2015).

Turkey is one of the major recipients of refugees from Syria. According to the Regional Refugee and Resilience Plan 2015-2016 of UNHCR (United Nations High Commissioner for Refugees), there is a total of nearly 2.5 million registered refugees surrounding Syria and nearly 1.5 million are in Turkey (UNHCR, 2015). Unofficial estimates put the number of refugees in Turkey at around 3 million, which corresponds to more nearly 4% of Turkey's the population. With the recent agreement with the EU (European Union), more Syrian refugees will be relocated to Turkey from EU countries and it is not unrealistic to expect that the Syrians refugees will end up Turkish citizens. Arrival of such a large wave of refugees presents considerable policy problems on many levels. In line with the prevailing findings of the literature, one can expect that the impact on Turkey's labor market will be considerable. However, it may be possible to locate the refugees in a limited number region, so that only the regional labor markets are effected and ripples of adverse labor market effects are minimized. Fakih and Ibrahim (2016) is actually an example of such distortion minimizing effects of controlled allocation of refugees.

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However, in order to avoid the inhumane practice of strictly controlling refugee movements, policy makers can aim to locate refugees where they will be least likely to leave. In other words, if refugees are located into regions that have the least tendency to give out migration, or emigration, labor market and demography impact of arriving immigrants across the regions of an economy would be minimized. The problem is the identification of regions that trigger the least interregional population movements.

Given this concern, this article aims to identify the regions in Turkey which create the lowest interregional demographic movement in response to arrival of foreign immigrants. The contributiions of this article are: i) A very hot policy problem in Turkey is addressed. ii) The adopted methodology, due Vazquez et al. (2011), quantifies interregional migration through an IO inspired approach; detailed reviews of methodologies adopted to examine migration flows (Okkerse, 2008; Kerr and Kerr, 2011) the method employed here has never been employed. The limited number of studies that merge IO modeling and migration focus on the final demand impact of migrants (see, for example, Sastry 1992).

The article proceeds with summarizing the interregional migration flows in Turkey. Then, we present a model that can be used to analyze interregional migration flows, building on the IO models. The constructed model is then used to investigate the impact of immigrants on Turkey's interregional migration. Last section summarizes the findings and concludes.

2. MIGRATION IN TURKEY

Migration data for Turkey is available from Turkish Statistical Institute (TURKSTAT). The data is available on-line for years 2008 to 2015 with some detail on gender and education level of migrants. Compiling data from TURKSTAT, basic characteristics of migration in Turkey can be identified. The first observation is that about migration accounts for 3% to 3.5% of population. There are no significant gender differences; migrating population is divided more or less evenly between males and females.

In terms of education; it is observed that the group most likely to migrate are the ones with relatively higher education. Of the population with bachelor or college degrees in Turkey, around 6% migrate from 2009 to 2014. This group is followed with a ratio of 5% by people with master's degrees or bachelor's degrees that last more than 4 years (such as medicine). Lowest migration rate is for illiterates and those with primary school education; less than 2%. This observation is robust to gender differences.

Finally consider the bilateral migration flows between provinces of Turkey. In terms of absolute numbers, regions with larger populations generate the highest immigration and emigration. Istanbul, the most heavily populated city in Turkey takes the lead in 2015. The observations change, however, when one considers migration as a share of region's population. The regions of Turkey that yield the largest emigration as a share of the region's population are the ones in the east and south east of Turkey. This is as expected, for the eastern regions of Turkey are regarded underdeveloped and present relatively less opportunities.

3. THE MODEL AND RESULTS

The theoretical approach of this article is based on IO modeling. The IO models focus on the flows of goods and services across sectors, whereas this article considers flows of migrants between regions. As exemplified by Vazquez et al. (2011), the IO approach can be used to analyze migration flows between regions of an economy if one replaces good flows between sectors with population flows between regions.

The model that we construct considers both domestic migration, people moving between regions of an economy, and international migration, people arriving from other countries to the regions of the economy being examined. Consider the movement of migrants from region i to region j, represented as mij. Aggregate immigrants arriving to region j is $n_j = m_{ij}$. Also, let immigrants arriving to region *j* from other countries be represented as f_j. Then, total immigration to a region from other regions of the economy and other countries is:

$$x_j = f_j + n_j = f_j + \sum_i m_{ij} \tag{1}$$

Let parameters $d_{ij} = m_{ij} / x_j$ represent the share of domestic migration from each region *i* to region *j*. then,

$$x_j = f_j + n_j = f_j + \sum_i m_{ij} = f_j + x_j \sum_i d_{ij} \tag{2}$$

Solution yields:

$$x_j = \frac{1}{1 - \sum_i d_{ij}} f_j \tag{3}$$

This enables one to examine how changes in foreign immigration to region j effects total immigration to region j. This provides a foundation for analyzing how changes in foreign immigration leads to further migration waves between the regions of a country.

The presented structure can be generalized through matrix notation. Let the matrix MRxR represent the cross section of migration flows between R different regions in an economy. This matrix is such that each element mij represents domestic migration flow from region i to region j. The domestic migration received from each region *j* is represented by $\mathbf{N}_{1xR}$. Foreign immigrants to each region *j* are denoted as $\mathbf{F}_{1xR}$. Then, total immigrants arriving to each region can be summarized by:

$$X_{1XR} = F_{1xR} + 1_{1xR}M_{RxR} = F_{1xR} + N_{1xR} \qquad (4)$$

where **1** is a *1xR* vector of ones that enables matrix operations. Let $\mathbf{D}_{RxR}$ be an *RxR* matrix, each element of which is $d_{ij} = m_{ij} / x_j$. Then,

$$X_{1xR} = F_{1xR} + X_{1xR}D_{RxR} \qquad (5)$$

The solution is:

$$(6)$$

$$X_{1xR} = F_{1xR}[I_{RxR} - D_{RxR}]^{-1}$$

The matrix [IRxR - DRxR]-1 in the solution is the population displacement matrix. Equation 6 can be used to examine the flows of migrants between regions of an economy given a change in arrival of foreign immigrants to a region j. Specifically, row sums of the population displacement matrix less the diagonal element of each row would show total interregional migration, given additional foreign immigration to each region j. Similarly, column sums excluding the diagonal elements would show emigration out of each region j.

Given the population displacement matrix from Equation 6, the movements between provinces can be calculated. The calculations require the D matrix and the F vector from Equation 6. Matrix D requires bilateral migration movements across regions, matrix M, and immigration to each region from other countries, the vector F. Data of interregional migration movements, M, is available from TURKSTAT Migration Statistics for 2014. However, the arrival of foreign immigrants to regions, F, is available only for the year 2000 from TURKSTAT, based on a population census. This regional distribution is applied on the aggregate number of foreigners given residential permit in 2014; data is from Göç İdaresi Genel Müdürlüğü (2015: 43). Given these data sources, the necessary matrices can be constructed.

Results from employment of the data and the row sums of the population displacement matrix from Equation 4 are provided in the Appendix. The calculation results clearly show that eastern regions of Turkey are bad choices for locating an inflow if immigrants, for considerable population will be displaced out of those regions. In other words, population displacement effect is very large for these regions.

Istanbul and Bursa, the white regions to the north west would be best in absorbing the immigrants and create less population displacement. Izmir, Uşak and Denizli are good candidates from the western part of Turkey for locating immigrants. Nevşehir, in Central Anatolia, is also a good choice.Yozgat, just to the north of Nevşehir, and Aksaray, just to the west of Nevşehir, are also good choices in terms of minimizing interregional displacement in Turkey.

4. CONCLUSION

Arrival of foreign immigrants creates displacement effects in an economy. Displacement can be in terms of wage, with arriving workers driving the wage down for native workers, and it can be in terms of spatial displacement, with arriving people causing further interregional migrations within an economy. Hence measurement of displacement effects is important, especially for Turkey. For Turkey is the major recipient of Syrian refugees and is likely to receive more due to agreements with the European Union. Therefore, this article investigates the impact of foreign immigrants or arrival of refugees on interregional population movements in Turkey.

The employed method is due Vazquez et al. (2011) based on the intuitions provided by input-output models. Rather than intersectoral purchases, interregional migration is considered and the mathemathical

foundation implied by input-output models is used to analyze the impact of foreign arrivals on interregional migration in Turkey. The data employed in this study is from TURKSTAT's Address Based Population Registration Statistics. Conducted analysis shows that ideal regions to locate immigrants and refugees are İstanbul, Bursa, Izmir, Uşak, Denizli and Nevşehir. All of these regions are known for their relatively better developed industries, with the exception of Nevşehir.

This study focuses on aggregate population and identifies regions in Turkey most appropriate in terms of triggered population displacement. The population displacement is expected to have adverse effects on regional labor markets and the relevant literature implies that the worst effects will be experienced by informally employed, unskilled women. Further policy formulation should focus on how to integrate large flows of refugees in to the society and how to provide them with means to earn a living, if they are to remain in Turkey permanently.

REFERENCES

Borjas, G. J., Friedman, R. B., and Katz, L. F. (1997). How Much Do Immigration and Trade Affect Labor Market Outcomes? *Brookings Papers on Economic Activity*, 28 (1), 1-90. Retrieved June 3, 2016, from https://ideas.repec.org/a/bin/bpeajo/v28y1997i1997-1p1-90.html

Bratti, M., De Benedictis, L., and Santoni, G. (2014). On the pro-trade effects of immigrants. *Review of World Economics*, 150 (3), 557–594.

Carpio, X. V. D., & Wagner, M. (2015). The impact of Syrian refugees on the Turkish labor market *Policy Research Working Paper*. World Bank.

Ceritoğlu, E., Gürcihan Yüncüler, H. B., Torun, H. And Tümen, - S. (2015, September). The Impact of Syrian Refugees on Natives' Labor Market Outcomes in Turkey: Evidence from a Quasi-Experimental Design, *IZA Discussion Papers* No. 9348. Institute for the Study of Labor (IZA).

Fakih, A., and Ibrahim, M. (2016). The impact of Syrian refugees on the labor market in neighboring countries: empirical evidence from Jordan. *Defence and Peace Economics*, 27 (1), 64-86.

Göç İdaresi Genel Müdürlüğü (2015). 2015 Türkiye Göç Raporu. (Tech. Rep.). TC İçişleri Bakanlığı Göç İdaresi Müdürlüğü. Retrieved May 8, 2016, from http://tinyurl.com/zbl6lpn

Kerr, S. P., and Kerr, W. R. (2011, January). Economic Impacts of Immigration: A Survey. *NBER Working Papers* No. 16736. National Bureau of Economic Research, Inc. Retrieved June 3, 2016, from: https://ideas.repec.org/p/nbr/nberwo/16736.html

Labanca, C. (2014, August). The effects of a temporary migration shock. The case of the Arab Spring migration toward Italy. *University of California at San Diego, Economics Working Paper Series*. Department of Economics, UC San Diego. Retrieved June 3, 2016, from: https://ideas.repec.org/p/cdl/ucsdec/qt8m49f3qb.html

Liu, X. (2010). On the macroeconomic and welfare effects of illegal immigration. *Journal of Economic Dynamics and Control*, 34 (12), 2547-2567.

Morales, J. S. (2016). The impact of internal displacement on destination communities: Evidence from the colombian conflict. *HiCN Working Papers* No. 209. Households in Conflict Network.

Okkerse, L. (2008). How to measure labour market effects of immigration: A review. *Journal of Economic Surveys*, 22 (1), 1–30.

Sastry, M. L. (1992). Estimating the economic impacts of elderly migration: An input-output analysis. *Growth and Change*, 23 (1), 54–79.

UNHCR. (2015). Regional Refugee and Resilience Plan 2015-2016: In Response to the Syria Crisis (Tech. Rep.). UNHCR The UN Refugee Agency.

Appendix Table A1: Displacement Results

	Region	Displacement*		Region	Displacement*
1	Adana	7.66	41	Kocaeli	7.77
2	Adiyaman	8.52	42	Konya	7.32
3	Afyonkarahisar	7.28	43	Kütahya	7.27
4	Ağri	8.20	44	Malatya	8.37
5	Amasya	7.80	45	Manisa	7.66
6	Ankara	7.17	46	Kahramanmaraş	8.05
7	Antalya	7.22	47	Mardin	8.24
8	Artvin	7.60	48	Muğla	7.60
9	Aydin	7.59	49	Muş	8.44
10	Balikesir	7.51	50	Nevşehir	6.55
11	Bilecik	7.82	51	Niğde	8.06
12	Bingöl	8.26	52	Ordu	7.58
13	Bitlis	8.61	53	Rize	7.76
14	Bolu	7.91	54	Sakarya	7.65
15	Burdur	7.45	55	Samsun	7.61
16	Bursa	6.28	56	Siirt	8.67
17	Çanakkale	7.84	57	Sinop	7.40
18	Çankiri	8.13	58	Sivas	7.61
19	Çorum	7.49	59	Tekirdağ	7.23
20	Denizli	6.91	60	Tokat	8.05
21	Diyarbakir	8.37	61	Trabzon	7.30
22	Edirne	7.46	62	Tunceli	8.37
23	Elaziğ	8.21	63	Şanliurfa	8.36
24	Erzincan	7.99	64	Uşak	6.77
25	Erzurum	8.05	65	Van	7.82
26	Eskişehir	7.79	66	Yozgat	6.91
27	Gaziantep	8.19	67	Zonguldak	7.19
28	Giresun	7.67	68	Aksaray	6.87
29	Gümüşhane	8.09	69	Bayburt	8.14
30	Hakkari	8.05	70	Karaman	7.22
31	Hatay	7.11	71	Kirikkale	8.12
32	Isparta	7.42	72	Batman	8.62
33	Mersin	7.86	73	Şirnak	8.32
34	İstanbul	6.25	74	Bartin	7.51
35	İzmir	6.78	75	Ardahan	7.89
36	Kars	7.93	76	Iğdir	7.65
37	Kastamonu	8.06	77	Yalova	7.39
38	Kayseri	7.37	78	Karabük	8.23
39	Kirklareli	7.22	79	Kilis	8.70
40	Kirşehir	7.31	80	Osmaniye	8.48
			81	Düzce	7.62

Source: Authors' calculations.
* Displacement shows total emigration out of a region given one additional foreign immigrant arriving into the region.

INNOVATION AND TECHNOLOGY

TECHNOLOGICAL CHANGE, PUBLIC GOODS AND NEW INSIGHTS INTO THE "SOCIALIZATION OF PRODUCTION"

Grigoris Zarotiadis[1]

Abstract

Technological change speeds up and the process of lowering the marginal costs of (re-) producing commodities cumulates giving again a special significance to the Marxian notion of production's socialization. The classical contradiction arises in modern terms strengthening thereby the historical necessity for structural adjustments. In the present paper we start with the discussion of the phenomenon in relation to the current technological evolution and we combine the issue of socialization with a review of the literature and a relevant re-definition of public goods. The resulting generalized scheme for gradual socialization is then being used in order to discuss the current and the future systemic developments.

Key-Words: *technological change, public goods, socialization of production.*
JEL Code: *P26, O30.*

1. Introduction

As technological progress evolves, aside from any bias with respect to the intensity of using the different production factors, as well as from the advancing of products' and services' differentiation, the major accomplishment is the gradual increase of labor's productivity. This in turn means that the marginal costs for (re-) producing commodities are lowering close to zero. At the same time the necessary initial investment, in other words fix costs are getting (relatively) higher.[2]

The above illustrated evolution converts into a gradual de-commercialization of products and services. In some cases, consumers anticipate this change – for instance think of the way how people get access to products of cultural industries outside the functioning of any typical market. In the rest, the monopolistic position of producers enables them to limit the access to their products and set thereby an artificial price far above the zero-profit logic of the perfect competition utopia (pharmaceuticals and food industry is a perfect example for that).

The present paper, in order to enlighten the depicted phenomenon, combines the notion of public and social goods in the mainstream and the heterodox tradition. Thereafter, we proceed by studying how the accumulation of capitalist technological achievements affects the very nature of capitalism, transforming the commercial character of products into a prevailing process of production's socialization. Thereby, we conclude in determining a generalized scheme for gradual socialization and we proceed by setting the unavoidable nexuses to applied policy.

2. Public and Social Goods – transforming the orthodox definition

Starting with mainstream tradition there is a well-known 2-dimensional definition scheme for the different types of goods.

Table 1: Mainstream Classification of Products

	Excludable	Non-Excludable
Rivalrous	**Private goods** food, clothing, cars, parking spaces	**Common-pool resources** fish stocks, timber, coal
Non-Rivalrous	**Club goods** cinemas, private parks, satellite television	**Public goods** free-to-air television, air, national defence

Following the definitions of the orthodox tradition, a good or service is (non-) excludable if it is (not) possible to prevent users/consumers who have not paid for it from having access to it (Joseph E. Stiglitz:

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[2] Fix costs increase at least in relative terms, compared to the minimizing marginal costs.

Knowledge as a Global Public Good, World Bank. Last accessed 29 May 2007). On the other hand, a rival (subtractable) good is a good whose consumption by one consumer prevents simultaneous consumption by other consumers (D.L.Weimer & A.R.Vining, 2011). Alternatively, a good is considered non-rival if, for any level of production, the cost of providing it to a marginal (additional) individual is zero (Cornes, R., T. Sandler. 1986. The theory of externalities, public goods, and club goods. Cambridge University Press.).

   As the mainstream analysis shows specific weaknesses with respect to the conclusiveness of the derived concepts, we proposed an alternative definition: **an economic good is public if the ratio of marginal costs of (re-) production over fix capital investment tends to be zero: MC(q)/FC≈0** (which is actually identical to the non-rivalry), regardless the existence of "natural" or artificial ways of excluding consumption. Notice that given the variability of marginal costs, a good can also be public for specific levels of production!

   In a way, the proposed alternative conceptualization constitutes a reasoning towards the socialization of production yet with the analytical tools of marginalist theory. As we mentioned already, technical change provokes a gradual decrease of the ratio MC(q)/FC, generating thereby a tendency for de-commercialization of all products (yet, with different degree for the different branches). The following triple diagram shows the significance of (increasing) marginal costs for the definition of equilibrium pricing behavior in the three major, indicative cases – perfect competition, monopoly and mark-up pricing in monopolistic competition. In fact, as the mentioned ratio falls to zero, the same happens with the exchange value for the produced output. As the chargeable price goes down as well, this means that the commodity becomes gradually a public good.

Diagram 1: Marginal costs and pricing behavior in orthodox theory
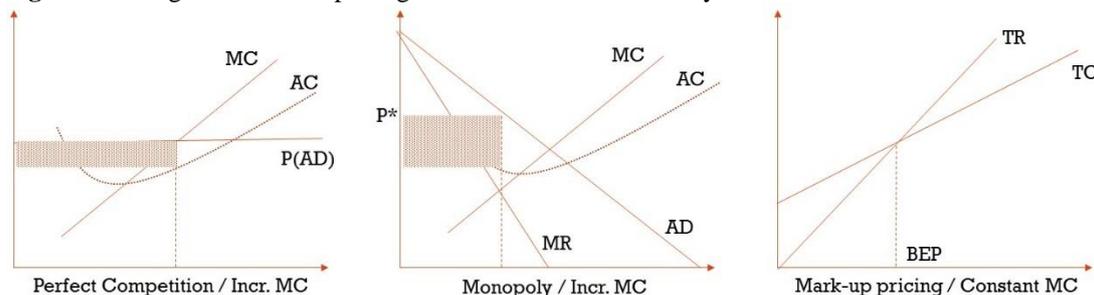
3. The process of socialization from the Marxian tradition

   The previous discussion links capitalist technological evolution with the de-commercialization of products. Thereby, it endogenizes the heterodox socialization process. According to the Marxian tradition, socialization is a process that starts by the capitalist centralization process, meaning the tendency to oligopolize the structure of initially (quasi) perfectly competitive markets. This process transforms production into an increasingly social and collective process involving planning and greater coordination among producers, where the private ownership of production means and the usurpation of added-value remains as an artificial residue, against the very logic of the systemic evolution itself (*Socialism: Utopian and Scientific, by Engels, Friedrich. From "Part III: Historical Materialism"*).

   Notice that this typical heterodox contradiction between the socialized nature of production and the individual appropriation of the surplus product is identical to the case we mentioned before, where a public good remains artificially a commodity, due to the ability of capitalists to exclude consumption. As technology evolves further, this contradiction becomes deeper and unsustainable. Thereby, the very systemic development itself provokes the systemic change and builds up the necessary preconditions for a socioeconomic reality based upon social ownership and de-commercialized, public goods.

4. A Generalized Scheme for Gradual Socialization

   The combined consideration of the mainstream, marginalist with the Marxian approach helps us to determine (till present) 4 different phases of competition and market-evolution, in which the urge to socialization – derived out of the evolution of capitalist competition itself and the derived technological development – intensifies and strengthens thereby also the urge for systemic change:

1st Phase of perfect competition – the era of artisanal shops and the so-called "cottage industries".

2nd Phase of first technological achievements in mass production and the derived introduction in the era of increasing returns to scale.

3rd Phase of generalized centralization tendencies, development of oligopolies and the deepening of imperfect competition, which counteracts the natural tendency of de-commercialization.

4th Phase of monopolization and the generalization of the de-commercialization process – in other words the urge to socialization due to the evolution of technology.

5. Conclusions

Evolution of competition and thereby market structure on the one hand and of technology on the other generate an endogenous socialization process.

Capitalist competition itself is the driving force of a counter-systemic technical change. Specifically, the evolution of technology leads to de-commercialization: decreasing MC/FC.

The discussion of the previous paragraphs combines the mainstream, marginalist tradition with the Marxian approach in order to enlighten this conclusion. Thereby, beside to the main thesis of the paper, we end up having an innovative definition for public goods and we derive interesting proposals for further research: to define quantitative indicators for measuring the degree of socialization, industry and region specific, enabling cross-regional and –time comparisons.

Last but not least, the following policy remark summarizes the content of the present discussion: this endogenous process of de-commercialization causes barriers in the usage of "technological revolution" as a way-out of the recurring systemic crisis; yet, there is an alternative to artificial excludability: structural reforms that enhance the efficiency of the public sector, while broadening the socialized sector of the economy.

SUSTAINABLE TECHNOLOGY DRIVEN INNOVATION AND ENTREPRENEURSHIP: PROSPECTS FOR FUTURE DEVELOPMENT

Maja Levi Jakšić[1]

Abstract

Technology and business innovation drives the economy towards achieving the sustainable development goals. In this paper, sustainable technology driven innovation as opportunity for sustainable entrepreneurship is argued to be the driving force of economic and social development. Special attention is given to the Base of the Pyramid (BoP) considerations in the sustainable development perspective. The research is based on relevant literature review and analysis of 100 global innovative companies in relation to the sustainable business and technology innovations leading them to the highly ranked positions on the most innovative company lists. The findings lead to the conclusion that sustainable technology, innovation and entrepreneurship are essential to comapny success, economy growth and overall development of the highly industrialized and the less developed economies and nations,

Keywords: sustainability, technology innovation, sustainable entrepreneurship, business models
JEL Classification: O35, L21, O33

1. INTRODUCTION

Economic growth and development is strongly related to technological change and the character of new technologies is radically changing the focus of key development factors. These turnarounds and new paradigms were first detected as paradoxes related to incomplete understanding of the crucial forces of development and growth. The understanding of technology as comprising tangible, physical assets, but also the know-how, knowledge and skills necessary in exploiting the equipment, material and tools in practice, gradually emerged. The new, integrative, comprehensive technology model, the complete, technology package" consists of hardware (tangible components-equipment, material, tools, utilities, etc), software (know-how, blue prints, instructions), brain-ware (qualified, skilled workers) and org-ware (organizational structures, procedures and best management practices). (Levi Jakšić 2011a)

Striving for knowledge based development brought to a new paradox, the so called Swedish paradox (Levi Jakšić, 2011). "As measured by the most common benchmarks of knowledge investments, such as R&D, university research, patents, human capital, education, creativity and culture, Sweden has ranked consistently among world leaders. However, following more than a decade a stagnant growth and rising unemployment, concerned policymakers in Sweden started to worry about what they termed as "the Swedish paradox"". (Acs et al, 2009: 7) The new paradox in the 1990s was based on the findings that knowledge capital was lacking management and entrepreneurship components and that without them it was obviously not capable of creating competitive strength and growth. The concept of knowledge-based economy emerged with a view that creating value must be considered as the most important determinant of living standards and creating new jobs in the twenty-first century. (Tornataky et al, 1996)

The entrepreneurial link, as the missing "glue", puts together the crucial competitive forces leading to entrepreneurship using innovations as opportunities to the point of their creating new, superior value in the economy and society. Technology and innovation entrepreneurship «implies the creation of new companies that exploit opportunities provided by technology innovation. Fostering technology entrepreneurship has become a major topic for public policy makers, as a means to release currently unexploited opportunities hidden in individuals, shelved technologies and resource combinations». (Gilsing et al, 2010: 12)

Sustainable technology and business development is viewed as the central pillar of sustainable development (SD). Relevance of the subject is based on the necessity for firms to reconcile sustainability aspects, simultaneously fulfilling all the stakeholders' needs while reaching profitability and respecting the diversified demands of social goals fulfillment (Adams, 2014; Epstein & Roy, 2001; Levi Jaksic, 2015).

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Traditional technology and business innovation models need rethinking (Ricart, 2014; Chesbrough, 2003; 2014; Levi Jaksic, 2006; 2015)

There is evidence of a rising interest of researchers and practitioners in sustainable technology and business innovations (Boons, 2013; Bocken et al, 2014; Rainey, 2006). Sustainable business development rests upon sustainable technology and innovation, and managing technological change directly influences sustainable competitiveness of business operations. (Popa, 2014, Rainey, 2006; Levi Jaksic, 2012; Porter, 1985; Chesbrough, 2006; Levi Jakšić, 2006, 2007, 2012, 2015, McIntyre, 2013). The relevant literature and practice review shows that in some cases, sustainable solutions in industrial practice appear to be ahead of academia in exploring and developing novel business models. (Bocken et al, 2014; Chesbourough, 2014; Moore, 2014).

The aim of this paper is to: 1. establish the theoretical framework and concepts of sustainable technology, innovation and entrepreneurship as the key determinant of growth and development, based on the relevant literature analysis and 2. to critically approach the concept of 'appropriate' technology for the developing economies by elaborating the hypothesis that sustainable technology and business innovation strategy brings competitve advantages and success to companies in both the developing and the developed economies.

The remainder of the paper is organized in the following manner: Section 2 presents literature review and basic concepts of sustainable technology, open innovation and entrepreneurship elaborating the main objectives and hypothesis of a comprehensive approach towards sustainable technology and business innovation. Section 3 elaborates on the Base of the Pyramid considerations related to technology innovation hypothesising that sustainable technology and business model innovation, as an entrepreneurial opportunity, leads to sustainable growth and development of firms and economies, both developing and developed. The hypothesis is further elaborated in Section 4 where the research analysis of 100 global top ranked innovative companies is presented in relation to sustainable technology and business innovations they had introduced. Section 5 deals with concluding remarks, indicates limitations as well as elements of future research. At the end References are presented.

2. SUSTAINABLE TECHNOLOGY, INNOVATION AND ENTREPRENEURSHIP

The core objectives of sustainable society, as defined so far in the political and scientific discourse, include greater social cohesion, more and better jobs (social dimension); economic competitiveness and stability (economic dimension); declining resource use and economic development, safeguarding biodiversity and ecosystem health (environmental dimension); and an open, participatory approach based on equality and non-discrimination, justice and solidarity (institutional dimension). Building and maintaining such a system requires that policies and strategies are developed based upon these principles and resulting in a mixed economic system justified by "value mix": based on a market economy with its inherent drive towards efficient and productive resource allocation, but correcting the distributional (social), environmental and institutional blindness of the market by means of public policies. (Spangenberg, 2002).

2.1 Technology entrepreneurship and sustainable development

The sustainability principles of technology entrepreneurship introduce sustainability dimensions at the early stages, i.e. idea generation phases of new technology and business opportunity, all through to the end of the technology and organization life cycle (Levi Jaksic & Trifunović 2010). Leaders of new ventures are "challenged to build a strategy that attempts to meet the economic and social needs of its region." (Byers et al, 2011) Technology entrepreneurship implies a strong knowledge base for research and development activities enabling the creation of new technology as the opportunity for new entrepreneurial ventures. Entrepreneurship contributes to the economic and social welfare and historically, entrepreneurial cycles are identified with the new waves of development (Sundbo, 1998, p. 45; Schumpeter, 1947). "Since the knowledge-based economy is an economy in which production and distribution of knowledge play an important role in wealth creation, in such economy, the goal is not only advancing knowledge, but also promoting the efficient use of knowledge in all economic activities" (Mortasavi and Bahrani, 2012)

According to Gibbs (2009) sustainability entrepreneurs have an alternative approach to doing business that also assists them in building the advantage. While profit is the key for the success of any business, it is not the primary concern of the sustainability entrepreneur. These business owners are more likely than the traditional entrepreneurs to focus on reducing their companies' carbon footprint and keeping their employees happy. In that sense, new, modern, technology entrepreneurship can be seen as creation of new

business enterprise that generates benefits (wealth, jobs, value progress) for participating parties by creating unique, new arrangements of resources, including technology, to meet the needs of customers and society (Byers et al, 2011).

2.2. Open innovation and technology entrepreneurship

The definitions of entrepreneurship vary in scope, focus, research objectives and domains. Entrepreneurship is described by terms "new, innovative, flexible, dynamic, creative and risk taking" (Coulter, 2001: 3). Special significance and emphasis is also given to the perspective of creating new business organization. "Entrepreneurship is the creation of an innovative economic organization (or network of organizations) for the purpose of gain or growth under conditions of risk and uncertainty" (Dollinger, 1999: 19).

The emphasis is also on creativity centred on four issues: 1. the creation of new ventures and organizations, 2. creation of new combinations of goods and services, methods of production, markets and supply chains (Schumpeter, 1934); 3. creative recognition of new and existing opportunities; 4. creative (cognitive processes, behaviour and modes of action) to exploit new and existing opportunities. The most relevant domains of focus of the entrepreneur are described as the focus on change, focus on opportunity and focus on organization wide management, they are the "agents of change". (Wickham, 2004: 7). Emphasizing risk, entrepreneurship is also defined as "an ability to recognize and a risk-willingness to exploit entrepreneurial opportunities". (Ulhoi, 2005)

The leading role of entrepreneurship in the next world economy decade is pointed out and this is a critical issue «confirmed by various experts for many times. In fact, entrepreneurship can be called a dynamic process which includes vision, transformation, change and creativity." (Mortasavi and Bahrani, 2012)

Process approach is relevant as "entrepreneurship involves the creation of value, the process of starting or growing a new profit-making business, the process of providing a new product or service, and the intentional creation of value through organization by an individual contributor or small group of partners" (Coulter, 2001: 4).

Based on Schumpeter's definition of the entrepreneur as an innovator who "creatively destructs" and Drucker's definition of the entrepreneur as "someone who maximizes opportunity", it is argued that opportunity is at the heart of entrepreneurship, encompassing technology management and innovation leadership. In this sense, innovation and opportunity are viewed as two sides of the same coin.

The concept of open innovation (OI) is strongly based on the principles of innovation as a process encompassing different stages of transition from idea to commercialization. Chesbrough (2003) defined OI as a firm that "uses external ideas as well as internal ideas, and internal and external paths to market" (Chesbrough, 2003: xxiv). OI approach means "systematically relying on a firm's dynamic capabilities of internally and externally carrying out the major technology management tasks, i.e., technology acquisition and technology exploitation, along the innovation process." (Lichtenthaler, 2008: 148) The adoption of OI strategies lies on a continuum. At one end are those companies with entirely closed innovation, whereas at the other end are those companies with fully open approaches to innovations. (Hung and Chou, 2013) Open innovation "allows innovative ideas and knowledge embodied in people and intellectual property (IP) to flow freely either inwardly or outwardly". (Hung and Chou, 2013) Open innovation is decomposed into two processes: external technology acquisition, also termed inbound open innovation and external technology exploitation, also termed outbound open innovation. (Chesbrough, 2003; Chesbrough and Crowther, 2006; Lichtenthaler, 2008). "Open Innovation is the purposive use of inflows and outflows of knowledge to, respectively, accelerate internal innovation, and expand the markets for external use of innovation" (Chesbrough, 2003).

It is noted that open innovation is not a strictly determined, clear cut concept and "it is necessary to develop open innovation frameworks". (Huizingh, 2011: 2-9)

2.3 Technology entrepreneurship model

The three contingencies of the entrepreneurial process: opportunity, innovation andorganization/resources are influenced by the crucial dimensions of OI. Entrepreneurial activities in all the domains of opportunity identification and exploitation are outward oriented based on the interaction between firms, research institutions, government and other actors that collaborate and drive (contribute to) the innovation process.

Technology Entreprenurship as the link between science and technology and the practical new value created for the customers upgrading their living conditions and standards contributing to the overall welfare of the economy and society, is represented by the simplified model below (Etlie, 2000: 95).

Technical world ↔ Technology entrepreneurship ↔ Commercial world

The successful entrepreneurial venture is usually based on a on a significant innovation, that might be technology innovation, market innovation, the way something is marketed or distributed, or possibly the way organization is structured or managed, or the way relationships are maintained between organizations (Wickham, 2004). Technology entrepreneurship in the organizational context refers to the establishment and management of an enterprise based on research, development, innovation and technology. (Antoncic, 2008)

Technology entrepreneurship (also found under the terms techno-entrepreneurship, technological entrepreneurship, technical entrepreneurship, technopreneurship) encompasses in a complex way: opportunity identification and analysis, technology and innovation management, strategic management, new business models development. Different definitions of technology entrepreneurship found in literature basically are related to technology and innovation at the core of development. (Petti, 2012). Technology entrepreneurship exists where there is investment in new technological projects interdependent on scientific discovery and new technologies. (Bailetti, 2012).

The main features and the significance of sustainable technology entrepreneurship lie in the following:
1. Founding on sustainable technology and innovation (McIntyre et al, 2013).
2. Technology entrepreneurship is, in a sense, a broader concept than entrepreneurship, as it encompasses a chain of activities related to both the development and implementation of technology. It expands over science and knowledge development, research and development (R&D) where entrepreneurial direction is necessary to enhance and plan those R&D projects and activities which possess the greatest potential to contribute to sustainable growth of the economy, region, firm and society as a whole. Technology entrepreneurship is related to vertical and horizontal technology transfer which extends entrepreneurial actions in creating new technology as well as commercializing the technology by developing new ventures.
3. Technology entrepreneurship is, in relation to some specific issues, more narrow than entrepreneurship due to the fact that it focuses technology as the opportunity to entrepreneurial venturing, thus excluding some other domains of entrepreneurial opportunity and narrowing the concept of opportunity.
3. Technology entrepreneurship is realized by teams assembled to work together primarily on projects of technology development and implementation.
4. Technology entrepreneurship is embedded within the goals of modern society and it essentially contributes to sustainable development since it deals with new, green and sustainable solutions for new technology at the base of all operations. The concept of key enabling technologies (KET) directs the efforts towards those technological platforms that will lead the economy and society in the most efficient manner towards these goals. Mastering and deploying Key Enabling Technologies (KETs) in the European Union is "central to strengthening Europe's capacity for industrial innovation and the development of new products and services needed to deliver smart, sustainable and inclusive European growth" (European Commission, 2011). The major difficulties were identified in translating ideas into marketable products. (European Commission 2011)
5. Technology entrepreneurship is not related strictly to small and medium enterprises and new ventures. It is equally well implemented in new and existing firms as well as in firms of different size, including large firms. (Bailetti et al, 2012)
6. Technology entrepreneurship is analysed through different approaches, along many perspectives, from different angles. It is based on system solutions in the economy and society, it determines policy and strategies, emphasizes the role of the state, higher education, industry, and determines new business models.

3. INNOVATION AND ENTREPRENEURIAL OPPORTUNITIES IN BASE OF THE PYRAMID

In the research presented in relevant literature over the past decade, there has been a rising interest in the issues of stimulating economic growth in developing and emerging economies, referred to as 'Base of the Pyramid' (BoP) and also as 'Bottom of the Pyramid' economies. (Hall, 2014; Ramani & Mukherjee, 2014;) Special emphasis is on a set of specific aspects and roles of technology, innovation and

entrepreneurship in achieving sustainable development. It is argued that, opportunities in the 'Top of the Pyramid' (ToP), mature markets in industrialized nations, are becoming increasingly saturated, whereas BoP markets can provide considerable opportunities for multinationals (MNCs) while simultaneously providing much needed goods and services. (Hall, 2014: 265) Romani and Mukherjee (2014) point out that the sustainability equation, based on economic, social and environmental objectives, is the driving force of opportunity in BoP. It is argued that companies targeting BoP customers «must incorporate environmental sustainability criteria into their broader business policies to achieve the desired outcome from their efforts». (Arnold and Williams, 2012, p. 55)

Technology innovation models are in the relevant literature based on research and development activities playing a crucial role in creating new technological breakthroughs and demanding significant investments. As such, it could be assumed that this leaves no space for the impoversihed, developing, emerging economies to join the intensive 'technology innovation race' which is the dominant feature of modern development. Ramani and Makherjee (2014) point out that it is implicitly assumed that firms work on break-through technological innovations for high-income communities only. The concepts of 'appropriate technology' for the developing economies are not new, they advocate the principle of implementing less advanced technology with low performance, thus excluding the usage of state-of-the-art, high technology advantages for BoP, since these technologies are not 'well suited' to their needs. Among other arguments for this statement, it is cited that they are expensive and have features that the 'poor' do not need.

The case studies and examples from practice destroy this premise. In this paper, we argue that the combined efforts in innovating technology and the business models lead to sustainable solutions that can bring benefit of technological breakthroughs to the developed, as well as the developing economies. Technological and business model innovation, cannot be approached separately and they lead to innovative solutions that have the potential of serving the needs of both the highly industrialized, ToP, and the developing, BoP mass markets.

The argument that BoP mass consumer needs can be satisfied by low performance technology as, firms often add features (speed, power, etc) to products faster than customers' capacity to absorb them." (Schilling, 2013: 58) is represented in Fig. 1 by trajectory of High technology A interesected by the High-end market needs, and to a large extent by-passing the BoP mass markets. Schilling (2013) argues that while both the trajectory of technology improvement and trajectory of customer demands are 'upward sloping', the former is steeper and often requires learning on how to use new features and adapt their work and life styles. Introducing concepts of market segmentation as high-end and mass market it is shown that the mass market is very often not served in the situation of steep high performance technology trajectory improvements (Schilling, 2013).

This gap, in our opinion, clearly shows an open space for innovation in both technology and business models for serving the mass low-end market needs. Sustainable technological breakthroughs and new business models noted in emerging economies are addressing these market segments and the orientation at serving the mass market needs in frugal circumstances has already shown results. These innovative, sustainable solutions represented by the sustainable technology trajectory B in Figure 1., oriented at frugal innovation, have shown potentials for the high-end market in view of their sustainability capacity. The overlooked, undeserved and seemingly profitable end of the market can provide fertile ground for massive competitive advantage». (Grove, 1999: 11) In Fig. 1, Sustainable technology trajectory B is intersecting both the ToP and the BoP markets.
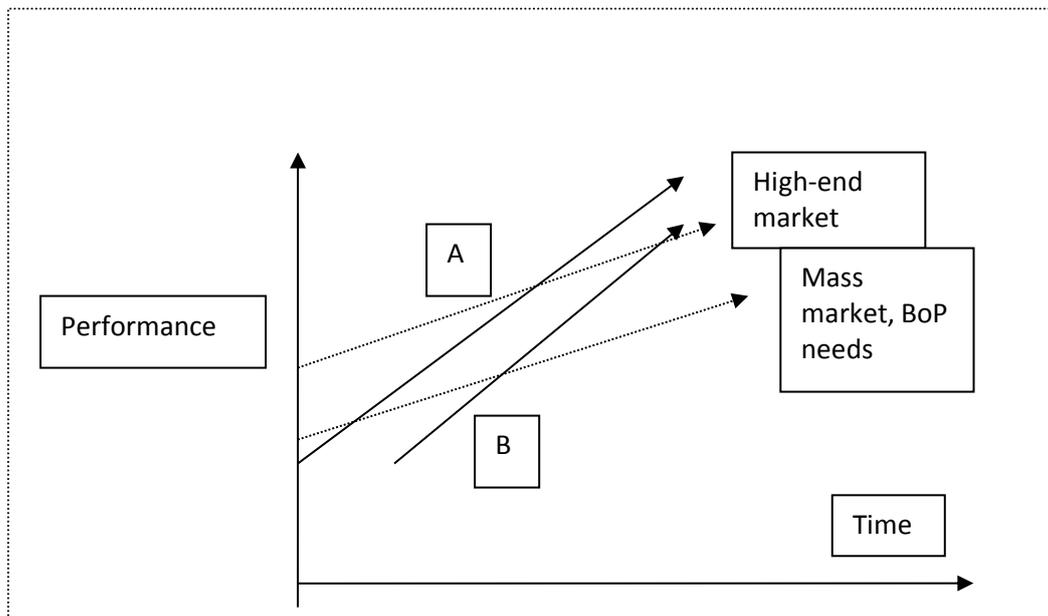
Figure 1. High performance Technology A and Sustainable Technology B intersecting Mass market trajectory serving the BoP needs (Adapted from Schilling, 2013: 58)

The significance of technology innovation is in recent works broadened by the business model innovation necessity as looking «beyond the 'design of the technology' to the design of business models and delivery mechanisms incorporating the interests of both innovation providers and potential end-users.» (Ramani and Mukherjee, 2014, p. 296). The new business model is rapidly being developed in emerging economies (e.g. well known example of Gramen bank, or Tata Motors of India with Nano – the world's cheapest car, Algramo company in Chile). Technological innovation driven by, frugal use of resources through a new combination of existing component technologies created a new modular product to achieve the unique price-performance requirements demanded by the BoP." (Ray and Ray, 2011: 216-227)

In circumstances of, limited economic resources, scarce employment opportunities, abundance of unskilled labour, low levels of technological know-how and insufficient governmental capabilities" (Bardy and Massaro, 2013: 140) of the BoP economies, it is the logical response to these circumstances to address all the listed problems and search for solutions by integrating the economic, social and ecological dimensions and goals. These approaches are also referred to as 'eco-business', 'social business', 'eco-social business' perspectives, but it is, thought that the sustainability perspective warrants a more encompassing view." (Bardy and Massaro, 2013: 140)

It is in the context of, developing economies in the world of emerging nations" (Bardy and Massaro, 2013: 143) where the sustainability issues are beginning to play an increasingly significant role.

In this paper it is argued that a combined, simultaneous approach to technological and business innovation leads to sustainable entrepreneurship at the core of sustainable development of both the developed and the underdeveloped economies.

4. RESEARCH FINDINGS

According to OECD, 2015 definition, 'an innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organisation or external relations'. Technological innovation concerns mainly product and process innovation. A product innovation is defined as 'the introduction of a good or service that is new or significantly improved with respect to its characteristics or intended uses. This includes significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics'. A process innovation is defined as 'the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software'. Many other forms of innovation (e.g. marketing innovation, organizational innovation) exist besides technological innovation. (OECD, 2005)

The sustainability oftechnology innovation is interrelated to its life in a business environment leading to its realization and future life on the market, exploitation and end of life. The sustainable technology innovation is inseparable from the business creating potentials for its realization on the market.

Review of relevant literature on the definitions of business model, it is evident that the concepts of technology and business innovation are closely linked. A business model is a conceptual tool to help understand how a firm does business and can be used for analysis, comparison and performance assessment, management, communication and innovation. (Osterwalder & Pigneur, 2005). Also, a business model is used as a plan which specifies how a new venture can become profitable. (Boons & Ludeke-Freund, 2013:10). and it describes, how companies create and deliver value to their customers and how they get rewarded for doing that". (Mendelson, 2014; Callon et al, 2007).

4.1 Expanded Sustainable Business/Technology Model

The relevance of business model innovation in delivering greater social and environmental sustainability is increasingly recognized. (Bocken et al, 2014). It means changing the ways you do business and shifting the focus from developing individual technology towards creating new systems, with a broader perspective of stakeholders necessitating a value network perspective for innovating and transforming the business model. (Bocken et al, 2014).

In the relevant literature, business model consists of different blocks: value proposition, value architecture and economic equation (Sempels & Hoffman, 2013), or value proposition, supply chain, customer interface, financial model (Boons & Ludeke-Freund, 2013). In this paper a business model is defined by three elements: value proposition, value creation and delivery and value capture.

Business models have received attention in literature and industry and it is increasingly suggested that business model innovation is the key to business success. (Chesbrough, 2006; Boons and Ludeke, 2013; Bocken et al, 2014). The main question and concern is how to encourage corporate innovation that significantly changes the way companies operate to ensure greater sustainability., Sustainable business models with a focus on technological nnovation are market devices that overcome internal and external barriers of marketing clean technologies: of significance is the business models ability to create a fit between technology characteristics and (new) commercialization approaches that both can succeed on given markets." (Boons & Ludeke, 2013:14)

Based on the model developed by Boons and Ludeke-Freund (2013) a new expanded model relationship is developed for sustainable relations and presented in Table1.

Table 1. Expanded Sustainable Business/Technology innovation model combinations

TECHNOLOGY	BUSINESS MODEL			
		Existing	New	Sustainable
	Existing	Not considered here (NCH)	Traditional relations (NCH)	3
	New	Traditional relations (NCH)	Traditional relations (NCH)	4
	Sustainable	1	2	5

The combinations indicated in Table 1 are analysed in more detail.

Combination 1. With sustainable technology innovation we are using existing business models. This situation can be described as missed opportunity that means that the sustainable technology innovation is not fully exploited, its potential value is not fully appreciated. The existing business model is not innovated resulting in under-usage of the business potentials in different spheres to be innovated: marketing and target markets, distribution channels and customer relationship mangement, developing value chain and value constellation relations, key partners, business eco-system development, new value architecture based on new models of cost structure and revenue streams, looking beyond just the financial value to integrate the environmental and social value, etc.

Combination 2. Sustainable technology and new business model not including all the elements of sustainability is again a missed opportunity although in a traditional sense the business model is innovated but not competely answering the complex needs of sustainability. This can be described as a partial solution, still lacking all the necessary dimensions that would lead to a sustainable business model.

Combination 3. Sustainable business model based on existing technology is the 'pull' strategy, introducing sustainability strategic goals, organizational configurations and conditions that are a precondition to introducing sustainable technology innovation.

Combination 4. Sustainable business model is developed, but the technology innovation management still not achieving the full potentials, although this is a step forward to finding sustainable technology innovative solutions. This can be referred to as the *partial solution.*.

Combination 5. The Sustainable business model well suited to the potentials of sustainable technologies, the *'push-pull'* balance achieved for future sustainable business development. (Levi Jaksic, 2015).

4.2. Sustainability goals in innovative company practices

Innovative firm performance measures (Epstein, 2001; BRW; FastCompany; FORBES Innovative Companies) used as the main indicators for global ranking of the world's most innovative companies are analysed and the research findings indicate that sustainability dimensions the main innovative driving force of the most successful companies worldwide in the last two years.

The results of a detailed analysis of innovative performance of companies from the FastCompany list presented in Table 1. indicates the rising relevance of sustainable goals embedded in technology and business innovation. The list taken into consideration includes analysis of 100 companies, 50 most innovative companies in 2015, and 50 in 2016. As it is shown in Table 1, 73.20% of companies have at least one component sustainable (technology and/or business model). (Levi Jaksic et al, 2016)

Table 2: Share of each SB&T model combination on the selected sample

		Business model		
		Existing	New	Sustainable
Technology	Existing	0%	7, 22%	**17, 53%**
	New	5, 15%	14, 43%	**17, 53%**
	Sustainable	**13, 40%**	**4, 12%**	**20, 62%**

These companies are considered further in order to examine which component of sustainability they focus on the most (environmental, economic, or social). Table 2 and Table 3 refer to the results of the analysis of sustainability aspects of technology and business model innovation, respectively, based on examining the existing, new or sustainable solutions. (Levi Jaksic et al, 2016)

Table2: Analysis of presence of sustainability aspects in technology

	Sustainable technology		
	Environment	Economic	Social
Existing technology	38.46%	92.31%	69.23%
New technology	25.00%	100.00%	100.00%
Sustainable technology	45%	80%	85%

Table 3: Analysis of presence of sustainability aspects in business model

	Sustainable business model		
	Environment	Economic	Social
Existing model	41.18%	88.24%	88.24%
New model	35.29%	88.24%	100.00%
Sustainable model	30%	88.24%	100.00%

In all the cases analysed, the main focus is on economic and social aspects, but it is important to emphasize that all the three aspects are present, with the ecological aspect detected to a minor degree.

5. CONCLUSION

As result of the review of the literature and analysis of main concepts introduced in this paper, we come to the conclusion that the concepts of sustainable technology, innovation and entrepreneurship are closely related. It is difficult to draw a line as innovation is understood as commercialization of invention (idea), referring to its market introduction and transfer. Focus on sustainable technology, innovation and entrepreneurship for economic growth and socio-economic development puts emphasis on technology and business model innovation for achieving sustainable socio-economic development, "Research and experimental development (R&D), when appropriately valorized, lead to technological innovation in the form of new products and processes, which contribute to growth, competitiveness and job creation, and which produce other societal benefits." (Delanghe & Muldur, 2014).

Relevant practice review shows that sustainability benefits are achieved often only through combining several approaches, e.g. car sharing without an efficiency focus (eg. fuel efficiency as a new technology) is unlikely to enhance sustainability since the vast majority of its environmental impacts are in the use phase, not in the manufacturing of the machine. (Bocken et al, 2014 : 44-45). Synergistic effects are present by combining sustainability efforts at both technology and business innovation.

The research based on the analysis of the global ranking of the most innovative companies in the world has also shown that the most successful innovative companies incorporate all the three objectives, economic, social and environmental, in their search and efforts to develop new innovative slutions. The necessity to develop sustainable technological innovation and sustainable business models are recognized in the solutions emerging from practice which indicate to new principles embedded in both business and technological domains.

Future research is viewed in developing and testing the principles of sustainable technology and business model innovation in practice for building coherent and consistent theoretical models that would assist future more intensive development of sustainable entrepreneurial practices.

REFERENCES

Acs, Z. J., Audretsch, D. B., Strom, R. J. (Ed) (2009). *Entrepreneurship, Growth, and Public Policy*. Cambridge, Cambridge University Press.

Adams, C. A., 2014, Sustainability and the Company of the Future, in *Reinventing the Company in the Digital Age*, Open mind, BBVA, 411-430

Antoncic, B., Prodan, I. (2008) Alliances, corporate technological entrepreneurship and firm performance: Testing a model on manufacturing firms. *Technovation*. 28, pp 257-265.

Arnold, D., Williams, L. (2012) The paradox at the Bae of the Pyramid: environmental sustainability and market- based poverty alleviation, Int. J. Technology Management (60) (1/2), 44-59.

Bailetti, T. (2012) Technology Entrepreneurship: Overview, Definition, and Distinctive Aspects. *Technology Innovation Management Review*. February, pp 5-12.

Bardy, R., Massaro, M. (2013) Eco-social business in developing countries: the case for sustainable use of resources in unstable environments, in J. McIntyre, S. Ivanaj, V. Ivanaj, ed., Strategies for Sustainable Technologies and Innovations, Edward Elgar.

Bocken, N.M.P., Short, S.W., Rana, P., Evans, S. (2014) A literature practice review to develop sustainable business model archetypes, Journal of Cleaner Production 65, 42-56

Boons, F., Ludeke-Freund, F., 2013, " Business models for sustainable innovation: the state of the art and steps towards a research agenda", *Journal of Cleaner Production,* 45, 9-19.

BRW list of 50 most innovative companies, http://www.brw.com.au/lists/50-most-innovative-companies/2015/

Byers, T.H., Dorf, R.C., & Nelson., A.J. (2011) *Technology Ventures: From Idea to Enterprise, 3rd Ed.* International Ed. McGraw Hill.

Callon, M., Millo, Y., Muniesa, F., 2007*, Market devices*, Oxford: Blackwell.

Chesbrough, H., 2003, *Open Innovation: The New Imperative for Creating and Profiting from Technology*, Cambridge, MA: Harvard Business School Press.

Chesbrough, H., 2006, *Open Business Models*, Cambridge, MA: Harvard Business School Press

Chesbrough, H., 2014, Open Innovation: Striving for Innovation Success in the 21st Century, in *Reinventing the Company in the Digital Age*, Open mind, BBVA, 395-410.

Chesbrough, H., Crowther, A.K. (2006) Beyond high tech: early adopters of open innovation in other industries. *R&D Management*. 36 (3), pp. 229–236.

Coulter, M. (2001). *Entrepreneurship in Action.* Prentice Hall.

Delanghe, H. & Muldur, U., 2014, Research and experimental development (R&D) and technological innovation policy, in Durlauf, S. N. & Blume, L.E. (eds.), *The New Palgrave Dictionary of Economics*, Online Edition.

Dollinger, M. (1999). *Enterpreneurship*. Prentice Hall.

Epstein, M. J., Roy, M., 2001, "Sustainability in Action: Identifying and Measuring the Key Performance Drivers", *Long Range Planning* 34, 584-604.

Etlie, J. E. (2000). *Managing Technological Innovation*. John Wiley&Sons

European Comission (2011) *High level expert group on Key enabling technologies Final Report*. Available from: http://ec.europa.eu/enterprise/sectors/ict/files/kets/hlg_report_final_en.pdf [Accessed: 14 May 2014]

Fast Company 50 most innovative companies, (http://www.fastcompany.com/section/most-innovative-companies-2015

FORBES list of 100 most innovative comapnies, (http://www.forbes.com/innovative-companies/

Gibbs, D. (2009) *Sustainability Entrepreneurs, Ecopreneurs and the Development of a sustainable Economy*. Greener Management International

Gilsing, V. A., Burg, E. V., Romme, G. L. (2010) Policy principles for the creation and success of corporate and academic spin-offs. *Technovation*. Vol. 30. Issue 1.

Grove, A. S. (1999), «Managing Segment Zero», Leader to Leader.

Hall, J. (2014), Innovation and Entrepreneurial dynamics in the Base of the Pyramid, Technovation 34, 265-269.

Huizingh, E. (2011) Open Innovation: State of the Art and Future Perspectives. *Technovation*. Vol. 31, pp. 2-9.

Hung, K. P., Chou C. (2013) The impact of open innovation on firm performance: The moderating effects of internal R&D and environmental turbulence. *Technovation*. 33, pp. 368–380.

Levi Jakšić, M. (2011) Sustainable Technology and Innovation management, In Y. Tsekouras, A. Damyanov, et al, (Ed.), *Recent Economic Crisis and Future Development Tendencies*, Rostov on Don Russia.

Levi Jaksic, M. (2015), Sustainable Innovation of Technology and Business Models: Steps Toward Rethinking Technology and Business Strategy, *Proceedings ASECU, "Openness, Innovation, Efficiency and Democratization",* Cracow University of Economics, 282-293

Levi Jakšić, M., 2006, "The New paradigm of Technology and Innovation Management", *Management*, 43, 28-38.

Levi Jakšić, M., 2007, Technology Innovation Management for Sustainable Business Development, in B. Rakita, S. Lovreta, M. Petković (eds.), *Proceedings of International Conference: Contemporary Challenges of Theory and Practice in Economics*, Ekonomski fakultet, Beograd, 155-167.

Levi Jakšić, M., 2012, Innovation Entrepreneurship for Sustainable Development, in Tipurić, D. & Dabić, M. (eds). *Management, Governance and Entrepreneurship – New Perspectives and Challenges*, London: Access Press, 487-508.

Levi Jakšić, M., Marinković, S., Petković, J. (2011) From knowledge based to knowledge entrepreneurship economy and society – the Serbian paradox. *In Proceedings of the 30th International Conference on Organizational Science Development, Future organization.* Univerza v Mariboru.

Levi Jaksic, M., Rakicevic, J., Jovanovic, M. (2016) Sustainable Technology and Business Innovation Principles – a comprehensive approach, Proceedings SYMORG, FON, University of Belgrade.

Levi Jakšić, M., Trifunović, M. (2010) Leading Innovation based on Knowledge Entrepreneurship, *In T. Kern, V. Rajković, et al. (Ed.) Proceedings People in Organization, 29th International Conference on Organizational Science Development.* Univerza v Mariboru.

Lichtenthaler, U. (2008) Open innovation in practice: an analysis of strategic approach to technology transactions. *IEEE Transactions on Engineering Management.* 55 (1), pp. 148–157.

McIntyre, J. R., Ivanaj, S., and Ivanaj, V. (eds.) *Strategies for Sustainable Technologies and Innovations*, Edward Elgar, 21 – 50.

Mendelson, H., 2014, Business Models, Information Technology and the Company of the Future, in *Reinventing the Company in the Digital Age*, Open mind, BBVA, 2014. 63-83.

Moore, G., 2014, The Nature of the Firm – 75 Years Later, in *Reinventing the Company in the Digital Age*, Open mind, BBVA, 2014, 51-61.

Mortasavi, S. H., Bahrani, M. (2012) Integrated Approach to Entrepreneurship – Knowledge based Economy: A Conceptual Model, *Procedia* 41, pp 281-287.

OECD, 2005

Osterwalder, A., Pigneur, Y. (2005) Clarifying business models: origins, present and future of the concept, Commun, AIS 15.

Petti, C. (2012) *Technological Entrepreneurship in China*. Edward Elgar London.

Popa, H. L., 2014, "Integrative innovation as core determinant for sustainable progress", *Procedia – Social and Behavioral Sciences,* 124, 460 – 467.

Porter, M., 1985, *Competitive Advantage: Creating and Sustaining Superior performance,* New York: Free Press

Rainey, D., 2006, *Sustainable Business Development*, Cambridge: Cambridge University Press.

Ramani, S.V., Mukherjee, V., (2014), Can breakthrough innovations serve the poor (bop) and create reputational (CSR) value? Indian case studeis, Technovation34, 295-305.

Ray, S., Ray, P. K. (2011) Product innovation for the people's car in an emerging economy, Technovation 31, 216-227.

Ricart, J., 2014, Business Models for the Companies of the Future, in *Reinventing the Company in the Digital Age*, Open mind, BBVA, 2014, pp. 134-146.

Schilling, M. (2013), Strategic Management of Technological Innovation, McGrawHill, New York

Schumpeter, J. A. (1947) Capitalism, Socialism and Democracy, Allen Unwin, London.

Schumpeter, J.A. (1934) *The theory of economic development*. Harvard University Press, Cambridge, MA.

Spangenberg J., Mesicek R., Metzner A., Luks F. (2002). *Sustainability Indicators for the Knowledge based society*. New York Futura.

Sundbo, J. (1998) The Theory of Innovation, Edward Elgar, London.

Tornataky, L. G., Waugaman, P.G.Y. & Gray, D.O. (1996) Innovation U: New University Roles in Knowledge Economy. *Journal of Industrial Economics*. 34, pp.217-223.

Ulhoi, J.P. (2005) The social dimension of entrepreneurship, *Technovation*. 25, pp. 939-946

Wickham, P. A. (2004) *Strategic Entrepreneurship*. Prentice Hall.

HOW DIFFERENT IS THE LAST TECHNOLOGICAL REVOLUTION?

Eirini Ozouni[1], Grigoris Zarotiadis[2]

Abstract

Are we phasing the era of the digital and information technological revolution? The age of IoT (Internet of Things) as well as of AI (Artificial Intelligence) is approaching in high speed – which will be the effects of this new technological paradigm? All technological revolutions until present had common characteristics as well as common systemic consequences. They all were directly connected with a new form of energy, increased productivity and destruction of traditional working places, in combination however with the introduction of new areas of investment and new professions. Do the latest technological achievements have certain, different characteristics? Are we dealing with a new technological paradigm and how will this affect the industrial production? What are going to be the consequences in labour market? What is the dynamic of world effective demand? Will the different characteristics of the new era affect the duration of the following socio-economic paradigm? In the present paper we proceed with a comparative investigation of the characteristics of the historical technological revolutions and their socioeconomic effects. We use the findings of this comparison, in combination to contemporary theoretical foundations for providing progressive answers to the above questions.

Keywords: Technological Paradigm, Technological Revolution, Long Waves, Economic Development.
JEL: O14, O33,

1. Introduction

In economic literature it is commonly accepted that technological revolutions play a key role in the long-term evolution of economic activity. The first arguments supporting this thesis coincide with the emergence of Industrial Revolution and the prevalence of capitalism. Most of them were closely related to the tradition of Long Wave Theories that came up after the identification of Kondratieff's (1928, 1935) long economic cycles. Additionally, the dominant influence of technology as the main driving force of the long run economic evolution exists also in growth economics. However, the predominance of the neoclassical view and the weakness of a scientific documentation of a long-term cyclical evolution of the economy, contributed to the characterization of these approaches as heterodox.

Research discussions about the cyclical long term evolution of economic activity are numerous. This resulted mainly due to two reasons: first due to the oldness of the phenomenon and second the theoretical /and empirical differences in its interpretation. However, none of the different schools overlooks the significance of applied knowledge and of technology's development in the determination of the long cyclical economic evolution. Similarly, neoclassical endogenous growth theory anticipates technological progress for the determination however of a steady state log-linear evolution, neglecting the systemic character of cyclical movements.

In latest theoretical contributions, the long-wave tradition meets the one of Kuhn (1962). According to him, the development of science is not a linear accumulative process; it is rather a complex phenomenon with phases of discontinuity where revolutionary changes transform the existing "scientific paradigm" (SP) into another. Zarotiadis and Ozouni (2016) combine dynamically the two main arguments of Romer (1990), the "stepping on shoulders" effect and the "fishing out" effect[3] and they initiate a model that simulates long waves in the productivity of applied research, which results in analogue cycles of labor's productivity and of economic development.

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[3] **"Stepping on shoulders"** effect: the more researchers know, the higher will be their productivity.
"**Fishing out**" effect: given the limits of current scientific paradigms, as applied knowledge evolves discovering new ideas becomes gradually harder

Their theoretical analysis led to an interesting hypothesis with respect to the sequence of scientific breakthroughs and the related duration of the resulting new SP: the earlier a scientific breakthrough occurs, in other words the earlier a new SP is opened, the shorter will be the duration of this SP, the earlier will probably occur the next scientific breakthrough.

In the present paper we argue for a significant, historical transformation in the long term cyclical evolution of economic activity due to the changing characteristics of technical change and its effects on the capitalistic system. The rest of the paper is structured as follows: Section 2 sets up a short analysis of the history of Scientific Revolutions and the long economic cycles of capitalistic economic activity. In section 3 we discuss the indications of new deterministic characteristics for the current process of technological change. Finally, in section 4, we proceed with the main concluding remarks and the possible directions of future research.

2. History of Scientific/Technological Revolutions.

Empirically, the long-term fluctuations of economic activity were closely related to the occurrence of great technological revolutions. Radical changes in basic technological infrastructure and especially in the leading sectors of the economy provoked changes to each different techno-economic paradigm as well as traditional ways of production. More specifically, the first long wave appears at the end of the 18th century with the beginning of the Industrial Revolution. During this period, the water-powered mechanization as well as the introduction of the steam engine4 in key sectors of industry such as the textiles lead to a different organization of production based upon intensification of inner-division of labor.

Table 1: Periodization of post-industrialist long waves of economic activities.

Waves	Upswing	Downswing
Industrial Revolution: machine-based manufacturing, the mechanization of the textile industries		
First Wave (1789-1848)	1789-1815 (25)	1826-48
1rst Technological Revolution: Transition to machine-made machines, use of steam engine in production/transportation Massive expansion of the word market		
Second Wave (1848-1893)	1848-1873	1873-93
2nd Technological Revolution: electricity, heavy engineering Market expansion		
Third Wave (1894-1939)	1894-1913	1914-1939
3rd Technological Revolution: Energy (age of oil), electronic and chemical revolution, automation (mass production, automobile)		
Fourth Wave (1940-1991)	1940-1966	1967-1984 (Korotayev (2010))
Age of Information		
Fifth Wave (1991 - 2008 (10)) (Korotayev (2010))	1984	2008 (10) (Korotayev (2010), Lynch 2004)
Age of nano-engineering and Nanotechnology		
Sixth Kondratieff	2008 (10)	?

The second long wave started in the mid of the 19th century, where the mechanically produced steam engines became the driving force of production process in many industries and transportation (mechanization, first technological revolution). The opening of new markets for the mass produced industrial products occurred within the expanding period of the next, third long wave, which lasted until the end of the Second World War. Nevertheless, also this cycle was related to another (third) technological

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4 In 1769 James Watt discovered (as a first patent) the steam engine.

revolution: the electrification which was accompanied by the expanded use of iron and heavy engineering. The fourth long wave initiates after 1940 (in 1945 for Europe) and relates to the revolution in natural sciences. This period is also known as the era of atomic energy, oil, automobiles and steel technologies connected with highly structured technology research. Shortly afterwards, the electronic revolution made its appearance with the emergence of the first computers5 (Mandel, 1980/2003, p.p. 135-136, 1978/2004; Zarotiadis, 2012, p.p. 39).

The end of the fourth long wave opened a vigorous debate. Some of the analysts state that after the 1970' and the 80', a fifth long wave began, associated with the revolution in electronics, telecommunications and informatics (Freeman και Louca, 2001; Korotayev και Tsirel, 2010; Perez, 2010; Reati και Toporowski, 2009). Some believe that we are still in the longer-lasting downswing of the fourth long wave (Zarotiadis 2012; Wallerstein 1984), while others assume that now begins the sixth wave, associated with new developments in nano-bio technologies (Lynch 2004, Wonglimpiyarat 2005). Part of this disparity results from using different empirical techniques but also because of different, underlying theoretical arguments6.

3. The different characteristics of current Technological Revolution.

3.1 A Level effect.

All technological revolutions until present, had common characteristics as well as common consequences, especially in the labor market. They all were directly connected with a new form of energy, a new form of input in industry, increased productivity and obsolescence of old professions accompanied with the introduction of new areas of investment.

According to Perez (2010) the main characteristics of a technological revolution are 1) the creation or the refinement of industries 2) change in the cost structure 3) the opening of new opportunity spaces and 4) new organizational models. Changes in the cost structure were mostly related to the new key factor /input used in each industrial revolution (iron, coal, steal, oil, gas, electronic chips) (Luca and Freeman, p.p.147). Each input during a specific area was characterized by low-descending relative cost, inexhaustibility of supply, potential pervasiveness in applications and increased energy.

However, the contemporary technological paradigm has two characteristics that distinguish it from the previous ones. Since the emergence of the Information Age and of the paradigm related to Information and Communications Technologies (ICT paradigm), we are witnessing the gradual reduction of marginal production cost of may products/services and especially those of sectors referring to entertainment, communication-information, publishing even higher education7.

Moreover, the combination of internet technology with other contemporary technological innovations such as the 3-D printing synthetic biology, and nanotechnology guarantee that the near "zero marginal cost phenomenon" (Rifkin, 2014) will expand to other commercial sectors as well such as renewable energy, and manufacturing. More simply, we could say that all above accumulated applied technical innovations provoke a level effect in technological change by reducing the marginal cost of many economic goods.

3.2 A Path Effect.

The second characteristic of the contemporary paradigm is the speed of its development which is driving us soon to its successor. More specifically, the information revolution has a distinctive quality. It facilitates other, smaller ones to follow. The information technology is an important factor contributing to a continuing

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5ENIAC was formally dedicated at the University of Pennsylvania on February 15, 1946.

6 The number of authors who presented the Long -Wave periodization either as direct results of their own empirical research, or by presenting the results of other colleagues, is very large. The exact dates of occurrence of expansion and recession periods therefore vary between reports, which does not surprise us since each researcher uses different data and methodologies. Our presentation is closer to that of Mandel (Mandel 1978, 1994) which is considered as the most related to that of Kondratieff (Ayres, 1990). The reader can also consult Korotayev και Tsirel (2010) and Korotayev and Grinin (2012) who gathered and presented the results of many researchers related to the periodization of Long Waves.

7 The simplest example is music. Back in the 80's people had to buy music. Nowadays we simply download from the internet almost all the songs we love listening to.

increase of basic knowledge productivity. Thus, paradigm shifts are expected to appear more often. Indications of this expectation are provided by the evolution of the duration of each long term economic cycles depicted in the graph below. As we can see the duration of each long economic cycle related to each technological revolution becomes gradually shorter.
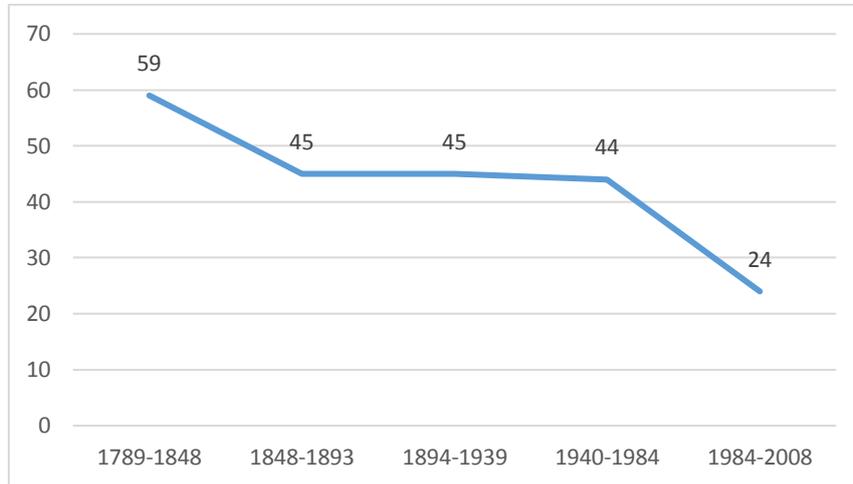

Fig 1: Course of the five Long Waves' years of duration

This fact is a strong indication of our theoretical argument: the paradigm shift will be stronger, the more delayed it will be (Zarotiadis and Ozouni, 2016). On the other hand the earlier a scientific breakthrough occurs, the shorter will be the duration of this SP, the earlier will probably occur the next scientific breakthrough. 8
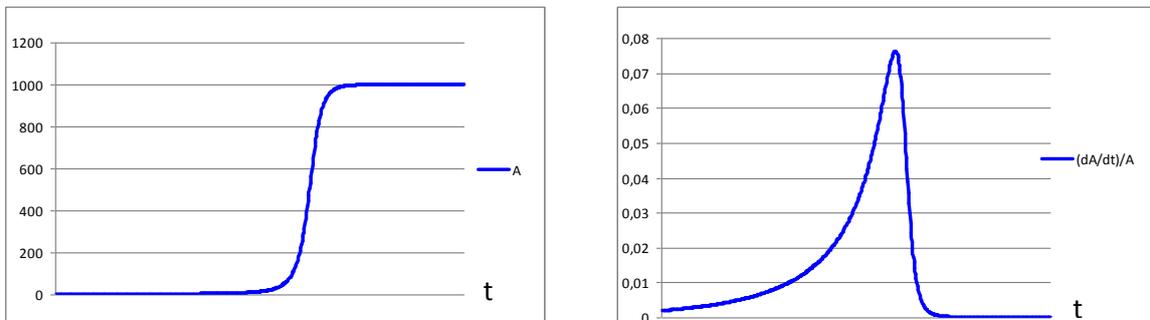
Fig. 2 Evolution of Applied Knowledge (A) within a scientific paradigm (Zarotiadis and Ozouni, 2016).

In Figure 3 we depict the evolution of applied knowledge for more than one scientific paradigms based upon our argument. A_0 is the first frontier, defining the first scientific paradigm. In t_1 we have the first paradigm shift, which moves the frontier up to A_1 (second scientific paradigm). In t_2 we have the second paradigm shift, which moves the frontier up to A_2 (third scientific paradigm). As technological / scientific history evolves, paradigm shifts become more often, yet shorter. In the margin innovations that alter the very structure of our basic knowledge appear continuously, aside to the evolving applied knowledge (A).

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8 In Zarotiadis and Ozouni (2016) three mechanisms provoke the cyclical evolution of applied ideas (A): a direct impact through applied research's productivity; an effect through researcher's effort allocation; and an effect through the allocation of labor force. Putting these together, we initiate long waves of per capita output. As we approach the limits provided by the current scientific paradigm, the probability of having a new, path-breaking basic innovation tends to become 1. Indeed, the paradigm shift will be stronger, the more delayed it will be.

Thereby, the cyclical path of technological evolution (and economic as well) is being gradually transformed in an exponential path.
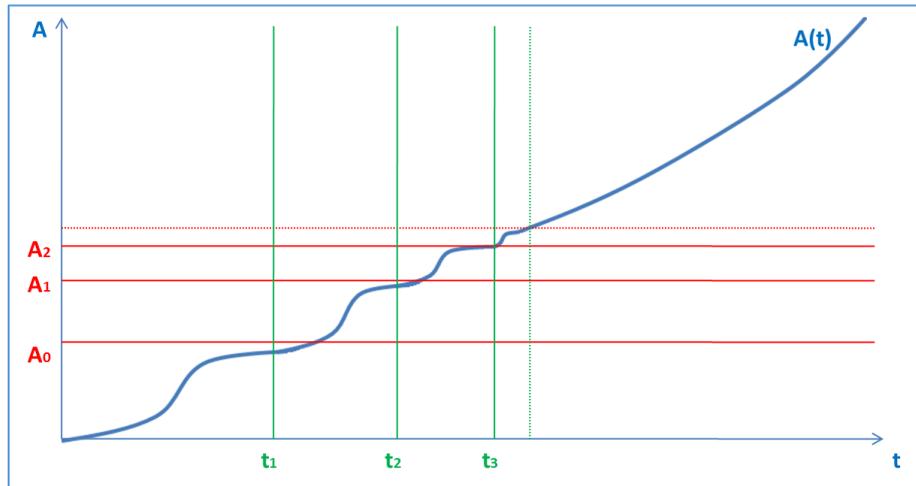
Fig. 3: Evolution of applied knowledge for more than one scientific paradigms

More simply, we could say that the accumulated "stepping on shoulders" provoke a path effect in technology's evolution.

4. Conclusions

Technology change changes. First, there is a path effect provoked by fast accumulating "stepping on shoulders" effects. The productivity of every researcher rises continuously leading to more often scientific breakthroughs and Scientific Paradigms of shorter duration. A structural change in the evolution of technology and thus economy is rising. Thereby, it is rather urgent, this continuously changing scientific environment to be considered in all research strategies and methodologies. Research institutes now have to become more flexible and be characterized by a continuous combination of both basic and applied research. A consequent and integral step of the above, must be the adjustment of the education provided. Educational systems must be re-organized so as to develop abilities in research methological issues as well as abilities for creatively questioning and criticizing.

Second, we are witnessing a level effect of accumulated applied technical innovations reducing the marginal cost of economic goods. Economic goods become dramatically cheaper, minimizing the profit of their producers and especially industry capital owners. This leads to product gradual de-commercialization and eventually product socialization. Thus, we are witnessing a deep systemic change in the cornerstones of bourgeois economy. The driving force of competitive capitalistic evolution, the low marginal cost of production due to technological progress, is becoming now its threat. Additionally, the emergence of new financial innovative products and the help of technology facilitate the expansion of financial capital in relation to a continually shrinking production. Thus, in case the rise of labor's productivity is not accompanied by an increase in relevant wages, low aggregate demand will maintain unemployment. Direct result of the above is the reduction of the world effective demand in relative terms compared to the productive possibilities.

As we can imagine, both effects determine a more intense need for ethical and social – institutional improvements and progressive changes in society, economy, science and education and that is why a more detailed analysis must be attempted. Further research and investigation should also take into consideration another implication of the contemporary technological revolution and the emerged new schemes of socio - economic development: the changing character of global demand which from an aggregation of individual needs is gradually transformed into a socialization of needs.

References

➢ Ayres, R.U. (1990), 'Technological Transformations and Long waves. Part I* 1'. *Technological Forecasting and Social Change*, 37(1), 1-37.

➢ Freeman, C., & Louca , F. (2001), *As Time Goes by: From the Industrial Revolutions to the Information Revolution*, Oxford University Press, USA.

➢ Kondratieff, N. D., & Oparin, D. I. (1928/1984). The "Long Wave Cycle" and 'The Theses of N.D. Kondratieff's Paper: Long Cycles in Economic conditions". In Kondratieff, N., Snyder, J.M. (Eds), *The Long Wave Cycle* (pp. 25-99 and 101-105, 137-108). New York: Richardson & Snyder

➢ Kondratieff, N. D., & Oparin, D. I. (1928/1984). *Long Economic Cycles*. New York: Richarson & Snyder.

➢ Kondratieff, N.D. (1935). The Long Waves in Economic Life. *The Review of Economic Statistcs*, 17(6), 105-115.

➢ Korotayev, A. &, Grinin, L. (2012), *Kondratieff Waves in the World System Perspective* in Kondratieff Waves, Dimensions and Prospects at the Dawn of the 21st Century, ISSN, 2305-3461.

➢ Korotayev, A., & Tsirel, S. (2010). A Spectral Analysis of World GDP Dynamics: Kondratieff Waves, Kuznets Swings, Juglar and Kitchin Cycles in Global Economic Development, and the 2008-2009 Economic Crisis. *Structure and Dynamics, 4(1)*

➢ Kuhn, T. S. (1962). *The Structure of Scientific Revolutions* (3rd ed.). Chicago: University of Chicago press.

➢ Lynch, Z. (2004). Neurotechnology and Society (2010–2060). *Annals of the New York Academy of Sciences*, 1013 (1), 229-233.

➢ Mandel, E (1980/1994), original title: *Long Waves of Capitalist Development: a Marxist Interpretation*, Verso Books. Translated title: *Τα Μακρά Κύματα της Καπιταλιστικής Εξέλιξης: Μια Μαρξιστική Ερμηνεία*, Εκδόσεις: Εργατική Πάλη, 2003 Αθήνα.

➢ Mandel, E (1972/1975/1978), original title: Late Capitalism, New Left Review Editions, London. Translated title: Ο Ύστερος Καπιταλισμός, Εκδόσεις: Εργατική Πάλη, 2004 Αθήνα.

➢ Perez, C. (2010). Technological Revolutions and Techno-Economic Paradigms. *Cambridge Journal of Economics, 34*(1), 185.

➢ Reati, A., & Toporowski, J. (2009). An Economic Policy for the Fifth Long Wave. *PSL Quarterly Review*, *62*(248-251), 147-190.

➢ Rifkin, J. (2014). *The Zero Marginal Cost Society: The Internet of Things, the Collaborative Commons, and the Eclipse of Capitalism*. Macmillan.

➢ Romer, P. M. (1990). Endogenous Technological Change. *Journal of political Economy*, 98(5), 71-102.

➢ Wallerstein, I. (1984), Long Waves as Capitalist Process, *Review (Fernand Braudel Center)*, 7(4), 559-575.

➢ Wonglimpiyarat, J. (2005). The Nano-revolution of Schumpeter's Kondratieff cycle. *Technovation*, *25*(11), 1349-1354.

➢ Zarotiadis G. Ozouni E., 2016, *"Standing-on-Shoulder and Fishing-out Synergies: A Model for Endogenous Long-Waves"* paper presented to 13th Annual International Scientific Conference EEFS (European Economics and Finance Society), 12-15 June 2014, Thessaloniki, Greece.

➢ Zarotiadis G., 2012, original title: *Νεοφιλελευθερισμός : Χυδαία απλός ή απλά χυδαίος;*, 1^η Εκδοση, Gutenberg - Γιώργος & Κώστας Δαρδανός, Αθήνα. Translated title: *Neoliberalism Simply vulgar or Vulgarly simple?* 1st Edition, Gutenberg

THE IMPORTANCE OF DIGITAL TECHNOLOGIES FOR SUSTAINABLE DEVELOPMENT

Rana Eşkinat[1]

Abstract

By putting people and their immediate needs at the forefront, the Millennium Development Goals (MDGs) has reshaped decision making in both developed and developing countries since the Summit of the UN General Assembly, held in September of 2000.

The experience of the MDGs offers numerous lessons, and they will serve as the springboard for next steps. The MDGs monitoring experience has clearly demonstrated that effective use of data can help to galvanize development efforts, implement successful targeted interventions, track performance and improve accountability.

The global community stayed at a historic crossroads in 2015. As the MDGs were coming to their deadline, new agenda was emerging to transform the world. The post-2015 development agenda promises to take on the MDGs' unfinished business, while adding objectives related to inclusion, sustainability, employment, growth, governance, and cooperation. The Sustainable Development Goals (SDGs) must finish the job that the MDGs started, and leave no one behind. Measuring sustainability is a highly technical task that requires capturing complex economic, societal and environmental interactions. Thus sustainable development demands a data revolution to support the implementation of the new development agenda at all levels.

This study examines the lessons learned about the importance of collecting high quality data for attaining MDGs. Also evaluates the importance of new digital technologies for attaining the goals of the new development era of Sustainable Development Goals (2015-2030).

Key words: MDGs, SDGs, data collection, digital technology
Jel Classification: 01, 033, 035, 038

1. INTRODUCTION

At the so-called Millennium Summit of the UN (United Nations) General Assembly, held in September of 2000, delegates adopted an ambitious set of goals for progress against global poverty, ignorance, and misery over the next decade and a half. MDGs generated new and innovative partnerships, galvanized public opinion and showed the immense value of setting ambitious goals. By putting people and their immediate needs at the forefront, the MDGs reshaped decision making in developed and developing countries alike.

The data and analysis presented in the UN, MDG's Report of 2015 prove that, with targeted interventions, sound strategies, adequate resources and political will, even the poorest countries can make dramatic and unprecedented progress. The 2015 report also acknowledges uneven achievements and shortfalls in many areas. The work is not complete, and it must continue in the new development era.

As the MDGs were coming to their deadline in 2015, new agenda was emerging to transform the world to better meet human needs and the requirements of economic transformation, while protecting the environment, ensuring peace and realizing human rights. At the core of this agenda is sustainable development.

The experience of the MDGs offers numerous lessons, and they will serve as a road map for next steps. Leaders and stakeholders in every nation must work together to achieve a truly universal and transformative agenda. The MDGs monitoring experience has clearly demonstrated that effective use of data can help to revive development efforts, implement successful targeted interventions, track performance and improve accountability. Thus sustainable development demands a data revolution to support the implementation of the new development agenda at all levels.

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This study starts by the introduction. Second section is about the evaluation of the process evolving from MDGs to SDGs. Third section summarizes the lessons learned about the role of collecting high quality data for attaining MDGs. Fourth section examines the importance of collecting high quality data and reaching detailed information for development process. Fifth section gives the policy approaches of supplying the data demand of the new development era of SDGs. Sixth section investigates the importance of digital technologies on sustainable development. Finally, the study is completed with the Conclusion.

2. FROM MDGs TO SDGs

Two thousand fifteen was a historic year and very special for several reasons. It was a year in which countries have shaped a new development agenda and reached a global agreement on climate change. They were set to adopt an ambitious agenda that will move them towards a sustainable future for people and planet. But adopting the agenda is only the first step. Making it a reality will require work and dedication from all of world society. Solution to problems like poverty, inequality and climate change demands global action and collaboration. New global SDGs which determined by the help of international activities in 2015 will guide policy and funding for the next 15 years.

Two thousand fifteen was also the deadline year for the MDGs which had announced in September 2000, under eight targets, to be reached until 2015. UN Secretary- General Ban Ki- Moon evaluated the global mobilization behind the MDGs as the most successful anti-poverty movement in history (UN, MDGs Report, 2015: 3). According to him, the landmark commitment entered into by world leaders in the year 2000—to "spare no effort to free men, women and children from the abject and dehumanizing conditions of extreme poverty"—was translated into an inspiring framework of eight goals and, then, into wide-ranging practical steps that have enabled people across the world to improve their lives and their future prospects.

The MDGs helped to lift more than one billion people out of extreme poverty, to make inroads against hunger, to enable more girls to attend school than ever before and to protect planet. They generated new and innovative partnerships, galvanized public opinion and showed the immense value of setting ambitious goals. By putting people and their immediate needs at the forefront, the MDGs reshaped decision making in developed and developing countries alike.

Although there were remarkable gains, Ban Ki-Moon accepted that inequalities persist and that progress has been uneven. The world's poor remain overwhelmingly concentrated in some parts of the world. In 2011, nearly 60 per cent of the world's one billion extremely poor people lived in just five countries (MDGs Report, 2015: 3). Too many women continue to die during pregnancy or from childbirth-related complications. Progress tends to bypass women and those who are lowest on the economic ladder or are disadvantaged because of their age, disability or ethnicity. Disparities between rural and urban areas remain pronounced.

According to Ban Ki-Moon, experiences and evidence from the efforts to achieve the MDGs demonstrate that we know what to do. But further progress will require an unswerving political will, and collective, long-term effort. Countries, need to tackle root causes and do more to integrate the economic, social and environmental dimensions of sustainable development. The emerging post-2015 development agenda, including the set of SDGs, strives to reflect these lessons, build on successes and put all countries, together, firmly on track towards a more prosperous, sustainable and equitable world.

The data and analysis presented in the MDG's Report of 2015 prove that, with targeted interventions, sound strategies, adequate resources and political will, even the poorest countries can make dramatic and unprecedented progress. The 2015 report also acknowledges uneven achievements and shortfalls in many areas. The work is not complete, and it must continue in the new development era.

Despite many successes, the poorest and most vulnerable people are being left behind. We can list the problems as follows:

- Gender inequality persists.
- Big gaps exist between the poorest and richest households, and between rural and urban areas.
- Climate change and environmental degradation undermine progress achieved, and poor people suffer the most.
- Conflicts remain the biggest threat to human development.
- Millions of poor people still live in poverty and hunger, without access to basic services.

The 2030 Agenda offers the opportunity to correct the errors and omissions of the 'MDGs approach' – an approach that has reduced the development discourse to a focus on the symptoms of extreme poverty and the provision of basic social services in poor countries. While – without doubt – these issues are extremely important, the MDGs approach failed to address adequately the structural flaws of the global economic and financial systems, the imperative of ecological sustainability and the responsibilities of the global North (Spotlight on Sustainable Development, 2016: 11).

The 2030 Agenda offers the opportunity to respond in an integrated manner to urgent global problems, such as accelerating global warming and growing inequalities. The SDGs contained in the 2030 Agenda incorporate a commitment to reduce inequalities within and among countries, a clear demand for sustainable consumption and production patterns and the aspiration for peace, fair governance and justice.

The 2030 Agenda is universal, not just because the SDGs are global in scope, but also because all countries have to do something to achieve them. No country can deem itself to be sustainably developed and having already done its part to meet the SDGs. The 2030 Agenda offers the opportunity to challenge the idea that development is a phenomenon that occurs only in countries of the global South while the North is already 'developed'.

However, the 2030 Agenda is not free of contradictions and fails to adequately address a number of goals and targets, particularly when it comes to their means of implementation. The 2030 Agenda represents a compromise among 193 governments and is far from perfect. But for the first time in an intergovernmental document, it acknowledges the "enormous disparities of opportunity, wealth and power" as immense challenges to sustainable development.

There are further severe obstacles to the implementation of the 2030 Agenda and overcoming them is a prerequisite for achieving the SDGs and fulfilling the commitments made to human rights and sustainability (Spotlight on Sustainable Development, 2016: 12):

For too long, economic policies have been shaped by acceptance of neoliberal policies "without alternatives". But taking the title of the 2030 Agenda, "Transforming our World", seriously implies that its implementation should lead to structural transformations instead of being led by the interests and advice of those governments, elite class sectors, corporate interest groups and institutions which have taken us down paths that are unsustainable and continue to create global obstacles to the implementation of the agenda. Domestic policies in the spirit of the dominant neoliberal paradigm have further strengthened the power of investors and big corporations and, by the same token, weakened the role of the state and its ability to promote human rights and sustainability. The 2030 Agenda does not provide an adequate response to these challenges. In the name of "international competitiveness" countries continue to compete in a race to the bottom, offering lower taxes and cheaper labour so as to attract investments. Tax havens allow for tax evasion.

These practices seriously undermine the ability of states to finance and implement the 2030 Agenda. Finally, the obsession with growth, backed up by the dominant economic regime, provides the drive to exploit nature, relies on fossil fuels and depletes biodiversity, undermining the provision of essential services.

The decision in the 2030 Agenda to improve progressively global resource efficiency and to decouple economic growth from environmental degradation, is a necessary, but by no means sufficient response to the transgression of the planetary boundaries. Here, as in other areas a combination of low levels of ambition, inadequate and contradictory goals, targets and indicators makes it impossible to stop or reverse the damage done to the global environment and scale down human demands on the earth's ecosystem. This lack of a serious political agenda presents a virtually insurmountable impediment to the realization of the 2030 Agenda. Without addressing the structural obstacles and inbuilt contradictions it will be difficult, if not impossible to achieve the SDGs by 2030.

The increasing global concentration of corporate power will exacerbate all of these trends if governments continue to regard such power as inevitable. In 2015 the merger and acquisition activities of transnational corporations reached an all-time high (Spotlight on Sustainable development, 2016: 14). The merger of Heinz and Kraft formed the world's fifth largest food and beverage company; Anheuser-Busch In Bev took over SABMiller in a deal that combines the world's two largest beer makers; US chemical giants Dow Chemical and DuPont announced plans to merge by the end of 2016; and in May 2016, the German pharma and chemical company Bayer offered to acquire Monsanto, creating the world's largest producer of chemicals and seeds with an estimated global market share of 30 percent. These and many more mega-deals have been supported or even initiated by a small group of corporate 'control-holders',

particularly transnational banks and investment funds, with no effective government opposition. The resulting concentration of economic power distorts the functioning of financial and labor markets and undermines democratic decision making processes, threatening the ability to implement the 2030 Agenda and the SDGs and rendering some of them (such as SDG 2 on food and agriculture, SDG 3 on health and SDG 12 on sustainable consumption and production) essentially meaningless.

Despite these numerous alarming trends there are also some positive signals ((Spotlight on Sustainable development, 2016: 14-15). In many countries discussions and consultations have started about how to use the 2030 Agenda as a reference framework for shaping national policies and adapt it to specific national realities. A total of 22 countries, from the global North as well as South, have agreed to conduct national reviews and to present their national strategies for implementing the 2030 Agenda at the UN High Level Political Forum in New York in July. Even the G20 under the Chinese presidency made the implementation of the 2030 Agenda to one of its key agenda items.

Also positive is the fact that civil society organizations and networks have started to create cross-sectoral alliances at national and international level, bringing together a broad range of environment, development and human rights groups as well as trade unions and social justice organizations.

Even at local level, citizen groups and local authorities have started consultations on sustainability goals and strategies for their cities and communities. Social change cannot be decreed top-down either by governments or by the UN. The critical engagement of civil society groups and the broader public will be essential for triggering the necessary change towards global sustainability (Pace, 2015).

The political success of the 2030 Agenda and its SDGs will depend on the adoption of appropriate strategies and policies, available resources and other means of implementation. Accountability mechanisms are important tools for strengthening political commitment and effectiveness. Thus the successful process relies a lot on the effective monitoring of progress or regressive developments in achieving the goals.

It is important to ensure that the monitoring and review process, like the implementation strategies themselves, not be dominated by the rich and powerful, including both countries and multinational corporations. Previous experience clearly shows that monitoring of outputs or outcomes alone is by no means sufficient. Rather, policies and policy changes (and not just outcomes) in the follow-up of the 2030 Agenda should be scrutinized. These analyses are by their very nature qualitative rather than purely quantitative.

Civil society organizations have to play a key role as independent watchdogs to monitor the (positive or negative) contributions by governments, international organizations, International Financial Institutions and Multilateral Development Banks as well as transnational corporations to the implementation of the 2030 Agenda (Cotton, 2014).

3. THE EXPERIENCE OF MDGs

Final MDGs report documents the 15-year effort to achieve the aspirational goals set out in the Millennium Declaration and highlights the many successes across the globe, but acknowledges the gaps that remain. The experience of the MDGs offers numerous lessons, and they will serve as the starting points for next steps. Leaders and stakeholders in every nation must work together to achieve a truly universal and transformative agenda. This is the only way to ensure a sustainable future and a dignified life for all people everywhere.

As the post-2015 development agenda is being established, strengthening data production and the use of better data in policymaking and monitoring are becoming increasingly recognized as fundamental means for development (World Bank Group, 2015: 22-27). Agreement is widespread that thoughtful data collection, guided by researchers who understand what types of information are most needed to address fundamental policy questions, is an important World Bank contribution to the field of development (World Bank Group, 2015: 24). The research-based data products generated by the World Bank's research department fall into three categories. Some are compilations of existing data series, while others are collections of primary data. The third category comprises datasets that are constructed by piecing together information from different sources and then performing some modeling. A vital characteristic of all three types of datasets is that they are valuable public goods: the same data can be used by many researchers and policy analysts to answer a broad range of development policy questions.

Data compilation relies on data being there to start with. Most countries had never fielded a household survey, and those that had had not asked the necessary questions to accurately estimate a household's consumption. To address this deficiency, the Living Standards Measurement Study (LSMS) team set about

designing a consumption questionnaire that could be used in household surveys in different settings, and they fielded it in multiple countries. Other organizations subsequently embraced the philosophy of the consumption module, thanks in part to a three-part volume the World Bank produced explaining the idea. Building on this legacy, World Bank researchers continue to set the standard for data collection efforts in everything from financial inclusion to service delivery.

Established in 2005, the Development Impact Evaluation (DIME) team's mandate is to generate high-quality operationally relevant impact evaluation research to transform development policy (World Bank Group, 2015: 30). It works closely with World Bank operations to increase the use of impact evaluation in the design and implementation of public policy, improve the quality of World Bank projects, strengthen country institutions for evidence-based policy making, and generate knowledge in strategic development areas. DIME achieves these through:

- Designing evaluations to inform decisions in collaboration with government partners.
- Building counterpart agencies' capacity to do this systematically.
- Drawing lessons and sharing them face-to-face with global audiences.

The MDGs monitoring experience has clearly demonstrated that effective use of data can help to increase development efforts, implement successful targeted interventions, track performance and improve accountability. Thus sustainable development demands a data revolution to improve the availability, quality, timeliness and disaggregation of data to support the implementation of the new development agenda at all levels (MDGs Report, 2015:10-13).

What gets measured gets done

The MDGs framework strengthened the use of robust and reliable data for evidence-based decision making, as many countries integrated the MDGs into their own national priorities and development strategies. Using reliable data to monitor progress towards the MDGs also allowed governments at national and subnational levels to effectively focus their development policies, programmes and interventions.

Real data improvement occurs when demand and policy support meet

The MDGs energized efforts to increase the production and use of development data. Their monitoring requirements drew attention to the need for strengthening statistical capacity and improving statistical methodologies and information systems at both national and international levels. Over time, this increased the availability of more and better data, while improving coordination within national statistical systems and leading to new statistical methodologies.

Despite improvement, critical data for development policymaking are still lacking

Large data gaps remain in several development areas. Poor data quality, lack of timely data and unavailability of disaggregated data on important dimensions are among the major challenges. As a result, many national and local governments continue to rely on outdated data or data of insufficient quality to make planning and decisions.

4. IMPORTANCE OF HIGH QUALITY DATA COLLECTION

Only by counting the uncounted we can reach the unreached

High-quality data disaggregated by key dimensions beyond the basics of age and sex, including migrant status, indigenous status, ethnicity and disability among others, are key to making decisions and monitoring progress towards achieving sustainable development for all (MDGs Report, 2015: 11-12). Estimating the size and exploring the attributes of small population groups requires large sample sizes or full population counts. National population and housing censuses provide an important data source and sampling frame for estimating the size of vulnerable minority groups.

It is not uncommon that in developing countries, where poverty and poor health outcomes are most pressing, statistical agencies do not have the budget that is needed to collect these data frequently. As a result, official estimates of poverty and malnutrition are often outdated: For example, across the 26 low-income countries in Sub-Saharan Africa over the period between 1993 and 2012, the national poverty rate

and prevalence of stunting for children under five are on average reported only once every five years and once every ten years in the World Development Indicators (Weide and Fujii, 2016).

In recent years, a number of studies have explored the option of predicting household expenditure data into existing secondary surveys in an effort to supplement existing poverty estimates and increase their frequency (Stifel and Christiaensen, 2007); (Douidich et al., 2015). Douidich et al. (2015), for example considers the Labor Force Survey as their secondary survey, which is often available at a higher frequency than household expenditure surveys.

There is also a large literature that predicts household expenditure and individual health data into the population census, see for example (Fujii, 2010). The objective here is to obtain estimates of welfare at a high level of disaggregation, or at the level of small area such as a district. These small area estimates are often presented in the form of a map known as a poverty map.

Real-time data are needed to deliver better decisions faster

In today's rapidly changing world, real-time information is needed to prepare and respond to economic, political, natural and health crises. However, most development data have a time lag of two to three years. Recent innovations are helping to circumvent this problem. For example, UNICEF and partners have used text messaging (SMS) technology to facilitate real-time collection and sharing of information about the Ebola outbreak. This real time information has helped rapidly locate new cases, determined what supplies are needed and disseminated lifesaving messages.

Geospatial data can support monitoring in many aspects of development, from health care to natural resource management

Knowing where people and things are and their relationship to each other is essential for informed decision-making. Comprehensive location-based information is helping governments to develop strategic priorities, make decisions, and measure and monitor outcomes. Once the geospatial data are created, they can be used many times to support a multiplicity of applications. A geodetic reference frame allows precise observations and 'positioning' of anything on the Earth and can be used for many social, economic and environmental purposes, such as precision agriculture and monitoring changes in sea level rise.

5. POLICIES TO MEET THE DATA DEMAND OF THE NEW DEVELOPMENT ERA

Strengthening statistical capacity is the foundation for monitoring progress of the new development agenda

To improve the availability, reliability, timeliness and accessibility of data to support the post-2015 development agenda, sustainable investments are needed in statistical capacity at all levels, especially the national level (MDGs Report, 2015: 12-13). The scaling-up of national statistical capacities and the strengthening and modernization of statistical systems will require ensuring effective institutional arrangements and internal coordination, sustainable human resources, sustainable financial resources (internal and external) and technical cooperation. National statistical offices should have a clear mandate to lead the coordination among national agencies involved and to become the data hub for monitoring.

New technology is changing the way data are collected and disseminated

The terms "digital technologies," "internet," and sometimes "information and communication technologies (ICTs)" can be used interchangeably. "Internet" emphasizes the central importance of connectivity. Faster computers and cheaper storage are useful in their own right. But the reason that all of these technologies have had such a massive impact on almost all aspects of life is that these devices are linked so that information can be distributed and accessed effortlessly from anywhere.

Technology development has vastly reduced the cost and increased the speed of all the digital technologies that drive the internet—in some cases by more than 30 percent per year. This continues a long-term and accelerating decline in the cost of computing. William Nordhaus, in (2007), estimated that since the era of manual computing in the mid-19th century, the cost of a computation has dropped by a factor of between 1.7 trillion and 73 trillion. The result has been a far lower cost of acquiring and using information, which in turn has lowered transaction costs—and often as a consequence, production costs.

New (ICT) provide unprecedented opportunities for data collection, analysis and dissemination. Today, 95 per cent of the global population is covered by a cellular network, while mobile cellular subscriptions have grown to over 7 billion (UN, MDGs Report, 2015:12). Internet penetration has increased to 43 per cent of the world's population, linking 3.2 billion people to a global network of content and applications. New data collection technologies, such as Computer-Assisted Personal Interviewing (CAPI) and mobile text surveys (SMS), and new data sources, such as social media posts, online search records and mobile phone call records, allow faster data collection and provide near real-time information.

However, new data sources and new data collection technologies must be carefully applied to avoid a reporting bias favouring people who are wealthier, more educated, young and male. The use of these innovative tools might also favour those who have greater means to access technology, thus widening the gap between the "data poor" and the "data rich".

Global standards and an integrated statistics system are key elements for effective monitoring

International standards are important for building national statistical capacity. One of the Fundamental Principles of Official Statistics states that "the use by statistical agencies in each country of international concepts, classifications and methods promotes the consistency and efficiency of statistical systems at all official levels". The Secretary- General's Independent Expert Advisory Group on the Data Revolution for Sustainable Development also highlighted in its report the need for a "Global consensus on data" to adopt principles concerning legal, technical, privacy, geospatial and statistical standards that facilitate openness and information exchange while promoting and protecting human rights. Measuring sustainability is a highly technical task that requires capturing complex economic, societal and environmental interactions. Therefore, an integrated framework of indicators is needed to cover these three dimensions cohesively. Integration benefits not only data users, but also data producers and providers by reducing the respondents' burden, the likelihood of errors and the long term costs. Harnessing the benefits of statistical integration requires investment in the adoption of statistical standards, developing and re-engineering of statistical production processes, and changing institutional arrangements.

Promoting open, easily accessible data and data literacy is key for effective use of data for development decision-making

Data for development are public goods and should be made available to the public in open formats. Open data supports government transparency and accountability, enables the use of collective intelligence to make smarter policy decisions, increases citizen engagement and promotes government efficiency and effectiveness. Besides data, information on definitions, data quality, methods used in collecting data and other important metadata also need to be made widely available. In addition to opening up data, great efforts need to be made to release data in machine readable formats and to provide free visualization and analysis tools. With an increasing volume of data available, people will also need the skills to use and interpret them correctly. Governments, international organizations and other stakeholders should support implementation of data literacy programmes, provide e-learning opportunities and include data literacy as a part of school curriculum.

Together we can measure what we treasure

Data, as the basis for evidence-based decision-making and accountability, are a crucial pillar of the post-2015 development agenda. The necessary data revolution is a joint responsibility of governments, international and regional organizations, the private sector and civil society. Building a new partnership will be essential to ensure that data are available to inform the post-2015 development agenda and support development decision-making for the next 15 years.

6. DIGITAL TECHNOLOGIES AND SUSTAINABLE DEVELOPMENT

The experience of MDGs highlighted the importance of new (ICT) in providing opportunities for data collection, analysis and dissemination. We are in the period of the greatest information and communications revolution in human history. We must take the advantage of this new technology to make the world more prosperous and inclusive.

Digital technologies in developed and developing countries

Digital technologies—the internet, mobile phones, and all the other tools to collect, store, analyze, and share information digitally—have spread quickly. The number of internet users has more than tripled in a decade—from 1 billion in 2005 to an estimated 3.2 billion at the end of 2015 (MDG's Report, 2015: 12). This means that businesses, people, and governments are more connected than ever before. The digital revolution has brought immediate private benefits—easier communication and information, greater convenience, free digital products, and new forms of leisure. It has also created a profound sense of social connectedness and global community.

The internet and related technologies have reached developing countries much faster than previous technological innovations. For Indonesia to reap the benefits of steamships took 160 years after their invention and for Kenya to have electricity, 60 years; but for Vietnam to introduce computers, only 15 years (WB, WDR, 2016: 5). Mobile phones and the internet took only a few years. More households in developing countries own a mobile phone than have access to electricity or clean water, and nearly 70 percent of the bottom fifth of the population in developing countries own a mobile phone (WB, WDR, 2016: 2) On average, 8 in 10 individuals in the developing World own a mobile phone, and the number is steadily rising (WB, WDR, 2016: 6). The lowest mobile penetration is in Sub-Saharan Africa (73 percent), against 98 percent in high-income countries. But internet adoption lags behind considerably. Only 31 percent of the population in developing countries had access in 2014, against 80 percent in high-income countries. China has the largest number of internet users, followed by the United States, with India, Japan, and Brazil filling out the top five. The world viewed from the perspective of the number of internet users looks more equal than when scaled by income—reflecting the internet's rapid globalization.

Internet adoption has increased across businesses in all country income groups. Nearly 9 of 10 businesses in high-income OECD (Organization for Economic Co-operation and Development) countries had a broadband internet connection in 2010–14, compared with 7 for middle-income countries and 4 for low-income countries (WB, WDR, 2016: 6). But adoption rates for more sophisticated technologies such as secure servers, enterprise network, inventory management, and e-commerce are much lower in most developing countries.

Governments are increasingly going digital, and a greater share of government jobs in developing countries is ICT-intensive than in the private sector. By 2014, all 193 member states of the United Nations (UN) had national websites (WB, WDR, 2016: 6):

- 101 enabled citizens to create personal on line accounts.
- 73 to file income taxes.
- 60 to register a business.

For the most common core government administrative systems:

- 190 member states had automated financial management.
- 179 used such systems for customs processing.
- 159 for tax management.
- 148 of them had some form of digital identification
- 20 had multipurpose digital identification platforms.

Greater internet access has led to an explosion in the production and consumption of information around the world. But while the internet has reached almost all countries quickly, the intensity of its use has been lower in poorer countries—in large part because it has not spread as widely within those countries. And despite many great examples of the uses of new technologies in developing countries, advanced economies have been using them even more effectively.

According to recent studies, ICT sector in developed countries has grown more slowly with respect to developing countries (Şaf, 2015: ii). The most important reason of this is that ICT sector in developed countries has reached a certain maturity level. In addition, capacity building and the structural change can be said to cause this growth in ICT sector of developing countries. Many developing countries consider ICT as a factor that contributes productivity. Moreover, they regard ICT as an essential part of development strategies. Today the fruits of the strategical decisions taken by countries like Brazil, China, India, Ireland and Israel in ICT sector since 1980 can be seen. Turkey also started to construct ICT policies during the period of Fifth Development Plan (1985-1989) which corresponded almost the same period with the

countries mentioned above (Şaf, 2015: 43-44). However, Turkey hasn't been able to focus on the matter satisfactorily due to lack of awareness, economic instability, rising inflation and economic crisis. Although 74 mostly middle- and high-income countries have unilaterally removed tariffs on ICT capital goods, computers and smartphones are still treated as luxury goods in some countries, including Turkey, where taxation adds almost half to the price of mobile handsets (WB, WDR, 2016:31).

In developed countries the share of the value added in ICT sector is observed to increase up to 15 percent as a share of all sectors value added. Research results demonstrate that in order to reach as high level contribution of ICT on economic growth as that of developed countries, ICT should diffuse into other sectors especially technology intensive sectors and a certain amount of ICT competence should be acquired. In Turkey ICT investments were observed to increase in the sectors that use technology intensively according to the analysis of 1998 and 2002 Input-Output tables of Turkey (Şaf, 2015: 101-107). However, the value-added in the ICT sector were observed to be confined as a share of all sectors value added in Turkey because of import dependency of these technologies and limited competence in this sector. Although there are some weaknesses in catching full advantages of digital dividends in Turkey, improvements in capital accumulation in ICT sector since 1998, increases the expectations of developmental gains in the future.

Digital dividends

Growth, jobs, and services are the most important returns to digital investments. Digital technologies help businesses become more productive. People find jobs and greater opportunities. Governments deliver better public services to all. By reducing information costs, digital technologies lower the cost of economic and social transactions for firms, individuals, and the public sector. They promote innovation when transaction costs fall to zero. They boost efficiency as existing activities and services become cheaper, quicker, or more convenient. As a result, digital technologies increase inclusion as people get access to services that previously were out of reach. Inclusion, efficiency, innovation—these are the main mechanisms for digital technologies to promote development. Technology can be transformational (WB, WBR, 2016: 2):

- A digital identification system such as India's Aadhaar, by overcoming complex information problems, helps willing governments to promote the inclusion of disadvantaged groups.
- Alibaba's business-to-business e-commerce site, by significantly reducing coordination costs, boosts efficiency in China's economy and arguably the world's.
- The M-Pesa digital payment platform, by exploiting scale economies from automation, generates significant financial sector innovation, with great benefits to Kenyans and others. The cost of sending remittances dropped by up to 90 percent after the introduction of M-Pesa.
- New technologies allow women to participate more easily in the labor market—as e-commerce entrepreneurs, in on line work, or in business-process outsourcing.
- The world's 1 billion persons with disabilities—80 percent of whom live in developing countries—can lead more productive lives with the help of text, voice, and video communication.
- Digital ID systems can provide better access to public and private services for the 2.4 billion people who lack formal identification records, such as a birth certificate.

While this is great progress, many are still left out because they do not have access to digital technologies. Those in extreme poverty have the most to gain from better communication and access to information. Nearly 6 billion people do not have high-speed internet, making them unable to fully participate in the digital economy.

Although there are many individual success stories, the effect of technology on global productivity, expansion of opportunity for the poor and the middle class, and the spread of accountable governance has so far been less than expected. Firms are more connected than ever before, but global productivity growth has slowed. Digital technologies are changing the world of work, but labor markets have become more polarized and inequality is rising—particularly in the wealthier countries, but increasingly in developing countries. And while the number of democracies is growing, the share of free and fair elections is falling. These trends persist, not because of digital technologies, but in spite of them. Traditional development challenges are preventing the digital revolution from fulfilling its transformative potential. How technology

interacts with other factors that are important for development—what the WBD Report calls "analog complements."

- The digital revolution can give rise to new business models that would benefit consumers, but not when incumbents control market entry.
- Technology can make workers more productive, but not when they lack the know-how to use it.
- Digital technologies can help monitor teacher attendance and improve learning outcomes, but not when the education system lacks accountability.

To deliver universal digital access, countries must invest in infrastructure and pursue reforms that bring greater competition to telecommunications markets, promote public-private partnerships, and yield effective regulation. The full benefits of the information and communications transformation will not be realized unless countries continue to improve their business climate, invest in people's education and health, and promote good governance. In countries where these fundamentals are weak, digital technologies have not boosted productivity or reduced inequality. Countries that complement technology investments with broader economic reforms reap digital dividends in the form of faster growth, more jobs, and better services. International development institutions stand ready to help countries pursue these priorities (World Bank Group, 2015: 27). They are already working with clients to promote competitive business environments, increase accountability, and upgrade education and skills-development systems to prepare people for the jobs of the future. The greatest rise of information and communications in history will not be truly revolutionary until it benefits everyone in every part of the world.

Digital Divide

Digital technologies have spread rapidly in much of the world. Digital dividends—the broader development benefits from using these technologies—have lagged behind. In many instances digital technologies have boosted growth, expanded opportunities, and improved service delivery. Yet their aggregate impact has fallen short and is unevenly distributed. For digital technologies to benefit everyone everywhere requires closing the remaining digital divide, especially in internet access. But greater digital adoption will not be enough.

So far, developing countries have invested more in automating back-office functions than in services directed at citizens and businesses. The divide in digital access and use persists. The lives of the majority of the world's people remain largely untouched by the digital revolution. The digital divide within countries can be as high as that between countries. Adoption gaps between the bottom 40 percent and the top 60 percent and between rural and urban populations are falling for mobile phones but increasing for the internet. In Africa, the digital divide across demographic groups remains considerable. Women are less likely than men to use or own digital technologies. Gaps are even larger between youth (20 percent) and those more than 45 years old (8 percent). Countries that have bridged the digital-access divide often face a new divide in digital capabilities. Within countries, greater e-government use by individuals is associated with education, employment, urban residence, being male, and broadband access.

The use of digital technologies is still basic in most developing countries (WB, WDR, 2016: 52) In Vietnam, only 2.2 percent of all firms sold their goods or services on line in 2011 (up from 0.6 percent in 2007). In Turkey, 92 percent of all firms with at least 10 employees had internet access in 2012, but only 71 percent used it for banking; 55 percent had a website; and 10 percent made orders or reservations on line. In Mexico, 84 percent of firms with at least 10 employees used the internet in 2012, but only 26 percent of employees had internet access; and only 13 percent of firms used e-commerce for purchases, and 9 percent for sales. In Brazil, 63 percent of all manufacturing firms with at least 10 employees bought or sold products on line, but only 28 percent provide an on line catalogue or feature on line orders on their website; and only 6 percent allow on line payments. And less than half the manufacturing firms in Brazil have an information technology (IT) department or use software supporting management, either for resource planning or customer relations.

Making the internet universally accessible and affordable should be a global priority. The internet, in a broad sense, has grown quickly, but it is by no means universal. For every person connected to high-speed broadband, five are not (WB, WDR, 2016: 4) Worldwide, some 4 billion people do not have any internet access, nearly 2 billion do not use a mobile phone, and almost half a billion live outside areas with a mobile signal.

We saw that, while digital technologies have been spreading, digital dividends have not. We can put forward two reasons:

First, nearly 60 percent of the world's people are still offline and can't participate in the digital economy in any meaningful way.

- There also are persistent digital divides across gender, geography, age, and income dimensions within each country.

Second, some of the perceived benefits of digital technologies are offset by emerging risks:

- Many advanced economies face increasingly polarized labor markets and rising inequality—in part because technology augments higher skills while replacing routine jobs, forcing many workers to compete for low-paying jobs. Quickly expanding automation could contribute to a hollowing out of labor markets and to rising inequality.
- Public sector investments in digital technologies, in the absence of accountable institutions, amplify the voice of elites, which can result in policy capture and greater state control. The poor record of many e-government initiatives points to failure of (ICT) projects and the risk that states and corporations could use digital technologies to control citizens, not to empower them.
- Because the economics of the internet favor natural monopolies, the absence of a competitive business environment can result in more concentrated markets, benefiting incumbent firms. Vested business interests, regulatory uncertainty, and limited competition across digital platforms could lead to harmful concentration in many sectors.

Not surprisingly, the better educated, well connected, and more capable have received most of the benefits—circumscribing the gains from the digital revolution.

The importance of digital technologies for attaining sustainable development

The unfinished task of connecting everyone to the internet—one of the targets in the recently approved Sustainable Development Goals (SDGs)—can be achieved through a judicious mix of market competition, public-private partnerships, and effective regulation of the internet and telecom sector. Access to the internet is critical, but not sufficient. The digital economy also requires a strong analog foundation, consisting of regulations that create a vibrant business climate and let firms leverage digital technologies to compete and innovate; skills that allow workers, entrepreneurs, and public servants to seize opportunities in the digital world; and accountable institutions that use the internet to empower citizens. The triple complements—a favorable business climate, strong human capital, and good governance are the foundation of economic development. But digital technologies add two important dimensions (WB, WDR, 2016: 4):

First, they raise the opportunity cost of not undertaking the necessary reforms. They amplify the impact of good (and bad) policies, so any failure to reform means falling farther behind those who do reform.

Second, while digital technologies are no shortcut to development, they can be an enabler and perhaps an accelerator by raising the quality of the complements:

- Online business registries ease market entry for new and innovative firms.
- Well-designed internet-based training helps workers upgrade their skills.
- New media platforms can increase citizen participation.
- Digital enablers—digital finance, digital identification, social media, and open data—spread benefits throughout the economy and society, further strengthening the interaction between technology and its complements.

As a result, to get the most out of the digital revolution, countries need to work on the "analog complements"—by strengthening regulations that ensure competition among businesses, by adapting workers' skills to the demands of the new economy, and by ensuring that institutions are accountable. Countries that are able to swiftly adjust to this evolving digital economy will reap the greatest digital dividends, while the rest are likely to fall behind.

Market competition, public-private partnerships, and effective regulation of internet and mobile operators encourage private investment that can make access universal and affordable. Public investment will sometimes be necessary and justified by large social returns. A harder task will be to ensure that the internet remains open and safe as users face cybercrime, privacy violations, and online censorship.

7. CONCLUSION

Two thousand fifteen was the deadline year for the MDGs which had announced in September 2000, under eight targets, to be reached until 2015. When we examine the performance of reaching targets between 2000 and 2015, we can say that half of the glass fool on the other hand half of it empty. The post-2015 development agenda promises to take on the MDGs' unfinished business, while adding objectives related to inclusion, sustainability, employment, growth, governance, and cooperation. The SDGs must finish the job that the MDGs started, and leave no one behind.

The MDGs monitoring experience has clearly demonstrated that effective use of data can help to galvanize development efforts, implement successful targeted interventions, track performance and improve accountability. Thus sustainable development demands a data revolution to improve the availability, quality, timeliness and disaggregation of data to support the implementation of the new development agenda at all levels.

Using the price mechanism incurred a number of additional costs, such as the effort of finding buyers or suppliers, and negotiating contracts and enforcing them. As long as the cost of making an exchange of an intermediate good or service in the market is larger than the profit from that exchange, it is rational for a firm to produce it in-house. Most of these transaction costs stem from the costs of acquiring and sharing information. Many years later, the internet and other digital technologies have vastly reduced many of these costs, with major implications for market and nonmarket exchanges among businesses, people, and governments.

New ICT provide unprecedented opportunities for data collection, analysis and dissemination. We must take advantage of this rapid technological change to make the world more prosperous and inclusive. For many people, today's increase in access to digital technologies brings more choice and greater convenience. Through inclusion, efficiency, and innovation, access provides opportunities that were previously out of reach to the poor and disadvantaged. Unfortunately, traditional development challenges are preventing the digital revolution from fulfilling its transformative potential. The full benefits of the information and communications transformation will not be realized unless countries continue to improve their business climate, invest in people's education and health, and promote good governance. The greatest rise of information and communications in history will not be truly revolutionary until it benefits everyone in every part of the world.

Digital technologies have spread rapidly in much of the world. Digital dividends—the broader development benefits from using these technologies—have lagged behind. For digital technologies to benefit everyone everywhere requires closing the remaining digital divide, especially in internet access. But greater internet adoption will not be enough. Digital development strategies need to be broader than ICT strategies. Connectivity for all remains an important goal and a tremendous challenge. But countries also need to create favorable conditions for technology to be effective. When the analog complements are absent, the development impact will be disappointing. When countries build a strong analog foundation, they will reap ample digital dividends—in faster growth, more jobs, and better services. To get the most out of the digital revolution, countries need to work on the "analog complements"—by strengthening regulations that ensure competition among businesses, by adapting workers' skills to the demands of the new economy, and by ensuring that institutions are accountable.

REFERENCES

Cotton, Kate (2014) Agents of change: recognizing the role of volunteer action in sustainable development" devex.com/news/agents of change recognizing the role of volunteer action in sustainable development 84039.

Douidich, M Abdeljaouad Ezzrari, Roy Van der Weide and Paolo Verme (2015) "Estimating Quarterly Poverty Rates Using Labor Force Surveys: A Primer" World Bank Econ Rev, doi: 10.1093/wber/lhv062.

Fujii, Tomoki (2010), "Micro-Level Estimation of Child Undernutrition Indicators in Cambodia" World Bank Econ Rev, doi: 10.1093/wber/lhq016.

Global Sustainable Development Report (2015). Edition Advance Unedited Version.

Nordhaus, William D. (2007). "Two Centuries of Productivity Growth in Computing." Journal of Economic History 67 (01): 128–59.

Pace, Matthew (2015) "Volunteers are key to achieving the SDGs" devex.com /news/volunteers are key to achieving the sdgs 86637 Suggested UNDP Senior Management Talking Points on Post 2015, January 7th, 2015.

Şaf, Mehmet Yaşar. (2015). Bilgi ve İletişim Teknolojileri Sektörünün Makro Ekonomik Etkileri: Uluslararası Karşılaştırma ve Türkiye Değerlendirmesi, Uzmanlık Tezi, T.C. Kalkınma Bakanlığı, Ya. No: 2918.

Spotlight on Sustainable Development (2016) Report by the Reflection Group on the 2030 Agenda for Sustainable Development.

Stifel, D and Luc Christiaensen (2007) "Tracking Poverty Over Time in the Absence of Comparable Consumption Data" World Bank Econ Rev, 21 (2): 317-341. doi: 10.1093/wber/lhm010

UN (2015). The Millennium Development Goals Report, New York.

Weide and Fujii (2016) "Is predicted data a viable alternative to real data?" http://blogs.worldbank.org/developmenttalk/predicted-data-viable-alternative-real-data

World Bank Group (2015), Research at Work 2015: Turning Insight into Impact, Research_TrningInsightintoImpact_med.

World Bank (2016). World Development Report 2016: Digital Dividends. Washington, DC: World Bank. doi:10.1596/978-1-4648-0671-1.

GENDER STUDIES

GENDER WAGE GAP FROM A SOCIAL PERSPECTIVE – TOWARDS SOCIO ECONOMIC RE-EVOLUTION THROUGH MAINSTREAMING PAY POLICY. THE CASE OF CYPRUS

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Abstract

Gender wage gap is a socio economic reality still exists not only in European but also in international labour market which affects all relative stakeholders' efforts for social cohesion, socio economic innovations, integrity and solidarity economy despite discriminations and disparities. Closing the gender pay gap gives greater profitability to the economy as a whole. This complex phenomenon requires a multifaceted approach to address various kinds of inequalities between men and women in the labour market. Women always have been key actors in employment and economic growth and their skills and talent are necessary for the economic and social development of our societies. However, this is not reflected in their wages and position in the labour market. The underestimation of women' work and the undervaluation of women' skills is a lost advantage for the economy and for society at large. This paper studies the case of Cyprus by estimating the factors cause gender wage gap and glass ceiling effect through analysing micro data from 2010 Earnings Survey. We estimate pooled quantile regressions with gender dummies, as well as separate quantile regressions by gender, and we carry out a decomposition analysis by applying the Oaxaca-Blinder decomposition technique. Even after extensive controls for gender differences in age, education (both level and field), sector, industry, and occupation, we find that the glass ceiling effect we see in the raw data persists to a considerable extent. Measures and policy proposals are represented for closing the gender pay gap in order to add value and contribute to the development of a more equal and cohesive society which could entrench a social, solid and sustainable economy

Keywords: *SSE, gender wage gap, Oaxaca – Blinder technique, glass ceiling effect, socio economic re-evolution*

JEL classification: R23, J3, Z13

1. INTRODUCTION

The institutional operation and remuneration forming framework of the labour market, directly influences the gender pay gap. Equal pay (EU and national) legislation constitutes one dimension of the wage formation framework, affecting the pay gap. While equal pay legislation outlaws paying women and men differently for the same job or for work of equal value, the gender pay gap remains due to direct or indirect discrimination that may persists despite the law and because of the variety of ways in which women's and men's labour market participation differs. That means that additional measures are needed, mainly focused on core changes in the legislation framework of operation and remuneration forming of the labour market (Rubery, 2007).

Although direct discrimination against women in pay, are typically eliminated, the margin of discrimination still exists. This may for instance be the case where the fee may not exceed minimum wages of the collective labor contracts and also in SMEs where the remuneration structure identifies more distortions and transparency issues, since the protective grid of trade unions is missing and the developing of interpersonal relationships, usually prevents denunciation both from the discrimination victim and colleagues (Spiliotopoulos et al. 1996).

For the purposes of the present study, we consider wage discrimination as a theoretical frame of wages identification, supporting that average wage is structured mainly around social criteria. Specifically, through this paper we examine the hypothesis that high – skilled work has higher value than low – skilled,

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intensive labor work and thus average wage is expected to associated with education and work experience variables. That means that pay gaps depends on differences in skills and qualifications per job position.

By using microdata of Earnings Survey 2010 in Cyprus (case study) we proceed with structure an econometric model for estimate the contribution of social factors and criteria in gender wage gap. Also through this model we are going to highlight the role of gender discriminations in the wage gap. This paper endeavors not only to analyze the existing situation regarding gender wage gap in Cyprus but also to highlight the factors that could contribute to close the gender pay gap, for the development of a more equal and cohesive society which could entrench a social, solid and sustainable economy

2. MAPPING THE CURRENT SITUATION -GENDER WAGE GAP AND THE INSTITUTIONAL FRAMEWORK OF WAGE FORMATION

Cyprus shows pay gap ranges between men and women close to the EU average. Apart from differences in characteristics of female and male employment and gender discrimination in the labor market, the extent of the pay gap and the comparative position of the country affected by the institutional context configuration fees. Instead, the legislation on equal pay does not seem to exert great influence on wage disparities based on gender.

Recent statistics from EUROSTAT shows that the gender pay gap in Cyprus was 15.8%, slightly lower from the EU 28 average which was 16.4%. In same research higher gender wage gap appeared in European North, especially in Germany, Denmark, Netherlands, Austria and the UK (figure 1)

Figure 1: Gender Pay Gap, E.E.28, 2013
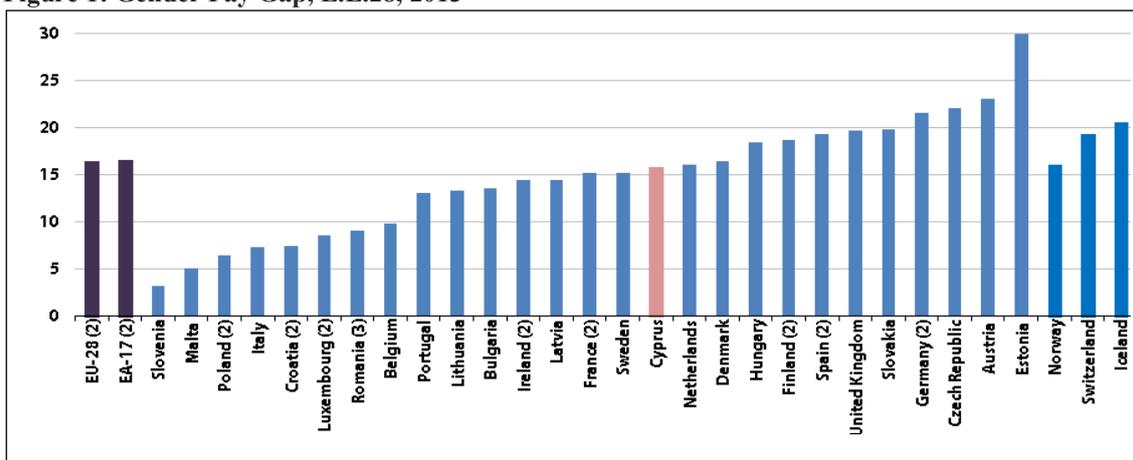
Source: Own Elaboration with Eurostat information (earn_gr_gpgr2ag 2013)

The institutional labor market framework direct influences wage disparities based on gender. The role of the institutional framework, was highlighted by a number of empirical studies conducted during the past decade, and which interpreted the differences in the size of the wage gap among developed countries (Rubery 1992; Blau & Kahn 1992; Rubery & Fagan 1994; Rubery et al. 1997).

Equal pay legislation can only be considered as a key dimension of the overall institutional framework, that significantly affects the formation and evolution of the gender wage gap.

In Cyprus, Equal Pay Policy was launched with great delay, and so far restricted to legislative measures. Although the prohibition of discrimination and the principle of equality is enshrined in the Constitution of the Republic of 1960 (Article 28), however the most important discrimination regulations recently emerged as a result of the harmonization of Cyprus legislation with EU legislation, Directives, Regulations, Programmes and campaigns.

3. ANALYZING THE GENDER WAGE GAP IN CYPRUS – ESTIMATED MODEL

In order to identify the gender wage gap and analyse its components and parameters we estimate an econometric model. First we calculate the wages' equations separately for men and women by applying multiple regressions (OLS) and then we will analyze wage gap in its components.

For the purpose of the gender wage gap analysis we start to consider a simple unadjusted model of wage determination such that

$$\ln Wi = \beta (X_i) + c + \varepsilon_i \tag{1}$$

where Wi denotes the natural logarithm of hourly wages for an individual (i), Xi denotes a set of observed characteristics, β denotes the regression coefficients, c denotes the unexplained gap, and εi is a random error term. In order to investigate the sources of gender differentials in detail, we estimatet men's and women's wage functions separately such that:

$$\ln W_i^m = \beta^m (X_i^m) + c^m + \varepsilon_i^m \tag{2}$$

$$\ln W_i^f = \beta^f X_i^f + c^m + \varepsilon_i^f \tag{3}$$

Given this information and following Oaxaca-Blinder (1993), we proceed to decompose the mean difference between the male and female earnings into a portion attributable to characteristics and portions attributable to the 'male advantage' and the 'female disadvantage'.

Oaxaca-Blinder (1993) decomposition method gives the following equation:

$$ln\overline{w}^m - ln\overline{w}^f = \left(\overline{\overline{X^m}} - \bar{X}^f\right)\beta^* + \left[\bar{X}^m\left(\beta^m - \beta^*\right) + \bar{X}^f\left(\beta^* - \beta^f\right)\right] + \left(c^m - c^f\right) \tag{4}$$

According to Oaxaca decomposition technique (4), the first term is the gender wage gap attributable to differences in characteristics. The second and the third terms capture the difference between the actual and pooled returns for men and women, respectively. Under discrimination, men are paid competitive wages but women are underpaid. If this is the case, the coefficient of men should be taken as the non-discriminatory wage structure. Conversely, if employers pay women competitive wages but pay men more, then the women coefficient should be used as the non-discriminatory wage structure.

Micro Data from 2010 Structure Earning Survey in Cyprus are used and a total of 32.566 records examined, of which 16.897 records related to sample men employees and 15.671 records to women employees. Earning Survey excels significantly all other researches that could be used as it contains much more information about the individual characteristics of employees (personal characteristics, job and business), thus allowing the introduction of more independent variables in equations.

The depended variable is the log average wage. We estimate independent variables and for the purposes of our research create dummies based on the personal characteristics (sex, education level, potential experience, tenure, nationality), sectoral characteristics (public/private/semipublic, collective agreement, economic sector) and job position characteristics (ISCO 88, overtime hours, shift work, supervision, temporary work). Based on that we estimate the impact of each separate variable in the gender wage gap. The results of our calculations with SPSS programming, appeared in Table 1.

Table 1: Contribution Analysis in gender wage gap

Oaxaca-Blinder Analysis - Differences%	Differences in Characteristics (1)	Market discrimination for same characteristics (2)	Total (1)+ (2)		Discrimination in unexplained gap	Gender Wage Gap estimated by regression
	$(X^m-X^f)\beta^*$	$(\beta^m-\beta^*)X^m+ (\beta^*-\beta^f)X^f$			C^m-C^f	$1- (w^f-w^m)$
Personal Characteristics	3, 87%	-3, 65%	-0, 22%			
Education	0, 04%	-1%	-0, 96%			
Past experience	0, 2%	0, 03%	0, 23%			
Tenure	3, 63%	-0, 9%	2, 73%			
Nationality	0, 0%	-1, 78%	-1, 78%			
Sector/Department Characteristics	0, 73%	1, 71%	2, 44%			
Size	-0, 1%	0, 64%	0, 54%			
Public, Semi-Public Sector	-0, 09%	-3, 2%	-3, 29%			
Business Negotiation Strengths	0, 22%	3, 3%	3, 52%			
Sectoral Negotiation Strengths		0, 97%	0, 97%			
Sex distribution in sectors	0, 7%		0, 7%			
Job Position Characteristics	3, 745%	-2, 615%	1, 13%			
Supervision, overtime hours, shifts, temporary work	1, 125%	-0, 775%	0, 35%			
Sex distribution in professions (ISCO 88)	2, 62%	-1, 84%	0, 78%			
Total	**8, 345%**	**-4, 555%**			**10, 95%**	**14, 74%**

4. **ANALYSIS OF SOCIAL FACTORS IMPACT AS COMPONENTS OF THE GENDER WAGE GAP**

Further analyzing Table 1 we are leaded to the following remarks relating to social factors contribution to gender wage gap.

- The proportion of women in educational levels, and wages paid by the labor market (after deduction of "pure" discrimination exist) act as a pay gap reduction factor. There, however, that the total reduction is only 1%, which means that education as a single factor doesn't influence wage gap significantly.
- The past experience contributes only 0.23% in the gap configuration. Equal pay given about men and women in connection with past professional experience may indicate the market trend in the period of long economic crisis, which tends to eliminate factors such as the premium of past work experience.
- An additional factor that contributes to reduce the gender pay gap by 1.78%, is "discriminatory bonus" for Cypriot nationality (and EU nationalities).
- The size of the enterprise (SME/Large) negatively affects the gap increase it by 0.54%, but generally seems that the size did not significantly contribute to the formation of the gap.
- The difference in participation of both sexes in public and semi-public sector contributes 3.3% to gap's reduction. Remuneration of men and women with the same characteristics in the public sector is clearly favorable for women, also the percentage of women employed in the public sector exceeds that of men, curtailing the wage gap. Since the public sector does not differentiate remuneration levels between men and women, this difference should be ascribed to tacit skills (tacit skills).
- The bargaining power factor has a strong stimulative effect on the pay gap favoring men by 3.52%. Also, there is separation at industry level through the variables mentioned in economic activity. Bargaining power in industry level also favors men by 0.97%. Summing the two levels of bargaining power, it is observed that in total contributes to gap formation by 3.52% + 0.97% = 4.9% of a total 14.74%.
- Sectoral distribution equality contributes only 0.7% to the formation of the wage gap.

From the analysis of the gender wage gap to its components we realize that social factors are the parameters that mostly contribute to the formation of the gap.

5. **GLASS CEILING EFFECT ESTIMATION IN CYPRUS**

To detect the existence of the glass ceiling effect in Cyprus, we re-use the equations presented in Chapter 3, and we apply Quantile Regression (Koenker and Bassett, 1978), in order to estimate how the male-female pay gap varies across the pay distribution. We decompose the pay gaps at different quantiles of the pay distribution into differences in endowments of wage determining characteristics and differences in the returns for the same characteristics.

This approach allows the examination of the "glass ceiling effect" and the approach of the range, with a statistically acceptable manner. The method is based the regression analysis proposed by Melly (2005), Machado and Mata (2005), and Gosling (2000).

Analyzing the results and statistical findings we see that glass ceiling effect exists in Cyprus and could further be explained on the basis of 3 components; Individual differences between men and women, organizational and social causes.

Racial discrimination was identified as the primary factor responsible for the existence of the phenomenon. Citing References on the effects of civil status of women in shaping the phenomenon of the glass ceiling, it seems more fruitful to seek the explanations needed in the work environment of Cypriot women. In this context we must include the current framework as discussed in this report and in particular the law relating to parental leave and benefits. Such policies as expressed through the law are a powerful incentive for the participation of women in the workforce. But at the same time can in some cases these benefits to work and discouraging to potential career plans, mainly in the parent more involved with the upbringing of the child (which in most cases is the mother). In practice, this means that women may have strong incentives to participate in the workforce but not to do so very intensively. This fact combined with the distorted views and employers' anachronistic ideas, which they consider a woman committed less in

her career than with a man, can explain realistically and largely the existence of the glass ceiling phenomenon.

6.   SSE AND GENDER WAGE GAP – SOCIAL RE- EVOLUTION TOWARDS TACKLING GENDER DISCRIMINATION ISSUES

Gender inequality is not only a pressing moral and social issue but also a critical economic challenge. If women—who account for half the world's working-age population—do not achieve their full economic potential, the global economy will suffer (McKinsey Global Institute Research, 2015).

REFERENCES

Blau, F.D., Kahn L.M. (2001), "Understanding International Differences in the Gender Pay Gap", NBER Working Paper 8200, Cambridge, MA

Blinder, A. S. (1973) 'Wage discrimination: reduced form and structural estimates', Journal of Human Resources 8, 436-55

Booth A., Francesconi M. and Frank J. (2003), "A Sticky Floors Model of Promotion, Pay and Gender", European Economic Review, vol. 47, 295-322

Christofides L.N., Pashardes P., (2000), 'The Gender Wage Gap: A Study of Paid Work in Cyprus', Labour 14 (2) 311-330

Dickens W.T. and Katz L.F. (1986) "Inter-industry Wage Differences and Industry Characteristics", NBER Working Paper No 2014

D.Grimshaw, G.Bosch and J.Rubery. "Minimum Wages and Collective Bargaining: What Types of Pay Bargaining Can Foster Positive Pay Equity Outcomes?" British Journal of Industrial Relations(2013)

G Bosch, J Rubery, S Lehndorff. "European employment models under pressure to change."International Labour Review 146, 3/4(2007)

Grimshaw D. & Rubery J. (2007), 'Undervaluing Women's Work', European Work and Employment Research Centre, University of Manchester, Working Paper Series no. 53

Koenker, R. and G. Bassett: 1978, `Regression Quantiles'. Econometrica 46(1), 33-50

Kunze, A.: 2008, `Gender wage gap studies: consistency and decomposition'. Empirical Economics 35(1), 63-76

Machado, J. A. F. and J. Mata: 2005, `Counterfactual decomposition of changes in wage distributions using quantile regression'. Journal of Applied Econometrics 20(4), 445-465.

Melly, B.: 2005, `Decomposition of differences in distribution using quantile regression'. Labour Economics 12(4), 577-590

M. Karamessini and J.Rubery. M. Karamessini and J.Rubery. ed. Women and Austerity. Routledge IAFFE Advances in Feminist Economics

Neumark D. (1988), "Employer's Discriminatory Behavior and the Estimation of Wage Discrimination." Journal of Human Resources

Oaxaca, Ronald. "Male-Female Differentials in Urban Labor Markets." International Economic Review 14 (October 1973): 693–709

Rubery J. (1992), ''Pay, Gender and the Social Dimension to Europe'', British Journal of Industrial Relations, 30:4, pp. 605-621

Rubery J., Bettio F., Fagan C., Maier F., Quack S., Villa P. (1997), ''Payment Structures and Gender Pay Differentials: Some Societal Effects.'' International Journal of Human Resource Management 8(3): 131 – 49

Wirth, L., (2002), "Breaking through the Glass Ceiling: Women in Management", International Labour Office, First International Conference, Luxembourg

Websites

http://eep.eurostat.ec.europa.eu
http://www.mof.gov.cy/mof/cystat/statistics.nsf/index_gr/index_gr?OpenDocument
http://ec.europa.eu/justice/gender-equality/document/index_en.htm

THE CONTRIBUTION OF SOCIAL ENTREPRENEURIAL ORGANIZATIONS TO REGIONAL DEVELOPMENT THROUGH EDUCATIONAL TECHNOLOGY

Mediha Tezcan[1]

Abstract

A dramatic change is being experienced in the world economy. The experienced economic crisis and the revolution in the field of technology are leading to this change collectively. The economic crisis causes many commercial establishments to be closed, and employees to be out of jobs. Employees who are unable to adapt to the technological revolution also lose their jobs. The numbers of those who are unemployed and are looking for jobs continue to increase in the society.

There is a need for education programs that could contribute in the employability of the unemployed individuals. Social entrepreneur establishments may be involved in education activities aimed to increase employment through education technologies, in order to support social sustainability. The contribution that social entrepreneur establishments may make in regional and sustainable growth by the education they offer through education technologies are being discussed in this research.

Key words: Social entrepreneurship, regional development, educational technology, human capital
JEL Classification: I25, J24, L31, R11, O31

1. INTRODUCTION

Ambiguities continue in many areas of economy. Capitalist crises are more destructive than ever and are observed more frequently. We are frequently witnessing that well-operating; profitable industries are being closed during these days when the change arising from the economic crisis is becoming even more destructive gradually. Thousands of workers are losing their qualified jobs. Employees are being pushed into an environment of unemployment or vulnerable employment. Taxes cannot be collected fairly due to the redistribution systems of nations, and escalating global tax evasions. And this circumstance increases the gap between the winners and the losers even further.

On the other hand, an enormous revolution is experienced in the field of technology. Groundbreaking technologies, such as mobile broad band, big data and artificial intellect are re-shaping the societies and economies. Technological advances generate extraordinary gains in economic efficiency and productivity. Meanwhile, many employees who are unable to adapt to the technological innovations either lose their jobs or are required to increase their employability. This circumstance is disturbing the balance in the labor market.

The economic crisis experienced in the world economy and the enormous changes in the field of technology have led to a destructive transformation in the economy, labor markets and the society. A major task falls on the part of social economy in combatting with this circumstance. Especially on the social entrepreneur establishments.

Social entrepreneur establishments/non-profit entrepreneur organizations may offer education to various groups in the society through education technologies. Social entrepreneur establishments may create education opportunities for those who are unemployed, who want to increase their employability and the disadvantaged individuals and help them to be employed.

This research discusses the contributions that social entrepreneurs may make in regional and sustainable development by trainings they will give through education technologies.

2. SUSTAINABLE DEVELOPMENT

One of the most important objectives of all countries and economies is to ensure sustainable development. The sustainable development concept may be defined as follows:

"Sustainable development calls for a World in which economic progress is widespread; (…) social trust is encouraged through policies that strengthen the community; and the environment is protected from human-induced-degradation […and thus formulates a vision of …] socially inclusive and environmentally sustainable growth" (Sachs, 2015, 3).

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On the other hand, the definition of the social development concept is:

"Social sustainability: A cohesive society based on mutual respect and well-being for all and where social bonds are constantly renewed through policies that integrate newcomers, foster social mobility, and empower citizens through democratic participation" (Rasmussen & Bullmann, 2016, 5).

One of the objectives in social sustainability may be defined as well-being and a qualified life for everyone. Economic growth is the objective indication of economic policies to increase the well-being levels in a country. And, economic growth is defined by the gross national income (GNI)/the gross national production (GNP) (Burchi & Gnesi, 2016). The total of the incomes of citizens and establishments in a country constitutes the gross national income of that country.

The personal income levels of individuals define their personal well-being levels. And increasing the well-being levels of individuals is achieved by increasing the education levels of the individuals.

3. EDUCATION AND SOCIAL OUTCOMES

Education can help individuals to develop their skills and thus contribute in improving the social results. Individuals who are better-educated generally also have a better tendency to be employed, to be in good health, to maintain healthier lifestyles, to take a more active part in the society and to exhibit higher levels of life-satisfaction as compared to their peers who are less-educated (OECD, 2015a).

The main findings of the Social Outcomes of Learning project were (OECD, 2015a, 24):

- Education can contribute to improving social progress and well-being, mainly through increased competencies or skills.
- Skills are important pathways through which education affects social outcomes.
- Education is among the most cost-effective strategies to address social challenges such as health, civic engagement and crime.
- The power of education is limited if children's cognitive, social and emotional skills are not development at an early stage.
- Parents, teachers, school administrators and the community play an important role in promoting healthy lifestyles and active citizenship.
- Policy coherence across sectors and levels of education is needed.

Education can help provide a variety of skills that empower individuals to better meet the challenges of daily life.

4. HUMAN CAPİTAL

The OECD defines human capital briefly and concisely as follows:

"The knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being" (OECD, 2001, 18).

Human capital has been defined as "acquired human capabilities". Human capital is related with earnings, efficiency, economic growth, social development and well-being.

The origin of the human capital concept may date all the way back to the 18th century. The first economists have stated that mankind and the competences acquired by mankind are one of the most important elements that constitute the wealth of nations (Smith, 1776; Farr, 1853; Marshall, 1920). Economists have used the human capital concept for the first time around the middle of the 20th century (Mincer, 1958; Schultz, 1961; Becker, 1964). These economists have asserted that people who invest in their educations formed a skill and ability stock (a capital) that would ensure long-term returns. At the same time, they have stated that the investment of individuals in their education may help to leverage the growth of the country economy by creating an increase in efficiency.

The fact that human capital accumulation is one of the important components that form economic growth has also been discussed in the endogenous and exogenous growth models. Solow (1957), Romer (1986, 1990) and Lucas (1998) are the first economists that have established the theoretical connection between human capital, technology and growth. In our day, the human capital theory maintains its significance. Many researches examining human capital are published.

5. HUMAN CAPITAL AND REGIONAL DEVELOPMENT

Education systems can contribute to growth and progress. Strengthening education and training is an investment in human capital. Globalization, innovation and growth have an important human capital component, and the comparative advantage of many countries and regions (OECD, 2015b).

Regional economies have many factors. Education is an important factor in regional development. Education is not the same between regions. The education differences arise from the differences in the developments of regions. Education plays a key role in the reduction of inter-regional development differences.

Human capital has a crucial role in regional development since individuals who are better-skilled and better-educated tend to be more productive and individuals also tend to be more productive in regions where the levels of human capital are higher. Higher levels of human capital positively influence regional economic growth and indicate regional wealth (OECD, 2010).

Educational technologies assume two key roles in the elimination of global differences. The first is the economic inequalities, the differences in educational investment between regions and countries. There are deficiencies in the educational equipment and activities of the developing countries and regions. This is an indicator of the differences in the education activities between regions, in fact a physical digital division. Furthermore, there also are qualified educator deficits between regions. And secondly, radical, ethnic and regional distinctions between regions lead to the social and cultural settings of radical differences. Education technologies support educators, schools and social entrepreneur establishments to continue education in regions with different social and cultural settings (Spector, 2014). Distance education technologies assume a critical role in the elimination of inter-regional education differences.

The collective operation of the public, private and a social economy establishment in regional development will generate power. Long-lasting, sustainable regional economic development can be achieved through the collective operation of these three establishments (Noya, 2009).

6. EDUCATIONAL TECHNOLOGY

The enormous technological advances that have been achieved in the field of communication and information technologies have influenced the education sector as well as all sectors of the economy. The innovations in the education technologies offer vast opportunities for education institutions, teachers and students alike. These innovations in the instructional technologies have offered students the opportunity to study at any time and any place they want, by using the education materials they want.

Defining educational technology and instructional technology:

"Educational technology should stand for a wise application of the available human and non-human resources for providing appropriate solution to the educational problems and to improve the processes and products of education" (Mangal & Mangal, 4).

"Instructional technology is made up of 'things of learning', the devices and the materials which are used in the processes of learning and teaching" (Anglin, 1995, 28).

Examples of traditional education technology devices and materials: Printed materials, Video-cassettes, Cable TV, Satellite TV, Computers, and others.

Examples of new education technology tools: Mobile phone, Tablet computers, Webcasts, Skype, Vods, SecondLife, WhatsApp, Blog, Twitter, Facebook, Google, Mendeley, Linkedin, YouTube, Free resources, MOOCs, E-Library, and others.

6.1 Educational technology and pedagogies

Information and communication technology (ICT) provide many contributions to the science of education. We may list the following as examples of the contributions of the ICT's to education (Barron, Ivers, Lilavois, & Wells, 2006; Ruberg, Calinger & Howard, 2010; Toit, 2015):

- Accelerate and enrich learning writing skills,
- Motivate and engage student in learning,
- Content knowledge and curriculum support,
- Flexibility for students with special needs,
- Instructional effectiveness,
- Active learning,
- Critical thinking,
- Individualization,

- Strengthens teaching,
- Cooperative learning,
- Communication skills,
- Problem solving,
- Creativity and innovation,
- Continuous lifelong learning,
- Introduction to 21st century skills
- Multicultural education

Today, digital skill levels need also to be raised among employees in all economic and regions sectors, youths, and among job seekers to improve their employability" (Degryse, 2016).

7. SOCIAL ENTREPRENEURSHIP

Social entrepreneurship is creating apparent social value. Social entrepreneurship can be defined as "the creation of a social value that is generated by collaborations which usually suggest an economic activity" (Hulgård, 2010, 4). They are organizations established by volunteers.

Social entrepreneurs recognize that multidimensional solutions are essential for solving the social problems. Social entrepreneurship organizations are becoming increasingly more widespread, and are serving in many areas. Social entrepreneurship organizations include areas such as; reducing poverty, rearranging welfare distribution, increasing employment level, education opportunities aimed to reduce unemployment, increase of human capital build up and others.

Social entrepreneurship organizations are providing contributions to the lifelong learning via educational technologies. Lifelong learning includes areas such as;

- The disadvantaged (gander, crime, and ethnic discrimination, etc.) individuals and groups,
- The poor individuals and groups,
- The unemployment individuals and groups,
- The increasing employability individuals and groups,
- The increasing education level different in regionals.
- and others groups.

Social entrepreneurship organizations can help provide a variety of skills through educational technologies. Therefore, those organizations contribute to increasing human capital investment.

"Social entrepreneurship and innovation to drive systemic changes that enrich the lives of all. Both have worked to empower people to succeed in a rapidly changing world by building their skills as problem solvers and critical thinkers" (Ashoka, 2014, 2).

7.1 The social entrepreneurship social outcomes of lifelong learning

Formal, informal, non-formal and lifelong learning attainment is positively associated with social outcomes. Education opportunities are becoming critical factors in enhancing regional competitiveness and economic performance (OECD, 2007).

Skills play a central role in ensuring people find and keep employment (OECD, 2016). Lifelong learning can help provide a variety of skills that empower individuals to better meet the challenges of daily life. Social entrepreneurship organizations are becoming increasingly social outcomes of lifelong learning.

Today, people are suffering from unemployment for various reasons, such as economic crisis, inability to adapt to technological innovations. Certain individuals, for example the disadvantaged, the poor and those who live in less developed regions can experience unemployment problems more. And sometimes, individuals who are already working want to increase their employability in order not to lose their jobs or to sustain their jobs. Social entrepreneur establishments may offer education services to those who are unemployed or do not want to lose their jobs for a variety of reasons.

The social entrepreneur establishments will generate a tangible advantage by giving education through education technologies. They will create an added value in the economy when individuals are able to find jobs following the education they have given to the unemployed.

8. CONCLUSION

Social entrepreneur establishments/not-profit entrepreneur organizations may help the unemployed, the individuals who want to improve their employability and the disadvantaged individuals in the society to find jobs, by creating education opportunities for them through education technologies. The social entrepreneur establishments should work together with the public and private sectors in a planned manner for the reduction of inter-regional education differences. The collective operation of these three entities will decrease the education distinctions between regions, and the lack of education differences between regions will influence the social outcome in the economy positively. The increase in the educational levels of the regional public will also increase the efficiency, productivity, competitive force and income of individuals and industries in that region. This, in turn, will reduce the gap in the distribution of income between regions, and ensure the continuity of social and sustainable development. Social entrepreneur establishments will contribute in improving and increasing the well-being and living quality in the regions by offering lifelong learning opportunities to the individuals.

REFERENCES

Anglin, G. J. (Ed.), (1995). *Instructional technology: Past, present, and future. (2nd ed.).* Colorado: Libraries Unlimited, Inc.

Ashoka. (2014). *Social innovation mapping: Social entrepreneurs changing lives through ICT.* Bangkok, Thailand: Ashoka Publishing.

Barron, A. E., Ivers, K. S., Lilavois, N., & Wells, J. A. (2006). *Technologies for education: A practical guide (5th ed.).* Connecticut, CT: Libraries Unlimited.

Becker, G. S. (1964). *Human capital: A theoretical and empirical analysis with special reference to education.* New York, NY: USA, NBER Publishing.

Burchi & Gnesi (2016). A review of the literature on well-being in Italy: A human development perspective. *Forum for Social Economics*, 45(2-3), 170-190.

Degryse, C. (2016). *Digitalisation of the economy and its impact on labour markets.* European Trade Union Institute, Working Papers 2016.02.

Hulgård, L. (2010). Social economy and social enterprise: An emerging alternative to mainstream market economy? *China Journal of Social Work*, 4(3), 201-215.

Lucas, R. (1988). On the mechanics of economic development. *Journal of Monetary Economics*, *22*(1), 3-42.

Mangal, S.K., & Mangal, U. (2011). *Essentials educational technology.* New Delhi, India: PHI Learning Private Limited.

Marshall, A. (1920). *Principles of economics.* London, England: Macmillan.

Mincer, J. (1958). Investment in human capital and personal income distribution. *Journal of Political Economy, 66*(4), 281-302.

Noya, A., Clarence, E., & Craig, G. (2009). *Community capacity building: Creating a better future together.* Paris: OECD Publishing.

OECD (2015a), *Skills for Social Progress: The Power of Social and Emotional Skills*, OECD Skills Studies, OECD Publishing.

OECD. (2001). *The well-being of nations: The role of human and social capital.* Paris, France: OECD Publishing.

OECD. (2007). Higher education and regions: Global competitive, locally engaged. Paris: OECD Publishing.

OECD. (2010). *Higher Education in regional and city development: Catalonia, Spain.* Paris: OECD Publishing.

OECD. (2015b). *Education policy outlook 2015: Making reforms happen.* Paris: OECD Publishing.

OECD. (2016). *Society at a glance 2016: OECD Social indicators.* Paris: OECD Publishing.

Rasmussen & Bullmann (2016). *The social democracy to come.* Published in cooperation with the Friedrich-Ebert-Stiftung Europe Office. Social Europe occasional Paper No: 11. October 2016. https://www.socialeurope.eu/book/op-11-social-democracy-come/

Romer, P. M. (1986). Increasing returns and long-run growth. *Journal of Political Economy*, *94*(5), 1002-1037.

Romer, P. M. (1990). Endogenous technological change. *Journal of Political Economy*, *98*(5), 71-102.

Ruberg, L., Calinger, M., & Howard, B. C. (2010). Evaluating educational Technologies: Historical milestones. In L. Tomei. (Ed.), *ICTs for modern educational and instructional advancement: New approaches to teaching* (pp. 285-297). New York, NY: Information Science Reference (An imprint IGI Global).

Sachs, J. (2015). *The age of sustainable development*. New York: Columbia University Press. In P. N. Rasmussen & U. Bullmann (2016). *The social democracy to come (pp. 3)*. Social Europe occasional Paper No: 11. October 2016.

Shultz, T. W. (1961). Investment in human capital. *American Economic Review*, *51*(1), 1-17.

Smith, A. (1776). *An inquiry into the nature and causes of the wealth of nations*. London, England: Methuen.

Solow, R. M. (1957). Technical change and the aggregate production function. *Review of Economics and Statistics*, *39*(3), 312-320.

Spector, J. M., Merrill, M. D., Elen, J., & Bishop, M. D. (Editors). (2014). *Handbook of research on educational communications and technology*. (4ᵗʰ ed.), New York, USA: Springer.

Toit, J.D., (2015). *Teacher training and usage of ICT in education: New directions for the UIS global data collection in the post-2015 context*. Montreal, Canada: Unesco Institute for Statistics.

GENDER-RESPONSIVE BUDGETING AS A TOOL TO GET EQUAL SOCIETY: CASE STUDY OF MONITORING GENDER RESPONSIVE BUDGETING IN ESKİSEHİR FROM PERSPECTIVE OF ESKİŞEHİR EQUALITY PLATFORM

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Abstract

Although Gender-Responsive Budgeting (GRB) is government planning, programming and budgeting that contributes to the advancement of gender equality and the fulfillment of women's rights, it meets rather local government implementations via analysis of the gender-differentiated impact of revenue-raising policies and the allocation of domestic resources. Once it is understood that decisions that are not related to the budget may also have a major impact on the distribution and use of resources, GRB is an inevitable tool in context of decentralized government with regards to women's access to services and resources; capacity of women councilors to formulate budgets that address gender-equity issues, and women's organizations. This paper deals with the case study of GRB in Eskişehir/Turkey. At this very point, Eskisehir Equality Platform (EEP) consists of 24 members from different NGO's and Universities comes up as Turkey's first local women monitoring platform for gender sensitive budgeting. EEP's activities and their road map to overcome gender gap in society will be discussed in this paper.

Keywords: Gender-Responsive Budgeting, Gender Mainstreaming, Gender-Equality
JEL classification:H60, H61, Z1

INTRODUCTION

Gender Responsive Budgeting (GRB) is a study field and policy tool at which all the steps of budgeting process are structured and assessed by considering the needs and rights of men and women. Feminist economics approach has affected budgeting policies and resulted in Gender Sensitive Budgeting methods. Ensuring gender equality is seen as a social policy and states use it as a financial tool (Demir 2011). Public services given by the states to the men and women are not equal or the same. These inequalities are reproduced in social life. Budget has become a tool to produce these inequalities. If the budget is designed by another approach, it could be a tool to decrease the gender inequality and to ensure the sustainability of development.

Gender Responsive Budgeting first appears as "women budgeting" in early 1980's at Australia. In this study we are using it as Gender Responsive Budgeting. After struggles of women movements at different platforms, some important steps are taken. One of them is affirmative action, the second one is gender mainstreaming.

Affirmative action: An action of policy favoring those who tend to suffering discrimination especially in relation to employment or education; positive discrimination. For example, opening women's shelters, providing incentives to women entrepreneurs, or to prepare action plan to get more women working in the life.

Gender mainstreaming: It is defined as considering men and women equality principle at all levels of politic processes. Thus, the politicians set policies by looking from the gender perspectives. Glass ceiling syndrome is an important example of this concept.

In the development of gender responsive budgeting a series of conferences were conducted;

- June 19- July 2 1975 in Mexico City the First World Conference on Women. In this conference three main targets have been set. Eliminating gender discrimination, inclusion of women in the development process, and more women contribution to World peace.
- July 14-July 30 1980 Copenhagen, The Second World Conference on Women. In this conference ensuring equalities in education, employment, and health services were set as the main targets.

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- June 16-June 16 1985 Nairobi, The Third World Conference on Women. In this conference it t is emphasized that a limited number of improvements were made for women equality.
- September 4-September 15 1995 Pekin, The Fourth Conference on Women. In this conference gender responsive budgeting is considered as an important subject. For the first time, governments systematically revised their policies such that women will benefit from public spending and public services more effectively. They included gender equality goals into their topics.
- Approving states of Committee on the Elimination of the Discrimination Against Women (CEDAW) rectified the importance of GRB significantly.
- One of the eight targets of Thousand's Year Development Plan of United Nations is related with gender equality and women's empowerment.
- One of the components of United Nation's Joint Programme for Promoting the Human Rights for Women is GRB.

2. WHY GENDER RESPONSIVE BUDGETING?

Gender-responsive budgeting (GRB) is government planning, programming and budgeting that contributes to the advancement of gender equality and the fulfillment of women's rights. It entails identifying and reflecting needed interventions to address gender gaps in sector and local government policies, plans and budgets. Gender budgeting is part of the gender mainstreaming strategy. Gender budgeting focuses on a gender-based analysis and an equality-oriented evaluation of the distribution of resources. These resources are mainly money, time as well as paid and/or unpaid work.

GRB should not be considered only as a financial document. It occurs as a result of the public will to the Political power for the implementation of political and economic of priorities. The GRB itself is management and it's first outlet is political.

GRB is a political solution recommendation for women to receive a greater share from the budget, to give equal duty to vote and recommend a political solution although not represented in councils. It is developed in the female fight to have access to participatory democracy.

GRB was considered a neutral concept so far but nowadays it is discussed that is not neutral. Even legislation can lead to inequality in implicit ways (Şahin 2011).

GRB Benefits;

• **Provides gender equality;** It leads to increased awareness and prepare the ground for political decisions.

- Provides progress in women's rights
- Contributes to reduce Poverty more effectively
- Improving economic efficiency
- Improving Accountability and transparency
- Monitoring achievements of the policy objectives
- Development of gender sensitive participatory approaches
- Ensuring democratic governance
- Development of gender sensitive participatory approaches
- Ensuring democratic governance

3. GENDER ORIENTED BUDGETING AT MUNICIPATILIES

Cities are public places for women to participate decision-making at the local level. Statistics show that, local governments are predominantly male and number of women in the creation of policies and projects is quite a few in these councils. Women have to fight for these strategic needs and ensuring legislation of the rules about themselves is their most fundamental right. There are two fundamental steps to accomplish these (Kümbetlioğlu, 2001).
  - Creating gender awareness,
  - Creating the power to affect decision mechanisms.

Local gender oriented budgeting states the requirements why and how the policies, programs, and activities carried by a municipality for women, men, boys, and girls should be different. In other words, local governments have important roles and responsibilities in achieving gender equality and having an inclusive local democracy. Because they are in a position to eliminate gender inequality (Günlük-Şenesen,

2009). Municipalities have many facilities because of their positions. Why do we need gender oriented budgeting at municipalities is explained as follows (Klatzer, 2011).

3.1. Local governments know the local conditions and needs very well.

Local authorities are in close contact with citizens. Therefore, they can identify inequalities in the most accurate manner. In addition, they are in a position to adapt gender oriented programs, determine policies, and transfer resources that can eliminate gender inequalities.

3.2. Local governments are in a position to get the most effective manner to eliminate gender inequalities

During the transformation of economic goals into the local goals, municipalities offer many opportunities in the determination of priorities and needs of women, men, girls, and boys. They also develop policies to meet the above mentioned needs in the best way.

3.3. Local governments are the most effective units to provide services to citizens.

Local governments have a responsibility to bring public services to citizens. Along these responsibilities, they have authority to set gender equality as a priority target and allocate resources to meet different needs of men and women.

3.4. Local governments play an important role in social and economic development

Women will have more chance to get education and find income bringing jobs if their involvement with non-income jobs becomes less (housework, child, retarded and elderly care).

Who Will Be Responsible For Monitoring Gender Budget In Eskişehir Metropolitan Municipality?

Eskişehir Equality Platform (ESEP) was formed by several non-profit organizations such as associations, foundations, unions, chambers. ESEP is Turkey's first local women monitoring platform for GRB. GRB project showed two results in Eskisehir. It was established at a search conference in November7, 2014. It is based on voluntary work.
Project Partners are:

      1. Eskişehir Osmangazi University Women's Studies Research Center (ESKAM)
      2. Anadolu University Women's Studies Research Center (AKAM)
      3. Eskişehir Metropolitan Municipality
      4. Tepebaşı Municipality

ESEP has had an opportunity to make a hot dialogue with reputable people in GRB literature and invited some of them to search conference and 3-day workshops.

- ESEP has been established on a voluntary base in the end of search conference.
- Women's NGOs have participated in the 3-day workshops which were made for intensive gender budget works.
- ESEP has entertained these participations based conference and workshops and witnessed an intense interest of multidisciplinary participants.
- ESEP has achieved making a road map and working principles on a nonhierarchical base.
- ESEP has developed a tolerance to different gender orientations (LGBTi ind.)
- ESEP has learned to use the "monitoring right" to monitor public expenditures without being a legal entity
- Has experienced that NGOs, Universities and local governments could effectively work in a collaborative way.

During the establishment days of ESEP, Equality Department's at Municipalities is formed. Equality Department's at Municipalities;
- works under the Directory of Women, Children and Disabled People

- makes capacity development for gender responsive planning and budgeting with some applications, trainings (i.e, training on car maintenance, house maintenance, creative writing) and activities (i.e, women careerists in the Fair, getting to Know the Occupations),

- mobilizes the councilors to make an Equality Commission to have some decisions in local level planning and budgeting processes,

- checks GRB level in the indicators of 5-year strategic plan of the municipality,

- monitors local and international funds to address women's priorities,

- does comparative situation analysis on two departments of the Municipality,

- develops some corrective and preventive actions according to claims complaints and suggestions sent to the Municipality.

This department supported ESEP to monitor budget processes for GRB and established communication with the related people in the Municipality.

Conclusion

Gender-Responsive Budgeting (GRB) is government planning, programming and budgeting that contributes to the advancement of gender equality and the fulfillment of women's rights. The ESEP project's benefits are created under the GRB.   Some of these benefits are;

- Visit to Eskişehir Metropolitan Municipality, Odunpazarı and Tepebaşı Municipalities; Target of this action: Monitoring GRB during the strategic plan preparation process of the municipalities methodology:
  - ESEP become external partner of the Municipalities
  - ESEP informed the Municipalities about why "" Gender Responsive Budget" must be included in 2015-2019 Strategic Plan.
  - Eskişehir Metropolitan Municipality revised 4 th target and its objectives of the 2014 2019 Strategic Plan as "Eskişehir Metropolitan Municipality proceeds to aim increasing the administrative quality and being a gender responsive nimble and pioneer Municipality".
- Monitoring Budgets of the Local Governments:
  - One of the main objectives of ESEP is to monitor Local Budgets twice a year.
  - ESEP initiated the visit program with the General secretary, The Social Services Department and The Equality unit of the Metropolitan Municipality.
  - As a result of the visit, it is decided to establish an Equality Commission to monitor gender responsiveness in the decision making process, especially in the contraction plans.
  - Just after the decision, Equality Commission is set up with the directorate of construction affairs, the directorate of environmental protection and control, the directorate of social and cultural affairs, the directorate of technical services and the directorate of social services.

- Collecting and reporting information from 63 institutions about their retrospective gender responsive activities.
  - ESEP protocol (Appendix 1) developed in 2010 had been signed by 63 institutions in the period of 2010-2011, however no feedback had been taken after.
  - Information form was prepared for collecting information from the signori institutions about their retrospective gender responsive actions to monitor their proceeding.
  - ESEP also took related prudential actions of the institutions in the workshop.
  - ESEP evaluated and reported the information forms taken from the institutions,

- Perpetrations of web site

Domain of the "**eskisehiresitlikplatformu.org**" was taken and broadcasted in Jan. 2015.

- Gender Equality Workshop
    - Organized on November 7 2014
    - %88 of 63 invited institutions were participated.
    - The aim of the workshop was to refresh the Gender Equality Protocol of the City which was signed in 2011
    - The workshop was done in two phases. In the first phase; Eskisehir Metropolitan municipality, Odunpazarı municipality and Tepebaşı Municipality presented the action raised in the framework of Gender Equality contributions to the establishment process. Moreover, participants shared the experience taken during the proceeding. In the second phase group Works were issued under some headlines such as education, health, employment, statues of the women, violence against women and women's right of social life.
    - Groups who are composed of public bodies, local government universities and NGO's discussed the main problems and offered solutions.

- Preparations of the Workshop Book:
    Methodology and output of the "Gender Equality Workshop" were prepared, published and sent to the participants& nonparticipant institutions.

- Site visit to the Municipalities of Diyarbakır
    - Member of ESEP visited the Municipalities of Diyarbakır in January 2015.
    - Target of visit was to have information exchange about Gender Sensitive Municipality Actions.

REFERENCES

Demir, M. (2011), "Devlet Bütçesinin Cinsiyet Eşitliğini Sağlamadaki Rolü ve Türkiye", Bütçe Dünyası Dergisi, Sayı:35, ss. 136-150

Günlü-Şenesen, G. (2009), "Cinsiyete Duyarlı Bütçeleme: Küresel, Ulusal ve Yerel Boyutlar", Uluslararası Yerel Yönetimler ve Kadın Konferansı, Diyarbakır Bağlar Belediyesi, 3-4 Mayıs 2008, Diyarbakır, 41-47

Klatzer, E. (2011), "Yerelde Cinsiyete Duyarlı Bütçeleme Kılavuzu", İstanbul: TESEV.

Kümbetoğlu, Belkıs (2001), "Kentsel Alan ve Yerel Yönetimlerde Toplumsal Cinsiyet, Yerli Bir Feminizme Doğru" (der. Aynur İlyasoğlu & Necla Akgökçe) (İstanbul: Sel) 259-82.

APPENDIX 1

TOPLUMSAL CİNSİYETE DUYARLI BÜTÇELEME
PROTOKOLÜ

Eskişehir, kadın hareketinin etkin olduğu kentlerdendir. Türkiye'de kadın cinayetlerinde 2002'den 2009'a kadar %1.400 oranında artış olduğu bilgisi kamuoyu ile paylaşıldığında, şehirde bu konudaki duyarlılık artmış ve çeşitli platformlardaki Sivil Toplum Kuruluşları bir araya gelmiştir. Oluşan ortak platform, 2011 yılında kadına yönelik şiddetin önlenmesi amacıyla "Eskişehir Toplumsal Cinsiyet Protokolü"nü hazırlayarak 63 kurum ve kuruluşa imzalatmıştır.

Bu çabalar, daha sonra da sürdürülerek 2013 yılında BM kuruluşları UNDP ve UN Women ile Sabancı Üniversitesinin desteğiyle "Kadınların İnsan Haklarının Geliştirilmesi" ortak programı çerçevesinde Toplumsal Cinsiyete Duyarlı Bütçeleme (TCDB) Uygulamalı Eğitimi Projesi kapsamında çalışmaları yürütecek olan bağımsız bir platform olan **"Eskişehir Eşitlik Platformu (ESEP)"** kurulmuştur.

ESEP İlkeleri:

Toplumsal cinsiyete duyarlı olmak

Temsil edilen kurumun harcamalarının toplumsal cinsiyete duyarlı olarak düzenlenmesine katkı sağlamak

Yerel yönetimlerin TCDB çalışmalarına destek olmak

TCDB konusunda ESEP'in önerilerini dikkate alarak uygulamalarına yansıtan Yerel yönetimlerin çabalarını basınla paylaşmak

"ESEP'in şahsıma/kurumuma yapmış olduğu bilgilendirme ziyaretinde tarafıma sunmuş olduğu bu protokolde yer alan "ESEP İlkeleri"ni kabul ediyorum.
Seçilmem halinde, TCDB ilkelerine uygun hareket edeceğimi, kadınların istihdamına önem vereceğimi şahsım ve kurumum adına taahhüt ederim."

İsim:

Kurum:

Tarih:

İmza:

SOCIAL ECONOMY ENTERPRISES AND MARKET STRUCTURE

EFFECTS OF INNOVATION TYPES ON ENTERPRISE PERFORMANCE IN ALBANIA

Fatma Jaupi[1], Ogerta Elezaj[2]

Abstract

Innovation is a crucial factor for the survival and the competitive strength of Albanian firms. Firms have to adapt to increasing global competition and dynamics. Albania's growth reflects in part the one-time benefits of restructuring toward a market economy; Future gains will be increasingly dependent on economic policies, especially in private sector. This requires increased R&D and innovation to enhance competitiveness and national value added.

The purpose of this paper is to investigate how the concept of product, marketing and organizational innovation manifests itself in the context of small to medium sized enterprises in Albania.

In addition this paper discusses the challenges and opportunities that globalization raises for SMEs as they are faced with pressures to reduce production costs, increase productivity, and become more knowledge intensive. It then focuses on how innovative these SME-s are, and identifies what is the impact of marketing and organizational innovation level at the company performance, how it influence and enhance the competitiveness in global markets.

The data coming from a survey carried out in 120 SMEs in the country with an innovative approach, provide evidences for the last three years (2012- 2015) and are analyzed in the light to identify the focus of these companies related to acquire innovative knowledge, processes and product.

Keywords: Product innovation; process innovation; competitiveness; SME innovation strategy.

1. INTRODUCTION

Innovativeness is a fundamental instrument of growth strategies for enterprises in Albania to provide with competitative edge and also to enter new markets. Nowadays enterprises motivated by the increasing competition in local and global markets, are grasping the importance of innovation, since changing technologies, organizational types, or marketing approaches rapidly erode the value added of existing products and services. Thus, innovations is becoming an important component of Albanian enterprises strategies for several reasons such as to apply more productive manufacturing processes, to perform better in the market, to seek positive reputation in customers' perception and as a result to gain sustainable competitive advantage. Innovation as a concept is not anymore only related to products and processes, but is also related to marketing and organization innovation. Schumpeter (1934) described different types of innovation: new products, new methods of production, new sources of supply, the exploitation of new markets, and new ways to organize business. In this study, we aim to explore innovations and their effects on enterprise performance by examining product, marketing and organizational innovations. Therefore the main contribution of this study is the comprehensive innovation-performance analysis based on empirical data, which not only revealed the positive effects of innovation types on enterprise performance but also yielded a path of relations among these variables using structural equation modelling approach.

2. DATA SOURCE

A sample of 440 companies was randomly selected to be interviewed. 120 questionnaires were returned with the status fulfilled. These data are used to analyse the relationship between performance and marketing, product and organizational innovation.

The majority of companies (55%) are manufacturing companies, followed by service sector representing 41% of the total. Only 4% of the companies operate in primary sector.

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Figure 1. Font sizes and styles (Times New Roman)
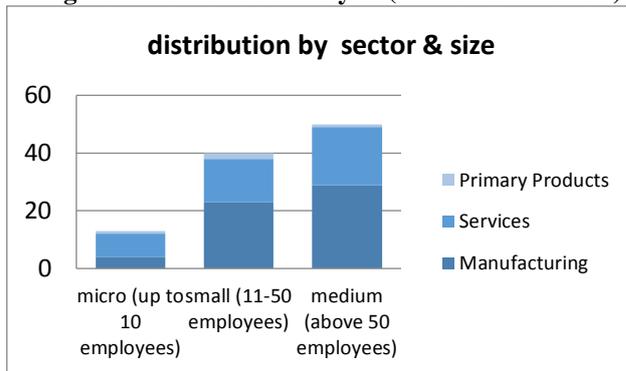
3. FINDINGS

SPSS was used for statistical analyses to calculate both factor analyses and the logistic regression.

An exploratory factor analysis was first undertaken to reduce the data into a few underlining dimensions. The dimensions were thereafter subject tor further regression analyses. . The factor analysis results indicate that all items load on their corresponding constructs and demonstrate adequate validity appropriate for number of samples (sample size) and the strength of the relationship between indicators (variables).

The adequacy of sampling is tested through KMO (Kaiser 1970, 1974), while the strength of the relationship among variables is assessed through Bartlett's test of sphericity (Bartlett, 1954).

3.1. Marketing Innovation

A marketing innovation is the implementation of a new marketing concept or strategy that differs significantly from the enterprise's existing marketing methods and which has not been used before.

- It requires significant changes in product design or packaging, product placement, product promotion or pricing.
- Exclude seasonal, regular and other routine changes in marketing methods.

The following factors were analyses:

IPI1	Development of new channels for products and services offered by our corporation is an on-going process.
IPI2	We deal with customers' suggestions or complaints urgently and with utmost care.
IPI3	In marketing innovations (entering new markets, new pricing methods, new distribution methods, etc.) our company is better than competitors.

The results of the explanatory factor analysis showed that the 3 identified marketing innovation factor could be reduced to one underlying dimension with Eigen values of at least one.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.577
Bartlett's Test of Sphericity	Approx. Chi-Square	59.272
	df	3
	Sig.	.000

KMO measure in this study was 0.577and the value of the significance of the statistic of Bartlett's test which is an approximation of $\chi 2$ statistic is less than 5%, namely 0.00 which shows that factor analysis is suitable for identifying the studied structure. The significant value less than 0.05 indicates that these data do not produce an identity matrix and are thus approximately multivariate normal and acceptable for further analysis.

Component Matrixa

	Component
	1
marketing inov1	.879
marketing inov2	.713
marketing inov3	.760

3.2. Organisational Innovation

An organizational innovation is a new organizational method in the enterprise's business practices (including knowledge management), workplace organization or external relations that has not been previously used by your enterprise.

- It must be the result of strategic decisions taken by management.
- Exclude mergers or acquisitions, even if for the first time.

MI1	Rules and procedures within our organization are regularly renewed
MI2	We regularly make changes in our employees' tasks and functions
MI3	Our organization regularly implements new management systems
MI4	The policy with regard to compensation has been changed in the last three years
MI5	The intra- and inter-departmental communication structure within our organization is regularly restructured
MI6	We continuously alter certain elements of the organizational structure
MI7	Our employees may pursue different roles within the organization
MI8	We usually alter the way in which we set our objectives
MI9	We regularly invest in developing our structure so as to make the most of our staff

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.854
Bartlett's Test of Sphericity	Approx. Chi-Square	295.644
	df	28
	Sig.	.000

KMO measure in this study was 0.854and the value of the significance of the statistic of Bartlett's test which is an approximation of $\chi2$ statistic is less than 5%, namely 0.00 which shows that factor analysis is suitable for identifying the studied structure. The significant value less than 0.05 indicates that these data do not produce an identity matrix and are thus approximately multivariate normal and acceptable for further analysis.

Component Matrixa

	Component
	1
MI [MI2]	.775
MI [MI3]	.905
MI [MI4]	.678
MI [MI5]	.815
MI [MI6]	.739
MI [MI7]	.538
MI [MI8]	.561
MI [MI9]	.797

Based on the component matrix only one factor is important which will be included in the regression analyses.

3.3. Logistic Regression

After the factor analyses of marketing innovation and organizational innovation, a logistic regression was done to evaluate the relationship between performance and innovation variables. The dependent variable is performance (which is a categorical variable) and independent variables: product innovation, marketing innovation and organizational innovation.

The research question is: Does marketing innovation, product innovation and organizational innovation make a substantial impact in explaining enterprise performance?

The data are process in SPSS, and the output of logistic regression is:

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1	Marketing innovation	.877	.314	7.806	1	.005	2.405
	Organizational innovation	.169	.193	.770	1	.380	1.184
	Product innovation	-.981	.659	2.218	1	.136	.375
	Constant	-4.169	1.669	6.239	1	.012	.015

Based on the regression results marketing innovation has an impact in the enterprise performance. Product innovation and organizational innovation do not influence the enterprise performance. So we can say for a one-unit increase in marketing innovation, we expect to see about0.877 increase in the odds of improvement in performance.

4. CONCLUSIVE REMARKS

With the expansion of globalization, innovation has become an important strategy for companies and national economies, especially for developing countries. This study aimed to investigate the relationship between innovation factors and enterprise performance. In order to support an empirical study, Albanian SMEs were selected and were interviewed. The results show that the most important Innovation aspect influencing enterprises performance was marketing innovation.

The organizational and product innovation do not affect enterprise performance.

The findings support the claim that marketing innovation performed in Albanian SMEs has positive and significant impacts on performance, product and organizational innovation has no impact on performance. Because of lack of resources managers are not focus or do not invest in product and organizational innovation.

On the other hand, it is evident that organizational innovations and product innovations play a fundamental role for innovative capabilities. Organizational innovations have a strong and direct impact on performance. Therefore, it is safe to suggest that managers need to pay more attention to organizational innovations, which have a crucial role for innovative capabilities.

Product innovation also is a critical driver for innovative performance, which also should act as a bridge carrying positive impacts of process innovations to performance. For these reasons, managers ought to invest more on innovative capabilit*ies and support new attempts of introducing innovations of each type.*

REFERENCES

[1] National Institute of Statistics www.instat,gov.al

[2] www.pacinno.eu

[3] Sutton, J. (1998). Technology and Market Structure. Cambridge: The MIT Press.Lööf, H. and A. Heshmati (2006), "On the Relationship between Innovation and Performance: A Sensitivity Analysis," Economics of Innovation and New Technology, 15,

[4] Mairesse, J. and P. Mohnen (2010), "Using innovation surveys for econometric analysis," UNUMERIT Working Paper 2010-023.

[5] Duguet E., 2002, Innovation Height, Spillovers and TFP Growth at the Firm Level: Evidence from French Manufacturing, University of Paris 1, Cahiers de la MSE, EUREQua 2002:73

[6] Verbeek M., 2000, A Guide to Modern Econometrics, Chichester: John Wiley & Sons Ltd

NEGATIVE FACE OF SOCIAL CAPITAL

Filiz Tepecik[1]

Abstract:

Social capital is thought to be an important part of the institutional structure of economic development. Social life, networks, trust and norms are associated with social control, mobility of individuals in society, democracy. And they are considered good generally in all aspects. However, social capital is, in fact, like a knife that cuts double sides. There are its bad aspects as its good features. There are even worse consequences of good qualities.

In this context, this study primarily reviews the origins and definitions of social capital in the writings of Bourdieu, Loury, and Putnam, among other authors. Then quickly it focuses on the dark face of social capital. Topic is being developed with examples from Turkey.

Keywords: *Social capital, negative effects of social capital, exclusion*
***JEL Classification:*** *Z1, L3, I3*

INTRODUCTION

After initial studies of Lydia Hanifan (1916) or Jane Jacobs (1961), Glenn Loury began to reuse the social capital concept to explain economic events in the 1970s. Social capital, for Loury, was impact of one's own social position on him/her achievement (as cited in Encyclopedia.com, 2008). In other words, social capital has contained social status, contacts and relationships in society since the early 1900s.

After Lorry, a more detailed description can be found in Bourdieu. Bourdieu defined social capital as "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition" (Bourdieu, 1986: 51 [248]; Claridge, 2004). As can be seen, this definition also has included human relations, contacts and networks, and draws attention to the structure of social capital which is different from other capital types.

Actually social capital is an investment like other types of capital. The investment implies that an actor has given up short-term gains for long-term interests. In this just case, we can say, by following Bourdieu, individuals are aiming to acquire returns through participation in a group or network. Social capital can be substitute or complement to other resources (Adler & Kwon, 2009: 94). In the absence of financial or human capital, his / her contacts or friends can cover this deficit. Additionally, social capital must be periodically reviewed and reconfirmed like physical capital. Otherwise relations may become cold. Finally, social capital is located not in a person but in their relations with others (Adler & Kwon, 2009: 94).

Figure 1: Social capital

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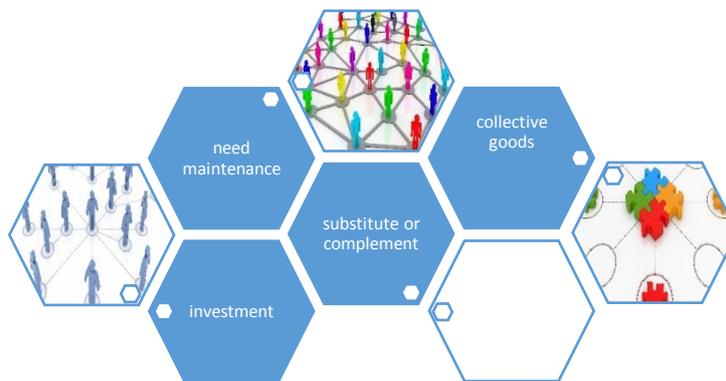
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Social *capital connects not only individuals but also groups.*

Social capital can do the "bonding," "bridging," or even "linking" of social groups. This means, respectively, forming ties between people in similar situations, bringing together people in different situations who belong to different social groups (Svendsen, 2006), and mustering heterogeneous social groups together (Woolcock, 2001). All result in synergies that effect positive outcomes in virtually all fronts. Undoubtedly, in this way networks appear to be vehicles of social capital. (as cited in Encyclopedia.com).

Putnam has extended social capital from individual and collective actors to organizations and communities and to social life as a whole. In his comparative study of regional governments in Italy, Putnam has argued that the success of democracies depends in large part on the horizontal bonds that make up social capital (Putnam, 1993: 103). He has claimed the difference between north and south in Italy was derived from community, guilds, clubs, and choral societies of northern Italy. Putnam defines social capital as "features of social organisation, such as trust, norms and networks that can improve the efficiency of society by facilitating coordinated actions" (1993:104) or "connections among individuals - social networks and the norms of reciprocity[2] and trustworthiness (Putnam, 2001: 19).

After being introduced from almost all the concepts of social capital, it is necessary to talk about Coleman somewhat. Coleman defines social capital on the basis of its function, as a range of entities with two common attributes: These entities are all aspects of social structures, and they all facilitate certain actions within structures, by individual or collective agents (as cited in Encyclopedia.com, 2008; Portes, 1998: 5). Social capital may assume three forms: "obligations and expectations, which depend on trustworthiness of the social environment, information-flow capability of the social structure, and norms accompanied by sanctions".

2. UNDESIRABLE EFFECTS OF SOCIAL CAPITAL

In Coleman's conception, social capital is a neutral resource that facilitates any manner of action, but whether society is better off as a result depends entirely on the individual uses to which it is put (Claridge, 2004; Silkoset, 2013: 22-23). Or as Portes said:

Whereas bounded solidarity and trust provide the sources for socioeconomic ascent and entrepreneurial development among some groups, among others they have exactly the opposite effect. Sociability cuts both ways. While it can be the source of public goods, such as those celebrated by Coleman, Loury, and others, it can also lead to public "bads" (Portes, 1998: 18).

Portes, in his study of a comprehensive review of social capital, has argued that social capital has at least four possible negative consequences: exclusion of outsiders, excess claims on groups members, restrictions on individual freedoms, and downward levelling norms (Portes, 1998: 15). These topics will be discussed in detail below.

2.1. Exclusion of Outsiders

In order for emerging the social capital, members of the group must be a somewhat homogenous. Homogeneity generally leads to strong ties between members. In order to sustain group cohesion, mutual recognition by group members needs continual repeated contacts (Bourdieu 2001: 104). Strong ties facilitate co-decisions or /and act together for members. Easy movement has indicated there is high confidence (trust) between them and all of which suggests the transaction costs have been likely to be low. This is already a desired result, in the other words the social capital's positive externality.

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[2] In social psychology, reciprocity is a social rule that says people should repay, in kind, what another person has provided for them; (Cialdini, 2006; as cited in Wikipedia) that is, people give back (reciprocate) the kind of treatment they have received from another. By virtue of the rule of reciprocity, people are obligated to repay favors, gifts, invitations, etc. in the future.
A person who violates the reciprocity norm by accepting without attempting to return the good acts of others is disliked by the social group. Individuals who benefit from the group's resources without contributing any skills, helping, or resources of their own are called free riders.
In economic theory Reciprocity: exchange of goods is based on reciprocal exchanges between social entities. On a macro level this would include the production of goods to gift to other groups (For details Polanyi, 2001).
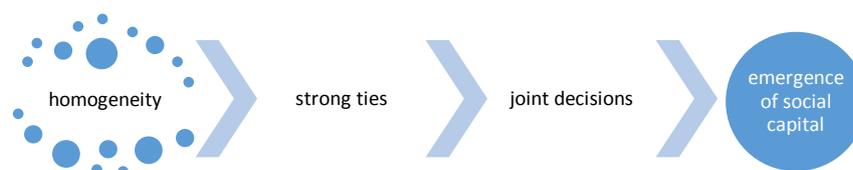
However, strong ties can also work in reverse direction. While strong links benefit members of a group, they can create an entry barrier for outsiders. These barriers sometimes arise from the accumulation of merchants forming an invisible glass ceiling or wall. For example, the cost of learning for newcomers will be very high because the merchant group shares their experience (knowledge) only within the group, thus the success rate of newcomers falls or high risk voluntarily deters ordinary people.

Sometimes job application requirements can be hidden or covered. Having a job, having a home, being a member of a society can be non-written rules.

As observed by Waldinger (1995: 15), for example Italian, Irish and Polish immigrants have dominated at the police, fire and construction sectors in New York. Also in Eskişehir, Albanian immigrants deal with trading nuts, people from Yozgat (from Turkey's cities) merchandize a salvage property or people from Emirdağ (from Turkey's cities) do a pedlar's trade commonly. Recently the existence of a new kind of barriers is mentioned in Turkey, a central examination is usually applied in assignments to public positions, in school selection in higher education, and so on. There was a widespread opinion/belief among the public that a religious organization / sect has stolen the questions of exam and shared only with its members in order to gain an advantage for their members' appointment and promotion. The subject currently is under investigation by judicial authorities. It seems possible to interpret this phenomenon in different ways. The central exam excludes one group from important positions. For example, "for the exam, a certain level of education was required, maybe there was no equal opportunity in education; then this situation made it the target". This viewpoint suggests that both the Exclusion of Outsider and Downward Leveling Norms appear together.

2.2. Excess Claims on Groups Members

The network may have unintended consequences for those who are in a group. Being a successful minority within a group generally present the burden of those in worse conditions to person. Portes, based on the studies of Geertz, Granovetter, Weber, has argued successful entrepreneurs were constantly assaulted by job and loan-seeking kinsmen (Portes, 1998: 16). Moreover these requests were buttressed by strong norms enjoining mutual assistance within the extended family and among community members in general.

This situation has arised from the structure which is perceived especially as Islamic brotherhood in Turkey. It is possible to see many applications in Turkey. In places and situations where the state cannot be strong enough, especially in the education sector, non-profit non-governmental organizations -even sects- have acted like a social security umbrella. Those who were helped yesterday are under the obligation to help those who come after themselves after earning income today. Portes has pointed out that intra-group relations involving such close solidarity economies also bear the problem of free riding because some members, who are less enthusiastic and less hardworking, have become privileged access through hardworking members (Portes, 1998: 16; Adler & Kwon, 2009: 104). Easy-to-obtain funds, quick achievements can lead to misuse of social resources. In addition, perhaps one more thing can be added to our experience in Turkey. Small amounts for solidarity can reach enormous size when accumulated in one source. The logic of solidarity has included the assumption which civil organization is better (than state organization) and people are good intentions. This viewpoint keeps it out of control. However, the great *financial strength always creates incentives for corruption. All these concepts (acquisitions) is affected implicitly behaviours in society as an embedded value structure.*

2.3. Restrictions on Individual Freedoms

Community or group participation necessarily creates demands for conformity (Portes, 1998: 16; Adler & Kwon, 2009: 104). Community solidarity can result in the abandonment of some individual freedoms because personal behaviour and decisions are assessed as good or bad by the community. Or the decisions are corrected in the direction the community will appreciate. In the other words, the greater the strength of

the community, the more important the values it impose[3]. In my opinion, the worst thing that could happen in such a situation may be a community acting with minority psychology despite being strong. Directing the personal decision by a community that shares a deviant or unlawful thought (to be kept in mind) can make a common delusion/fantasy share.

2.4. Downward Levelling Norms

This title can be interpreted as the situation in which the social capital is most radically transformed. There are situations in which group solidarity is cemented by a common experience of adversity and opposition to mainstream society (Portes, 1998: 17). The basic reason of this situation that mobility in society does not work well enough. The radicalizing group has shared the ideas of "success in legal ways is not open to everyone", "no competition on equal terms", "no equal opportunity". "Even if she/he works, she/he cannot be awarded for her/his work." This thought leads her/him to not working, or to deviate from legal routes. Therefore, the possibility of individuals compatible with the society is disappearing. Portes suggests that this self-sustaining process is caused by long-term outside discrimination. This "learned helplessness", often lasting generations, produces an option for itself through illegal routes. In these cases group members are merged by some reverse experience to mainstream society and are radicalized.

3. CONCLUSION

The dark face of social capital may harm the community's members, the network or the sense of solidarity or trust. If even one of the members who act together uses the relationship for their own benefit, it will have poor consequences for all members. If one of the members of one of the non-governmental organizations abuses the political or financial strength of it, then he/ she can lead to betray the trust for whole system. From our country experiences, we see that social networks can be used for exploitation purposes of "public resources" or "collected donations" in favour of a group. A whole movement can be illegalized. But when all happens, not only the community (networks) itself, but the society's ethos and the sense of trust is damaged. It is therefore important to examine the dark side of social capital well and prevent it appearing.

REFERENCES

Adler, Paul, S. and Kwon, Seok-Woo (2009). "Social capital: The good, the Bad, and the Ugly", in **Knowledge and Social Capital**: Foundations and Applications (edited by Eric L. Lesser), USC Marshall School of Business, Marshall Research Paper Series, Working Paper MKT 03-09, pp. 89-115, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=186928

Bourdieu, Pierre (1986)."The Forms of Capital", **Handbook of Theory of Research for the Sociology of Education** (edited by J.E. Richardson), https://faculty.georgetown.edu/irvinem/theory/Bourdieu-Forms-of-Capital.pdf (Retrieved May, 18, 2016).

Cialdini, Robert (2006). Influence: The Psychology of Persuasion. Harper Business; Revised Edition. ISBN 006124189X. via Reciprocity, Retrieved September, 2, 2016 from https://en.wikipedia.org/wiki/Reciprocity_(social_psychology)#cite ref-:1_1-0

Claridge, Tristan (2004) "Definitions of Social Capital", Social Capital Research, http://www.socialcapitalresearch.com/literature/definition.html (Retrieved October, 18, 2016)

Polanyi, Karl (2001). **The Great Transformation -The Political and Economic Origins of Our Time**, Boston, Massachusetts: Beacon Press.

Portes, A. (1998). "Social Capital: Its Origins and Applications in Modern Sociology", **Annual Review of Sociology** 24, 1-24.

Putnam, Robert (1993). "What Makes Democracy Work?". **National Civic Review** 82: 101–106.

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[3] "Depends on the ability of interest groups to participate in collective decisions and to Negotiate solutions based on the consent of the parties involved, too strong bonding social capital will impede social cohesion." (van Deth and Zmerli, 2010: 634).

Putnam, Robert D. (2001). **Bowling Alone: The Collapse and Revival of American Community**. Simon and Schuster, ISBN 978-0-7432-0304-3.

Silkoset, Ragnhild (2013) "Negative and Positive Effects of Social Capital on Co-Located Firms' Withholding Efforts", European Journal of Marketing 47 (1/2): 174-197. DOI: http://dx.doi.org/10.1108/03090561311285501, (This file was downloaded from the institutional repository BI Brage - http://brage.bibsys.no/bi (Open Access).

Social Capital (2008), Retrieved May, 18, 2016, in International Encyclopedia of the Social Sciences, Thomson Gale from http://www.encyclopedia.com/social-sciences-and-law/sociology-and-social-reform/sociology-general-terms-and-concepts/social-8

Svendsen, Gunnar L. H. (2006). "Studying Social Capital in Situ: A Qualitative Approach". **Theory and Society** 35: 39-70.

van Deth, Jan W. and Zmerli, Sonja (2010) "Introduction: Civicness, Equality, and Democracy – A 'Dark Side' of Social Capital", **American Behavioral Scientist** 53(5): 631–639.

Woolcock, Michael. 2001. "The Place of Social Capital in Understanding Social and Economic Outcomes". **Canadian Journal of Policy Research** 2 (1): 65-88.

CHANGING STRUCTURE OF THE MARKETS: ANALYSIS OF BANKING SECTOR IN THE CONTEXT OF COMPETITION AND CONCENTRATION

Gülçin Gürel Günal[1], E. Deliktaş[2]

Abstract

The relationship between the financial sector and real sector has been strong. Any problem in the financial sector affects the real sector. Besides, financial sector can finance the real sector and that provides to increase per capita income and economic growth. Therefore, it is very important for countries to have a strong financial sector. When it comes to Turkey's financial sector, the domination of the banking sector can easily be seen. The Turkish banking sector has undergone structural changes mainly because of the 2001 banking crisis. To overcome the crisis and to strengthen the banking system, various policies has been used and among them, one of the most affective ones is the merger and acquisition (M&A). Above mentioned issues M&A have brought out a new question. Has this situation caused a change in the structure of the market by time? The answer to this question should be searched by the help of concentration analysis. The purpose of this study is to examine the banking sector. This sector will be analysed using the method of Panzar Rosse H-Statistic for the years between 1990 - 2014 as part of Turkey. With the achieved results, it will be revealed if the policies have changed the structure of the market and if the new market structure has effected the economic growth and the welfare positively.

Keywords: Market Structure, Banking Sector, Competition, Concentration
JEL Classification: D40, G21, G34

1. INTRODUCTION

Globalisation can be defined in general as a process of very strong interaction among the states and the elimination of all kinds of state borders including economy, politics, sociology and culture. Even though the effects of globalisation can be seen in all areas of life, it is most probably the economy where it manifests itself the most. In this context, economic globalisation is evaluated as; a process of transformation of good, service and capital markets into a single market and production being done under a single large market (Rodrik, 1997: 14).

Economic globalisation has initially started after the World War II (WWII) with the globalisation in production. Nevertheless, globalisation in production has brought the globalisation in financial area as a necessity. However, this process had been limited until 1980s but later has become completely prevalent with the domination of liberal politics in all over the world. This created a strong bound between the financial sector and the reel sector where production is realised.

The importance of globalisation has increased since there has been a need for unity in the world particularly after the WWII. As an effect of globalisation; it has been thought that the elimination of borders and free movement of factors of production would positively influence the growth and development (Karabıçak, 2002: 128).

In order to benefit from the globalisation, developing countries had taken new decisions especially on finance markets. In this context, in the name of "financial globalisation", state control and checks have withdrawn from the market, state money has become convertible, and the interest and exchange rates be determined by the market mechanisms. At the same term, developing countries which has high public deficit, have adopted high interest and low exchange policies. With these policies, they hoped the foreign capital entry and investments to increase. In parallel to these developments, as technology has also advanced, the communication between the states has improved and the transaction costs have decreased (Çiftçi ve Aykaç, 2011: 167). As intended, these developments have also boosted the capital entry towards the developing countries. The increase in capital entry, helped the development of financial markets and the usage of many new financial institutions and instruments in the market. With these developments, it was aimed to pay off the public deficit and cure the financial problems with capital inflow, and increase the investments. However, after many of the developed states have passed to information society, globalisation

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has started to operate faster and for different aims. With this situation, it has become very attractive for capital owners to gain high profits from high interest rates. In the course of time, the globalization turned into a process where developed countries gained interest income over developing countries without investing on them and this increased the disparities between the developed and developing. However, these fast developments without building the necessary control and monitoring mechanisms, without macroeconomic indicators reaching a healthy structure, without forming an effective banking system despite increase in the number of financial instruments; have put many countries into crisis. Because, many developing countries have become economies that are not based on production but rely on short-term capital movements and portfolio investments, without a healthy financial system (Seyidoğlu, 2003: 153).

The development process of globalisation in Turkey went parallel with the world. In the period of global recession that took place during the Great Depression, WWI and WWII; Turkey has continued to adopt liberal policies, as the world also did. However, in the 1970s, while globalization has spread in the world, Turkey choose to pursue closed politics. Turkey, from 1980s and on, has very quickly passed from a closed economy to an opened economy. January 24, 1980 Decisions, represented the first step for Turkey's entry into the globalization process. Because, the intended short term target of January 24 decisions was to interfere the worsening economy, but in the long term it aimed to provide a complete liberalization, removing the public's interference to economy and opening it completely to the outside world (Kaya, 2013: 8). The steps taken in this context ensured in 1989 that Turkey has passed to complete financial liberalization. This development has increased the interest in the financial markets. Thus, new banks' entry has started to the banking sector under the financial markets. All these developments have increased the responsibilities of financial markets, and actors' fulfilment of their responsibilities in the market has become even more important.

On the other hand, globalization and financial liberalization was carried out to convert the foreign capital and savings to investment, and production to be made efficiently. It is necessary for reel sector to make investments that are required for production. This can be achieved through funding of the real sector effectively by the financial sector. Because the financial system takes savings from those who have surplus funds and forwards them to those who request funds. This system, funds the real sector and allows the transfer of funds to investments when appropriate. This creates a situation where the relationship between the financial sector and the real sector ought to be very strong and ensure that these two sectors are not considered to be independent from each other. Real sector is funded seamlessly in an economy where the financial system is healthy and this creates growth in the economy. However, the disruption and instability seen in the market, cause problems in the overall economy, particularly in the real sector. To sum up the effective operation of the financial system is important for economic growth (Altunöz 2013: 812).

The effectiveness of the financial sector may vary depending on the market structure. When the structure of the financial sector is examined, two types of it are encountered. The first of these is the Asian type and emerges as a structure that is dominated by the banking sector. The second type is the American type. Such is the structure where capital markets and non-bank financial institutions are dominant. When it is examined, the banking sector is prevalent in Turkey's financial market (Kuzucu, 2012: 3). The most important indicator for that is the roughly 85% of the banking sector's share in the financial sector.

In this context, when Turkey's economy is examined, the essential requirement for the proper functioning of the national economy is the existence of a healthy banking sector. It is known that for many years the Turkish banking sector faced several crises. These crisis, had significant impact on country's economy, due to the close relationship of the banking sector with the real sector. The crisis of 2001 in Turkey, sourced from banking however later affected the entire national economic system. This situation led to a decline in production and caused country's growth to deteriorate. Negative effects of this banking crisis over growth prevailed for many years, but over time has been overcome by the creation of a healthy financial market. The most important factor on this positive development has been the presence of Banking Regulation and Supervision Agency (BDDK), which was established in 1999, but has been efficient since 2001. From this date, Turkish Banking Sector subjected to a series of regulations and many innovations have been brought to the industry. Throughout the process, it was observed that the sector's structure become strong thanks to these developments.

One of those realised within the scope of these innovations in the sector, is the merging of the banks with each other or with foreign banks. This caused a decrease in the number of banks in the sector. When it is assessed with figures, in Turkey there had been 43 banks in 1980, 66 in 1990 and 81 in 1999 (BDDK,

2001: 2). In 2001, the number of banks fell to 74 and reduction has continued afterwards. Today, the number dropped to 46 (TBB, 2015).

This situation has revealed the question whether the industry structure has changed or not during time. Analysis of the changing structure of the industry in this context would certainly be useful. Because, understanding whether the banking sector's market structure is fully competitive, monopoly, oligopoly or monopsony, is beneficial in market competition and effective working of the market, though ensuring positive economic growth. When the number of companies is low or certain number of companies' share (power) in the sector is high, it indicates that the market has a structure which is akin to monopolistic. Companies that have market power, may abuse these conditions that they operate in. On the other hand, the analysis of market structure in recent years via new approaches, reveal that, despite the concentration in certain banks, market power in the sector may not be in those certain banks' hands. Therefore, analysing the structure of the banking sector and market power in Turkey via the recent approaches is a necessity. Because, when the market power is at the hands of certain banks, it is important to reveal out whether market structure is competitive or not.

There are two points that are important within the scope of the study. The first of these is the requirement of a healthy working relationship between the real economy and the financial sector. Second important point is the financial liberalization that took place in Turkey in 1989 and whether the banking sector crisis in 2001 has caused a change in the sector structure or not. Because with the financial liberalization, Turkey has experienced an increase in entry to the banking sector in the 1990s. This increase has continued until 2001, however, after the crisis in 2001, particularly with M & A activities, it has been reversed. These two important points, require the analysis of the Turkish banking sector. In this study, market structure is analysed for the intervals of 1990-2001 and 2001-2014, by using the Panzar Rosee H-Statistic. Here, the aims are to analyse the changing structure of the Turkish banking sector and with this analysis, to expose the sector's competitiveness.

5.   COMPETITION ANALYSIS IN THE TURKISH BANKING SECTOR

5.1. Methodology

In this part of the study, the competition structure of the Turkish Banking Sector will be analysed. With this analysis, it will be revealed if there is any change in the competition power of the market in 1990s and 2000s. There are several approaches in the literature for measuring the competition power. These approaches are divided into two as structural and non-structural, latter also known as new empirical industrial approach.

Structural approach is based on structure conduct performance paradigm and paradigm of efficient structure. According to the paradigm of performance, increasing concentration in the market, shows that, firms in the market have high market power. This allows firms to set high prices and ensure high profits. However, this case can cause the companies to engage in high-cost activities owing not to face any competitive pressure (Efthyvoulou and Yıldırım, 2014: 12). According to the paradigm of efficient structure, efficient companies working in the market, are the ones which have a high market concentration ratio and a high share of profits.

On the other hand, as being the recent studies in the literature, non-structural models claim that, there might be a competitive behaviour in the intensified markets. Naturally, for this, the companies in the market should be able to compete and be open to competition.

There are various methods that have been used to measure the market power in the non-structural models- also known as an industrial organization approach. Among these methods, the two most commonly used are the Lerner Index and the Panzar Rosse (1987) H statistical method. Panzar Rosse H-Statistic method is the one that is used in this study and competition analysis is made for the years between 1990-2001 and 2001-2014.

In this context of this method, some of the main studies in this area were done by Bikker and Haaf in 2000, 2001 and 2002. They examined market structure on competition of banking sector for 23 different countries. Monopolistic competition was seen in most countries.

Besides, Afandiyev (2012) analysed the banking sector of Azerbaijan for the years 2008-2011 and Emek (2005) examined the Turkish banking sector for the years 1990-2003. In these studies, it was determined that the banking sector bares the risk to move towards monopole structure.

Shin and Kim (2010) and Ozcan (2012) respectively, analysed Korean and Turkish banking sectors using this method and identified the existence of monopolistic competition in the sector for both countries. At the same time, it was seen that the increasing concentration in the market has also increased the competitive structure of the market.

Other than these studies, there are some analysis conducted for several countries using Panzar Rosse approach on banking sectors. (Molyneux et al., 1994; Bikker et al., 2009; Sun, 2011; Çelik and Kaplan, 2010; Ye, Xu, and Fang, 2012;).

5.2. Data Set and Model

In this study, market power of the banking sector is measured by Panzar Rosse H-Statistic method that is under the new industrial organization approach. In this context, data set is prepared for 62 banks for the 1990-2001 term and 42 banks for the 2001-2014 term, which covers public, private and foreign banks without discrimination. At least 4 years of observation was preferred for all the banks. In the study, as the literature was considered, the model which was followed by Bikker and Haaf (2002) below was used in empirical analysis with small changes. Different variables from the Bikker and Haaf are chosen to show the structure and the characteristic of Turkish banking sector.

$$\ln R = \alpha_0 + \alpha_1 \ln w1 + \alpha_2 \ln w2 + \alpha_3 \ln w3 + \alpha_4 \ln oi + \alpha_5 \ln l + \alpha_6 \ln nl + \alpha_7 \ln r + \alpha_8 \ln s + e$$

While R interest revenue is w1, w2 and w3 represent input prices, respectively shows the labour, capital and funding input prices. The price of labour is calculated through the personal expenditure ratio to total assets; price of capital is calculated through the management's and other capital expenditures' ratio to fixed assets; and the price of funds is calculated through interest expenditures' ratio to total assets. Oi is calculated through the other income ratio to total assets. Besides, as the control variables, l, nl, r, s are respectively, the ratio of loans to total assets, the ratio of nonperforming loans to total assets, the ratio of equity to total assets and total assets. L, nl and r are the risk indicators and bank size is proxied by total assets in the model.

H Statistic should take a value between - ∞ and 1. Values that approximate to 1 show that the competition is high in the market, while values that are distant to 1 show that the competition is low. Table 1 supplies the detailed information on the explanation of H-Statistic value.

Table 1: Information on H-Statistic Value

H-StatisticValue	Market Structure
H ≤ 0	Monopole conditions are valid in the market
0 < H < 1	Market has monopolistic competition characteristics.
H = 1	There is full competition in the market.

Source: by author

5.3. Empirical Results

Because of the banking crisis of 2001, data set to be analyzed is divided into two as 1990-2001 and 2002-2014. Panzar Rosse H_statistic values that are measured for Turkish Banking Sector is given in table 2.

Table 2: Estimated Results

Years	1990-1995	1995-2001	1990-2001	2001-2008	2008-2014	2010-2014
H-Statistic	0.89	0.64	0.52	0.37	0.52	0.70
	1990	1994	1999	2001	2008	2014
H-Statistic	0.90	0.88	0.69	-0.25	0.15	0.89

Source: calculated by author

The first row of the table, shows the H statistic value for terms. Considering these values, monopolistic competition characteristics are seen in the market throughout 1990-2001 and 2002-2014 which are respectively 0.52 and 0.49. A striking thing that was seen is, the high competition in the market with financial liberalization in 1989, but the diminishing trend of it towards 2000s. On the other hand, even though monopolistic competition structure is seen in general for the years between 2002-2014, from 2010 the competition reaches high levels.

One of the things that this study tries to reveal is; whether the increasing competition from 1990, stemmed from the new firms that entered the market thanks to the financial liberalization in 1989, or existing banks had become more competitive thanks to the effects of the advancing technology and information systems. To show this, the number of banks in the market by years is given in table 3 and table 4. On the other hand, it should be evaluated if the increase in competition after 2008 again was in all across the market, or only in the firms that have particular asset size. In order to do this, CR3 and CR6 (market share of the 3 and 6 banks which have the largest asset size) value of the Turkish Banking Sector and the number of banks in the market will be given in table 4.

Besides, the values given in the second row of the table 2, show the competitive power of the sector during the crisis years. The crisis of 1994, did not create a change in the competitive structure of the sector and the crisis of 1998-1999 in Asia and Mexico did not have a negative effect on the competition of the sector.

However, as it can be seen in the table 3, both after 1994 and 1998-1999 crises, there was substantial decline in the market competition. Nevertheless, the following crises of 2000 and 2001, terminated the competition and created a monopolistic environment. Because as it can be seen from the table, with banking crisis of 2001, H-statistic value became negative. In other words, in that year, a monopolist structure was seen. This value shows that, a few strong firm directed the market. Lastly, international financial crisis of 2008, created a reducing effect on competition structure of the market. In summary, crisis of 2000s, had a diminishing effect on the competition power of the market.

As table 3 indicates, the number of banks which was at average 51 in 1980s, has increased substantially in 1990s. This helped to the intensification of the competitive structure. However, the competitive structure, didn't contribute to a stable growth in the economy.

Table 3: Basic Indicators for the years 1990-2001

Years	H-Statistic	The Number of Banks	Growth Rate
1990	0.90	66	9,30
1991	0.92	65	0,70
1992	0.65	69	5,00
1993	0.92	70	7,70
1994	0.88	67	-4,70
1995	0.74	68	7,90
1996	0.25	69	7,40
1997	0.24	72	7,60
1998	0.81	75	2,30
1999	0.69	81	-3,40
2000	-0.10	79	6,80
2001	-0.25	61	-5,70

Source: calculated by author (H-Statistic), TBB (The Number of Banks), OECD (The Production Growth Rate)

When we come to 2000s, we see that the number of the banks decreased compared to 1990s. It is thought that this would reduce the competition. When the H static values and the number of banks are evaluated together from table 4, it is seen that, the decrease in the number of banks and decrease in competition move in the same direction, meeting the expectations. However, this situation started to change from 2008. Despite the decreasing number of banks, the competition in the banking sector increased. Another striking fact is the increasing values of CR3 and CR6 in parallel to decreasing bank numbers and increasing competition. This indicates that recently a certain number of banks with a certain market power existed. In

other words, rather than many banks inclining towards full competition conditions, there is an environment where large banks compete for larger profits.

Table 4: Basic Indicators for the years 2002-2014

Years	CR3	CR6	H-Statistic	The Number of Banks	Growth Rate
2002	0.30	0.45	0.70	54	6,20
2003	0.35	0.76	0.61	50	5,30
2004	0.35	0.77	0.59	48	9,40
2005	0.46	0.80	0.15	47	8,40
2006	0.46	0.82	0.19	46	6,90
2007	0.43	0.82	0.26	46	4,70
2008	0.43	0.84	0.15	45	0,70
2009	0.43	0.84	0.78	45	-4,80
2010	0.41	0.85	0.80	45	9,20
2011	0.40	0.87	0.86	44	8,80
2012	0.38	0.87	0.69	45	2,10
2013	0.41	0.85	0.53	45	4,20
2014	0.42	0.86	0.89	47	3,00

Source: calculated by author (H-Statistic), TBB (The Number of Banks), OECD (The Production Growth Rate)

In table 4, a growth with positive in production speed can be seen except for crisis years. However, it is understood that there was no correlation of this with the competition degree in the market, in other words existence of certain number of banks have possessed the market power.

Financial markets improved as a result of financial liberalization which was realized from 1980s to improve the production. However, more than that, a structure was created where many times large banks returned high profits and where the aim of growth of economy was not sincerely pursued.

6. CONCLUSION

To improve its statistics on growth and ensure development, Turkey aspired to adapt the globalisation process in production. With this reason, serious innovations were realized in financial markets during 1980s. While in 1990s, there had been a substantial increase in the number of banks in Turkey, 2000s faced a dramatic decline in numbers. Therefore, it is expected that, many banks would possess the competitive market characteristic and market power would be low.

Even though analyses done show that this was the case in the beginning of 1990s, after a while, large banks turned the crisis into opportunity and captured the market power. Consequently, market shifted from competitive to monopolistic structure. Similar results were taken in 2000s as well. Especially, because of the crisis of 2008, with the active market structure, it was seen that the largest 6 banks possessed the big portion of market power and these banks competed. However, improving financial markets, didn't create the expected positive developments in production.

In summary, the results of this study proves that the financial sector doesn't fund the real sector efficiently. This situation is a sign of financial sector contributing its own interests (profit) rather than the growth policies. It is certain that the financial sector is required to be reshaped in order to support the development of the country. Especially after 2011, in parallel with the sharp declines in the growth rates, 6 big banks increased their intra-competition and this negatively affected the growth rates. If these banks, cared more about the country's welfare and chose cooperative behavior instead of competitive one, this would have reverberated much more positively to Turkey.

REFERENCES

Afandiyev, F. (2012). *Concentration and Competition in the Azerbaijan Banking Industry*. Master Thesis, Eastern Mediterranean University.

Altunöz, U. (2013). Türk Bankacılığında Rekabet Değerlendirme Yaklaşımları ile Rekabet Dinamiklerinin Ampirik Analizi. *International Conference On Eurasian Economies*. 812-821.

Bankacilik Düzenleme ve Denetleme Kurumu (2001). *Bankacilik Sektörü Yeniden Yapilandirma Programi*. 15 May. Ankara.

Bikker, J. A. and Haaf, K. (2000). Competition, Concentration and Their Relationship: An Empirical Analysis of the Banking Industry. *Research Series Supervision no:30 De Nederlandsche Bank.* Amsterdam.

Bikker, J. A. and Haaf, K. (2001). Competition, Concentration and Their Relationship: A Review of the Literature. *De Nederlandsche Bank.* Amsterdam.

Bikker, J. A. and Haaf, K. (2002). Competition, Concentration and Their Relationship: An Empirical Analysis of the Banking Industry. *Journal of Banking & Finance*. 26(11). 2191–2214.

Bikker, J. A., Shaffer, S. and Spierdijk, L. (2009). Assessing Competition with The Panzar Rosse Model: The Role of Scale, Costs, And Equilibrium. *Tjalling C. Koopmans Institute Discussion Paper Series*. 9(27). 1–39.

Çelik, T. and Kaplan, M. (2010). Türk Bankacılık Sektöründe Etkinlik ve Rekabet: 2002-2007. *Journal of Sosyoekonomi,* 13(2). 7-28.

Çiftçi C. and Aytaç, G. (2011). İçsel Büyüme Modelleri ve Küreselleşme Sürecinde Gelişmekte Olan Ülkelerin Konumları. *Journal of Sosyoekonomi.* 1.

Dikmen, F.H. (2012) Türk Bankacilik Sektörü İçin Bir Etkinlik Analizi: 2003-2007. *Ekonomik Yaklaşım*, *23*(85). 83-120.

Efthyvoulou, G. and Yıldırım. C. (2014). Market Power in CEE Banking Sectors and the Impact of the Global Financial Crisis. *Journal of Banking and Finance*. 40(C). 11-27.

Emek, U. (2005). *Bankacılık Sisteminde Rekabet ve İstikrar İkileminin Analizi: Türkiye Örneği*, Ph.D. Thesis, Ankara Üniversitesi, Ankara.

Karabay, M. E and Okay P. (2012). An Empirical Study of the Measurement of the Level of Competition in the Turkish Banking System Using Panzar-Rosse Methodology. *Rekabet Dergisi*, 13(1). 51-102.

Karabıçak, M. (2002). Küreselleşe Sürecinde Gelişmekte Olan Ülke Ekonomilerinde Ortaya Çıkan Yönelim ve Tepkiler. *Süleyman Demirel Üniversitesi İktisadi ve İdari Bilimler Dergisi*. 7(1).

Kaya, A. (2013). Mali Sürdürülebilirlik: Teori ve Türkiye Uygulaması. *Türkiye Bankalar Birliği*. Ankara.

Kuzucu, S. (2015). Concentration and Competition in Turkish Banking Industry: The Evidence from 2000 to 2012. *International Journal of Finance & Banking Studies.* 4(3).

Molyneux, P., Lloyd-Williams, D.M. and Thornton,J.(1994). Competitive Conditions in European banking. *Journal of Banking and Finance*. 18. 445-459.

Özcan, A. (2012). Türkiye'de Ticari Bankacilik Sektöründe Rekabet Düzeyinin Belirlenmesi (2002-2009). *C.Ü. İktisadi ve İdari Bilimler Dergisi*, 13(1). 195-211.

Panzar, J.C. and Rosse, J. N. (1987). Testing For "Monopoly" Equilibrium. *The Journal of Industrial Economics*. The Empirical Renaissance in Industrial Economics June. 35(4). 443-456.

Rodrik, D. (1997). Globalization, Social Conflickt and Economic Growth. *UNCTAD, revise version of Prebisch Lecture*. 24 October. Geneva.

Seyidoğlu, H. (2003). Uluslararası Mali Krizler, IMF Politikaları, Az Gelişmiş Ülkeler, Türkiye ve Dönüşüm Ekonomileri. *Doğuş Üniversitesi Dergisi*. 4(2).

Shin, D.J and Kim, B.H.S (2013). Bank consolidation and competitiveness: Empirical evidence from the Korean banking industry. *Journal of Asian Economics.* volume 24. 41–50.

Sun, Y. (2011). Recent Developments in European Bank Competition. *IMF Working Paper*. WP/11/146.

Ye, Q., Xu, Z. and Fang, D. (2012). Market Structure, Performance and Efficiency of the Chinese Banking Sector. *Economic Change and Restructuring*. 45(4). 337–358.

https://www.tbb.org.tr/tr. Mali Tablolar

https://data.oecd.org/gdp/gross-domestic-product-gdp.htm

THE EFFECTS OF ENERGY PRICE SHOCKS ON THE ECONOMY

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Abstract:

Energy plays an important role in human life. The increase in energy prices in recent years has brought this issue to be taken in consideration frequently in the academic literature. High energy prices have serious macroeconomic effects on the global economy. Energy price shocks have a negative impact on macroeconomic variables like industrial production, economic growth, inflation, wages, unemployment, exchange rates and interest rates. Among these, the negative effect on growth and inflation particularly on energy importing countries is of high importance. Especially in countries where domestic demand has increased sharply due to loose financial policies, raises concerns that the effects of high energy prices on inflation will be reflected in the prices of other goods. Therefore, to which extent the high energy costs will be depends on the inflation persistency in energy prices.

Keywords: *Energy price shocks, oil price increases, channels of transmission*
JEL Classification: *E21, Q43*

1. INTRODUCTION

Energy is an essential input for almost every good and service. Therefore, energy is important for the development process of a country, because it not only improves the productivity of factors of production, but also promotes higher living standards for individuals. As energy price is a crucial engine of the world economy, changes in its price can significantly affect the macroeconomic condition and welfare in every country around the world.

The relationship of energy prices and macroeconomic variables has been examined by various researchers during the past years. Killian (2007) put forward four reasons why changes in energy prices differs from changes in other goods prices. First reason is that energy prices at times experience sharp and sustained increases, which are not typical for other goods. Second reason is, as demand for energy compared to other goods is more inelastic, therefore energy price increases matters consumers more than increases in prices of other goods. Third reason is, that energy price fluctuations seem to be determined by exogenous forces such as political strife in the Middle East. The last reason is that major energy price increases in the past have often been followed by severe economic dislocations, suggesting a causal link from higher energy prices to recessions, higher unemployment and possibly inflation.

The rise in energy prices will have direct or indirect effects on various macroeconomic variables, such as interest rates, inflation rates, exchange rates, economic growth, consumption, production, investment, employment and balance sheet.

2. LITERATURE REVIEW

A wide variety of theoretical and empirical studies have been undertaken to investigate the effects of energy price changes on macroeconomic variables.

Many researches indicated a negative relationship between energy prices and aggregate measures of output or employment among these are Hamilton (1983), Khan and Ahmed (2001), Yeh et al. (2012); Mork et al., (1994); Bernanke et al., (1997). Hamilton (1983, 1996, 2003) put forward that oil shocks have an important effect on output and that these shocks are responsible for the recessions in the USA. There is a general consensus that oil price shocks pushed the cost of production up and therefore lead to higher inflation and to a decrease in output.

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A number of empirical studies considered monetary policy response to oil price shocks Bernanke et al, (1997), Barsky and Kilian (2004), Hamilton and Herrera (2001), DePratto et al. (2009). Bernanke et al. (1997) found that monetary policy plays an important role in explaining the transmission of oil price shocks to the economy. According to Ferderer (1996) conservative monetary policy in response to oil price increases might affect domestic output. Furthermore, he found that central bank decisions cannot alone explain the oil price shock effects on real GDP.

Edelstein and Kilian examined the effect of energy price shocks on consumer spending for 1979 and 1986 in the U.S. and found that historically energy price shocks had been an important factor in explaining U.S. real consumption growth.

Tang et al. (2010) examined to what extent oil price shocks impact China's economy. They found that an oil-price increase negatively affected output and investment, but positively affected inflation rate and interest rate. Yıldırım et al. (2015) tested the impacts of oil price increases on monetary policy implementation in the four largest oil importers (USA, EU, China and Japan). They pointed out that oil price increases transmit to output and inflation and lead to fluctuations in industrial production, consumer prices and immediate interest rates which in turn influenced the monetary policy stance in the following periods.

Khan and Ahmed (2011) investigated the impact of global food and oil price shocks and their transmission channel to selected macroeconomic variables, such as inflation rate, output, money balances, interest rate and real effective exchange rate for Pakistan. According to their findings, oil price shocks negatively affect output, positively affect inflation and interest rate, and appreciate real effective exchange rate.

Raghavan (2015) examined the effects of oil shocks on the ASEAN's macroeconomic variables for the period 2000-2013 and reached the result that the effects on inflation are significant while the effects on economic growth are less destructive.

The impact of increased energy prices on inflation can be direct or indirect. The direct impact is due to increased prices in oil, diesel and such like energies, due to the share of one-tenth of energy products in CPI. High energy prices can indirectly influence CPI by increasing the prices of energy cost components in sectors where energy is used as an input. Because energy is an important input in many sectors and industries, an increase in energy prices, may also increase the prices in other sectors by creating a ripple effect.

3. THE EFFECTS OF ENERGY PRICE SHOCKS

3.1. Transmission Channels

The relationship of oil and macroeconomy is foremost determined by the transmission channels of oil prices within the economy and various transmission channels exist through which oil prices may have an impact on economic activity. From a theoretical perspective, oil-price changes affect the performances of macroeconomic variables through the following six transmission channels (Brown & Yücel, 2002):

• Supply-side shock effect: focusing on the direct impact on output due to the change in marginal production costs caused by oil-price shock;

• Wealth transfer effect: emphasizing on the different marginal consumption rate of petrodollar and that of ordinary trade surplus;

• Inflation effect: analysing relationship between domestic inflation and oil prices;

• Real balance effect: investigating the change in money demand and monetary policy;

• Sector adjustment effect: estimating the adjustment cost of industrial structure, which is mainly used to explain the asymmetry in oil-price shock impact;

• Unexpected effect: focusing on the uncertainty about oil price and its impact.

3.1.1. The Supply-Side Effect

According to the supply-side effect, due to an increase in oil prices will cause a decrease in energy sources which are important inputs in production and this will lead to a reduction in output. Consequently, the marginal cost of production will increase and the growth of output and productivity will slow down (Tang et al. 2010). The relation between energy price shocks and GDP has been discussed in a variety of studies (see Brown & Yücel, 2001; Lescaroux & Mignon, 2008; DePratto et al. 2009). According to DePratto et al. (2009) higher oil prices affect the macroeconomy primarily through the supply side, not the

demand side. They found that higher oil prices have short-term effects on the output gap, but also longer-term effects by temporarily lowering trend growth, which reduces the level of GDP permanently. On the other side a decrease in productivity growth has a negative impact on real wages and employment. That means real wages need to decrease in order to maintain the level of employment. If wages are sticky downward, unemployment will increase which in turn will lead to a further decrease in GDP.

Real wage rigidity and their flexibility to adjust to higher price levels is an important aspect of oil price shocks and inflation relation. High price levels may result in stagflation in case of inflexible wages as pressure is deflected by reductions in employment (Müller, 2009). Since oil-based products are an important component of CPI, rising oil prices lead to inflationary pressure in the economy.

An increase in oil prices also may have an asymmetric effect on economic activity, if it affects the sectoral reallocations of resources or depresses irreversible investment through the effects on uncertainty. The effects of energy price shocks on firms' investment can be either due to the increase in the marginal cost of production or to the decrease of consumers' expenditures (Ferderer,1996). If capital and labour are sector-specific or product specific and therefore cannot moved to different uses, reallocations will cause these resources to be unemployed. This in turn will cause further decreases in consumption and strengthen the purchasing power loss effect on the real economy. This indirect effect is considered by many economists as a primary channel, through which energy price shocks affect the economy as this indirect effect can be much larger than the direct effects (Kilian, 2007).

3.1.2. The Demand-Side Effect

Compared with the direct impact on production, energy price shocks will be likely to have a bigger impact on the demand for goods and services. This in turn will cause a decline in production and therefore reducing the growth in GDP. There is a widespread perception that an increase in energy prices slows economic growth primarily through its effects on consumer spending.

According to Edelstein and Kilian (2009), there are four complementary mechanisms by which energy price changes may directly affect consumer expenditures. First, higher energy prices reduce discretionary income and the less elastic the demand for energy is, the larger will be the discretionary income effect. Second, due to uncertainty effect, changes in energy prices may cause consumers to postpone irreversible purchases of consumer durables, especially energy-using durables. Third, the precautionary effect will arise because increases in precautionary savings will decrease consumption due to energy price shocks. Fourth, operating cost effect will come up as consumer's delay or forgo to buy energy-using durables, and the consumption of durables operating with energy will decline more.

3.2.3. The Monetary Policy Channel

In case of an energy price shock monetary policymakers are confronted with a tradeoff. Especially when due to energy price shocks a decrease in demand and an increase in production costs occur at the same time, monetary policymakers potentially face a difficult decision. If monetary policymakers tighten policy by raising short-term interest rate to avoid an increase in inflation, the drop in output and the rise in unemployment will exacerbate. If they accommodate the temporarily higher inflation with easier monetary policy, output will not fall as much. But in this case they risk inadvertently fostering a climate of inflationary expectations (CBO, 2006). Monetary policy can therefore significantly determine the effects energy price shocks have in the short run.

Barsky and Kilian (2001), put forward that the 1970s stagflation was induced by monetary policy. They blamed the Federal Reserve (FED) for conducting expansive monetary policy, which led to oil price hikes in 1973-1974, as an endogenous reaction. Ferderer (1996) argued that monetary policy can produce asymmetric effects by responding to oil price increases, while not responding to oil price decreases.

Bernanke et al. (1997), argue that monetary policy has not been neutral[3] in response to oil price shocks, while defining neutral monetary policy as one in which the federal funds rate is constant.

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[3] An unchanged growth rate of nominal GDP, an unchanged growth rate of the monetary aggregate, and a constant federal funds rate have been variously suggesten as a definitions of neutral monetary policy.

CONCLUSION

The fact that energy plays an important role for human beings, the macroeconomic effects of energy price shocks raise attention of many economists. In a variety of theoretical and empirical studies these effects are discussed. The changes of energy prices have direct or indirect effects on macroeconomic variables.

The rise in energy prices will have an impact on various macroeconomic variables, such as interest rates, inflation rates, exchange rates and balance sheet. In some studies, it is expressed that an increase in oil prices has negative effects on production growth, exchange rates and stock prices particular in oil importing countries.

LITERATURE

Barsky, R. And L. Kilian (2004). Oil and the Macroeconomy since the 1970's. (Working Paper 10855). National Bureau of Economic Research. http://www.nber.org/papers/w10855.pdf

Bernanke, B., M. Gertler and M. Watson (1997). Systematic Monetary Policy and the Effects of Oil Price Shocks. Brooking Papers on Economic Activity. 1, 91-142.

Brown, S.P.A. and Yücel, M.K. (2002). Energy Prices and Aggregate Economic Activity: An Interpretative Survey. Quarterly Review of Economics and Finance. 42(2), 193–208.

CBO (2006). The Economic Effects of Recent Increases in Energy Prices. Congressional Budget Office Report. https://www.cbo.gov/publication/17984

DePratto, B. C. De Resende and P. Maier (2009). How Changes in Oil Prices Affect the Macroeconomy. (Working Paper 2009-33). Bank of Canada.

Edelstein, P., and L. Kilian (2009). How Sensitive Are Consumer Expenditures to Retail Energy Prices? Journal of Monetary Economics. 56, 766-779.

Ferderer, J.P. (1996). Oil Price Volatility and the Macroeconomy. Journal of Macroeconomics. 18 (1), 1-26.

Hamilton, J. D. (1983). Oil and the Macroeconmy Since World War II. The Journal of Political Economy. 91 (2). 228-248.

Hamilton, J.D. (1996). This is What Happened to the Oil Price-Macroeconomy Relationship. Journal of Monetary Economics. 38, 215-220.

Hamilton, J. D. (2003). What is an Oil Shock? Journal of Econometrics. 113 (2), 363-398.

Hamilton, J.D. and A. M. Herrera (2001). Oil shocks and Aggregate Macroeconomic Behavior: The Role of Monetary Policy. (Discussion Paper 2001-10) University of California, San Diego.

Khan, M. A. and A. Ahmed (2011). Macroeconomic Effects of Global Food and Oil Price Shocks to the Pakistan Economy: A Structural Vector Autoregressive (SVAR) Analysis. The Pakistan Development Review. 50 (4), 491-511.

Kilian, L. (2007). The Economic Effects of Energy Price Shocks. Journal of Economic Literature. 46 (4), 871-909.

Lescaroux F. V. Mignon (2008). On the Influence of Oil Prices on Economic Activity and Other Macroeconomic and Financial Variables. OPEC Energy Review. 32 (4), 343-380.

Mork, A. K., Ø. Olsen and H. T. Mysen (1994). The Energy Journal. 15 (4), 19-35.

Müller, C.E. (2009). Oil and its Impact on Economics and Financial Markets. Master Thesis. University of St. Gallen. www.unisg.ch

Raghavan, M. (2015). The Macroeconomic Effects of Oil Price Shocks on ASEAN-5 Economies. (Discussion Paper Series No. 2015-10) Tasmanian School of Business and Economics. University of Tasmania.

Tang, W., W. Libo and Z. Zhang (2010). Oil Price Shocks and Their Short-and Long Term Effects on the Chinese Economy. Energy Economics. 32, 3-14.

Yeh, F., J. Hu and C. Lin (2012). Asymmetric Impacts of International Energy Shocks on Macroeconomic Activities. Energy Policy. 44, 10-22.

Yıldırım, N., O. Özçelebi, S. Oral Özkan (2015). Revisiting the Impacts of Oil Price Increases on Monetary Policy Implementation in the Largest Oil Importers. Zbornik Radova Ekonomskog Fakulteta u Rijeci. 33(1), 11-35.

SOLIDARITY ECONOMY AND REGIONAL DEVELOPMENT

DEVELOPMENT OF COMMUNITY: COOPERATIVE ENTREPRENEURSHIP FOR SUSTAINABILITY IN REGIONAL *SMALL AND MEDIUM ENTERPRISE IN JAPAN*

Tomoko Oikawa[1]

Abstract

Regional economy in Japan has suffered serious problems, e.g., depopulation, hollowing-out of villages or towns, and the globalization. Against these challenges, small and medium enterprises (SMEs) are required entrepreneurship. Entrepreneurship of SMEs in Japan may be based on cooperation in the community, which is cultural. Agricultural sector has been hit also by similar problems. The result is the declining regional economy. That is the loss of regional vitality: decrease of regional SMEs and agricultural population. Regional SMEs should be entrepreneurial. They exploit and develop their networking and cooperation, which should be based on community- development. Local people are fostering an enterprise culture to challenge these social and economic problems as well. They have found a variety of avenues to development. They have been revitalizing local economy in many ways. Also they are challenging the problems through adopting the policies, e.g. Sextiary sector industrialization and Agriculture-commerce-industry which are promoted by the government. Above all, these activities require developing their community through widening and deepening their relationships of networking and cooperation. This may be the base of sustainable development.

Keywords: Entrepreneurship, cooperation, networking, SMEs, community, sustainable development
JEL classification: P5, R11, Z13

INTRODUCTION

Last decades Japan has seen the declining local and regional economy. The decline of manufacturing and trade, and the concentration of population to metropolis have resulted in loss of regional vitality and decrease of regional SMEs. Regional economy has suffered serious problems, e.g., depopulation, hollowing-out of villages or towns, and the globalization. Against these challenges, small and medium enterprises (SMEs) are required entrepreneurship. It is the problems for SMEs themselves and for the region itself to tackle for the sustainable development. Agricultural people (farmer, corporation and cooperative) are suffered the same problems. Both SMEs and agricultural people are rooted in the area in terms of business, resources and culture in different ways. SMEs have tackled through entrepreneurship these problems by cooperation and networking, which are based on the principle cultural values in Japan. Similarly, agricultural people are tackling the agricultural sustainability and development which require entrepreneurship. There may be two approaches to the problems: one is a bottom-up and the other a top-down, the governmental policies, e.g. Sextiary sector industrialization and Agriculture-commerce-industry cooperation respectively. The latter is transformed in the process depending on the characteristics of locality or region in adoption. The general idea of the latter is to promote revitalization of agriculture by combining the growing things (traditional primary industry 1) with processing (secondary industry 2) and distributing and selling things (tertiary 3) to produce synergies $(1 + 2 + 3 = 6)$.

The paper will try to show 1. What the entrepreneurship is for SMEs and agricultural people, 2. How the community is the base for these entrepreneurs, SMEs and agricultural people. In concluding remarks, the importance of the principle values in social relations in Japan is discussed, which is at the bottom of entrepreneurship and community. The structure is as follows. 1. What is entrepreneurship? 2. Foundation of entrepreneurship, 3. Current situation and issues of SMEs, 4. Local enterprise of agriculture in the Sextiary sector industrialization and Agriculture-commerce-industry cooperation, 5. Concluding remarks.

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1. WHAT IS ENTREPRENEURSHIP?

The Economist, an established journal in Britain, sums up: 'Entrepreneurship is the special collection of skills possessed by an entrepreneur. They include a propensity to take risks over and above the normal, and a desire to create wealth. Entrepreneurs are people who find ways round business difficulties; they persevere with a business plan at times when others run for the shelter of full-time employment elsewhere (The Economist, Apr 27th, 2009).

A simplified definition is that the entrepreneur is a person who creates new businesses, brings new products to market, or develops new processes of production (Stiglits & Driffill, 2000).

One established understanding is the definition of entrepreneurship as "first and foremost a mindset" (European Commission, 2003). In the context of Japanese business, entrepreneurship has been interpreted first of all as entrepreneur spirit (the author's stress). Otherwise there is a view that entrepreneurship is not spirit but skills and entrepreneur is understood to include both new business starting and enterprise (Yonekura & Shimizu, 2013). It seems after all that mindset or spirit is not located in the center of defining entrepreneurship. However, as examined in the following sections local enterprises seem that in both manufacturing and agricultural, entrepreneurship and the community are profoundly interrelated in spirit and motivation. Further, sustainable development seems on the extension of such a community development.

2. FOUNDATION OF ENTREPRENEURSHIP IN JAPAN

Networking, cooperation or cooperatives are commonplace among SMEs. Further, company philosophy could have a significant effect on management policy. These local SMEs are based on community, where they organized various types of organizations in the following sections.

The term 'community' refers here to the nature of human interactions within groups that can be defined according to geographic, sociological, political or economic considerations (Moulaert, F., and Nussbaumer, J., 2005). Further, I will conjecture, 'community' should be defined according to cultural and historical consideration.

2.1 Networking

Keiretsu, Japanese business groups, is the relationships between suppliers and principal companies. Keiretsu relationship should be recognized from the aspect that it is based on the principles of social structure in Japan. The principles can be 'trust and dependence (Oikawa, 2011)'. Granovetter (1992) argues that it is important to recognize how economic action is constrained and shaped by the structure of social solidarity in which all real economic actors are embedded, such as Emile Durkheim and Max Weber, who regarded economic action as a subordinate and special case of social action.

Apart from keiretsu, enterprises are strengthening management capacity and benefitting a variety of effect through participating in the network. Their common aim is; skill development, efficiency of production, developing new customer, welfare, information gathering, improvement of technology level, and so on. Enterprises which participated in more than one network are getting more benefit (Yoshimi, 2010). Network is classified into three categories: same business cooperation, cross-sectoral cooperation, and industry-academia-government collaboration (Yoshimi, 2010). Among them the SMEs cooperatives have a long history in Japan in its origin. They are characterized as the profound combination of economy and morality, and referred to the forerunner of modern cooperatives in Japan (Miura, 2009). . In 1995 the ICA (International Cooperative Association) Meeting in Manchester issued an official statement of the principles on cooperatives, which does not contain 'mutual support (Miura, 2009)'. Small and Medium-sized Enterprise Cooperative Act in Japan (2009) states; 'The purpose of this Act is to provide for the organizations necessary for persons engaged in a small and medium-sized commercial business,….to engage in business in cooperative manner based on the spirit of mutual support'(Miura, 2009).

Industry clusters are groups of mutually and closely related enterprises in a relatively small defined geographic area. SMEs have constraints in terms of capital, human resources and finance. For such SMEs industrial cluster is the important base of existence. It provides a lot of related enterprises to their business from planning, supply of raw materials to logistics within neighboring distance. There are four types of clusters in Japan (2006 White Paper); '*company town clusters*', '*production region clusters*', '*mixed urban clusters*' and '*mixed invitation clusters*'.

2.2 Company philosophy and principles

According to the questionnaire survey (Fujino, 2012), 81.1 % have company philosophy, or company principles (Surveyed during Oct. to Nov. in 2011. 683 are valid responses among 5,000 SMEs). They consist of compliance, provision of better products and services, contribution to the community, welfare, global environmental protection, human rights protection and so on. They are reflected in the management of these enterprises in different ways. Interestingly, the better the business condition, the more the rate of 'making their philosophy or principles publicly available in the pamphlet or home page' and 'making business policy based on the philosophy or principles'. On the other hand the pooper, the more the rate of 'no reflection of the philosophy or principles on the management policy'.

3. CURRENT SITUATION OF SMEs

In 2014 (June), the 'Small and Micro Enterprises Promotion Act' has been introduced in Japan (small and micro enterprise is defined that its full time employees are up to 20 in the industries except wholesale, services and retail, in which case up to 5). Small and micro enterprises in Japan are 3,340,000 and 90 % out of 3,850,000 SMEs (2014 White Paper). During the years 2009 to 2012 SMEs were decreasing in number 350,000, among them small and micro enterprises are 320,000. This reflects in the attempt of the government to tackle the problems of regional SMEs. They have faced serious challenges from narrowing domestic market because of 'hollowing-out', cheap imported commodities and consumers' changing needs. Often they have business successor problems, while the child succession is the mainstream. Eventually more than 60 % have secured the successors. In the case of succession it is considered that the priorities are 'business continuity and development (73.5 %), 'employment maintenance (55.6 %), 'maintenance of customer relationship (38.4 %)' (Mochizuki, 2014). This outcome is suggestive showing their thought about what the business means. Their perspectives may show what entrepreneurship is for SMEs in Japan.

The majority of SMEs are domestic market oriented, domestic market only - 83.4 % and mainly domestic market but overseas market supplemented - 15.3 % (Mochizuki & Tsutsui, 2012). Their own evaluation of their competitiveness shows that 69.6% are confident of their present competitiveness. The main source of competitiveness is 'accumulated skills and know-how (62.3 %)', •'management for enhancing and aspiring workers' capacity (47.8 %)', • 'expertise of special and original field (42.5 %)', •'information collection of customers and skills (36.6 %)', •'securing and rearing skilled workers (32.3%)'.

Their targeting directions are; • 'exploring deeply conventional field and market (62.0 %)', are the most, and this seems quite characteristic of Japanese entrepreneurship. Others are: • 'planning differentiated products and services with high-added values (50.9 %)', and 'advance into new field and new market' remains (34.7 %).' Management policies to maintain and to strengthening competitiveness are first of all securing and rearing human resources (79.9 %), which is crucial for competitiveness. The more regarded the human resources important the better the business performance.

All in all, regional SMEs are shown as, not just profit seekers but also caring the locality, employees and not adventurous to expand business, i.e. non-ventures.

4. SEXTIARY SECTOR INDUSTRIATIZATION AND AGRICULTURE-COMMERCE-INDUSTRY COOPERATION

Apart from the sustainable agriculture issues which are linked to environmental protection and sustainability, the current problems are how declining agriculture should be dealt with and revitalized. In fact there have been observed many cases in local towns and villages where people have tackled the problems with regard to community revitalization in many different approaches. Such activities in agricultural sector could be called social entrepreneurship (Kickul, Gras *et al.*, 2013). They have set up various types of enterprises depending on the approach how resources can be utilized. Most of them are originally at grassroots level. Otherwise the government has introduced the new policy based on the theory of Rokuji Sangyou (sextiary sector industrialization) created by Imamura Naofumi (1998). The definition of his theory is as follows: 'Agriculture should not remain to be primary industry but get into secondary and tertiary industry. By doing so agricultural area can create and introduce new values. This will make possible to introduce new jobs for older people and women to work (Imamura, 1998)'. The theory of Rokuji Sangyou (sextiary sector industrialization) has been taken into by Ministry of Agriculture, Forestry and

Fisheries as the agricultural policy as integrated life industry. This policy is legislated in May 2008, when the Agriculture-Commerce-Industry Cooperation Promotion Act is introduced. In December 2008 Rokuji Sangyou (sextiary sector industrialization) Act and Local production for local consumption law are promulgated.

The number of certified following these legislations for two years since achieved 1,300 cases, which shows a great interest among agricultural areas in this administration. In reality a number of issues have emerged in these cases (Muroya, 2013): • Individual and single participation in the project is common. • Organic linkage and diversification strategy in rural   agricultural activities are not sufficient. • The projects incline towards processing, and unique projects with a variety of targets are few. Further, as recent phenomenon, major companies are entering into this sector as [sextiary sector industrialization from downstream], which are spreading out. However it is clear that there is a basic distinction between this rural project and these companies. The former is based on cooperation and aiming at local revitalization through establishing community-based agriculture (Tsutaya, 2013). The latter are based on market principles. From this point of view, rural agricultural industrialization should place its strength on cooperation against market principles. It is very important that rural people should develop cooperation into a variety of organization and at the same time, deepen cooperation through continuous dialogue each other (Muroya, 2013).

5. CONCLUSION

In exploring the developing regional economy in relation to SMEs and agricultural enterprises, it is realized that entrepreneurship is one of the key factor. The motivated and spirited participants are the pivot of entrepreneurship. The appropriate top-down policy and administration are necessary. However, entrepreneurship as such should be the base to achieve their goals to achieve their goals – regional revitalization and sustainable development. With regard to SMEs it is shown that they are deeply embedded in the regional economy and society. Even before the concept came from abroad, corporate social responsibility has been a tradition or philosophy or principle for SMEs. The section 5 has shown the interface of cooperation based rural enterprises and market principled major companies. As remarked there, it has clarified in a way that the former, based on the promotion of rural agriculture and economy, should take the lead. They will produce not only visible values. They will promote culture and history, health and welfare, education environment, women entrepreneur, and sense of solidarity in community. These are essential parts of community-based agriculture. This aspect will lead to connect the sustainability development with environment protection. This will result in an endogenous regional development and economic circulation through community initiatives.

With regard to the overall promotion of regional economy, SMEs share the same values as community-based agricultural industrialization. As seen, SMEs have accumulated knowledge and know-how in terms of networking and cooperation. They share the same goals, development and sustainability of community.

REFERENCES

European Commission (2003). *Green Paper Entrepreneurship in Europe* (Luxembourg: Office for Official Publications of the European Communities).
Fujino, H. (2012). *Survey of CSR (Corporate Social Responsibility) on SMEs (small and medium enterprises),* Research & Study Report, March 2012, Japan: Shoko Research Institute.
Granovetter, M. (1992). "Economic Institutions as Social Constructions: A Framework for Analysis,' *Acta Sociologica*, *35*(1), 3 – 11.
Imamura, N. (1998). Revitalization of agriculture by Rokuji Sangyou (sextiary sector industrialization), 21 Century Cram school for Village Development.
Kickul, J.R.,Gras, D., et al. (Eds.) (2013). *Social entrepreneurship*, Edward Elgar Publishing.
Moulaert, F., and Nussbaumer, J. (2005). "The Social Region Beyond: The territorial dynamics of the learning economy", *European Urban and Regional Studies*, 12(1): 45-64.
Miura, S. (2009). *Cooperative spirit supporting 21century's business activity*, Research & Study Report, Tokyo: Shoko Research Institute.
Mochizuki, K. (2014). *Survey in actuality about business succession of SMEs*, Research & Study Report, Sept., Tokyo: Shoko Research Institute.

Muroi, A. (2013). "Current situation and problems of Rokuji Sangyou (sextiary sector industrialization)", Norin kinyu, 5(2): 302 – 321.

Mochizuki, K., and Tsutsui, T. (2012). *Issues in SME competitiveness and man*agement, Research & Study Report, Sept. Tokyo: Shoko Research Institute.

Oikawa, T. (2011). "Economic organization and social solidarity: *Keiretsu* as a Local/Global Concept", *Firm-Level Internationalization, Regionalism and Globalization*, Elaine Hutson, Rudolf Sinkovics and Jenny Berrill (Eds.), pp. 365-378, UK: Palgrave Macmillan.

Rustinsyah (2015). "Social capital and implementation of subsidized fertilizer programme for small farmers: A case study in rural Java Indonesia", *International Journal of Rural Management*, 11(1) 25–39.

.Shoko Research Institute (2014). *Survey report of cooperatives in actualit*y, Research & Study Report, March 2014, Tokyo: Shoko Research Institute.

Stiglitz J. E., and Driffill J. (2000), *Economics*. W.W. Norton, New York.

Tsutaya, E (2013). Kyousei to teikei no community nougyou he (Toward community agriculture: Live together and cooperate), Tokyo: Soshinsha.

Yoshimi, R., (2010). *SMEs and Network: Current situation and assignment*, Research & Study Report, Oct. 2010, Japan: Shoko Research Institute.

TRADITIONAL SAMPLE OF SOLIDARITY AND CHARITY: IMECE

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Abstract

The aim of this study is to examine the common structural dimensions of the social solidarity and collaboration concepts within the context of solidarity economy. Collectivism is the whole set of activities that require collective work, production and attempts, are carried out by individuals in the community in order to provide added value to the society. Although the primary goal of collectivism is to serve the community, the financial gains are secondarily important. Hence, this study is an attempt to report the perceptions of people living in villages on social solidarity and collaboration.

Aiming to describe the existing situation, case study methodology, a qualitative research technique, is used in this study. Semi-structured interviews are conducted with the participants who were selected by a purposive sampling procedure. The collected data is then categorized on a computer and, using the content analysis method, sub-themes are obtained. The results indicate that the people living in villages adopt a collective and organized culture in their daily lives. It could be argued that the villagers are prone to solidarity and cooperation due to factors such as the physical deficiencies encountered in village life, the inferiority of materiality and warm settings. This study will finally aim to report the factors that create this culture.

Key words: social solidarity, collaboration, village life, perception.

1. INTRODUCTION

Our paper is on IMECE which is a kind of social and economocal solidarity coming from centuries before. The rise of IMECE goes back upto the 13th century, Seljuk era. Seljuk people coming to Anatolia from Central Asia established Ahi organization in the 13th century (Çagatay, 1989: 236). Ahi became the organization that enabled Turks settling and living in Anatolia, Balkans and Turkistan to educate in artistry and work fields and develop moral standards from the 13th century upto 19th century (Demir, 1994: 22). Ahi culture which became effectual in forming a lot of accepted practices and manners living in Anatolia at present took special notice of social and economical solidarity and cooperation. Ahi organization emanated to the villages in the form of Imece and and Yaran (Friendly) organization (Çagatay, 1989: 142). In this context, it can be said that Ahi formed the roots of Imece

Our country has a common solidarity and cooperation culture. Our paper is on 'IMECE' which is a way of economical and social cooperition coming from previous centuries.

Our country was having serious scarcities during the 1st World War, Liberation War and 2nd World War. Under very hard conditions of these years, imece became one of the most essential ways to cope with miseries and helplessness. Agricultural production, meeting common needs of the village, supporting those who needed help were realized by working together through imece method. As the economical atmosphere and works realized by imece, it decreased.

Somehow, the importance of cooperation, solidarity and mutual aid to cope with economical crisis, unemployment, poverty and environmental problems that effected our country was understood well in the recent yers. Renewal of this economical and social cooperation way which we practised for long years can make contributions for our a lot of problems. Now, let's summarize imece method and how it works.

2. IMECE

Imece is defined as 'a lot of people come together and work cooperatively to finish someone's or some people's job sequentially'. Imece is defined in the dictionary of TDK (Turkish Language Association-2005) as 'realizing compulsory and discretionary jobs of the village by villagers cooperatively under equal conditions in rural communities'.

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There are other words having the same meaning and used instead of imece in various regions of Anatolia. Common point of all these concep to is that imece includes the consciousness of working collectively, solidarity and charity.

Imece is a work organization applied to realize the jobs through solidarity and cooperation in rural areas in the past. 15th article of the Village Act no. 442 enacted in 1942 says 'Many of the villages must apply imece for their own use'. The 12th article of the said law listed affairs which are compulsory and discretionarily for villages. Among the compulsory affairs listed in 37 lines are; bringing water to the village, constructing school, road, village room; farming fields, vines and gardens of those who are soldiers and orphans and raising the grain through imece.

Discretionary affairs to be realized through imece are; helping the poor and orphans, constructing the destructed houses of the village by the charity, lending cereals to needy villagers for food and seed, farming fields on behalf of the village through imece every year and many others (Village Law, no.442).

As will be seen in the laws of the said era, imece was applied nearly as an indispensable element of the common life in rural settlements. People worked together and performed compulsory and discretionary affairs cooperatively to overcome the scarcities.

We see that economical resources which are required for the affairs to be performed cooperatively was formed cooperatively as well. The 16th article of the said law rules that if the income of the village is insufficient for compulsory affairs to be realized within the borders of the village, inhabitants of the villages and those who have position to have benefits from the village have to pay salma (local tax) not more than a stated amount by the decision of the village elderly council. If 'salma' was decided, everybody in the village had to contribute according to his/her income.

Decision about imece and salma is taken by the Village Elderly Council which is chaired by. Muhtar (headman) responsible for the management of the village. Elderly council is elected by village society and is formed by elder people and notables(dignitaries). According to the said law, Elderly Council taking common imece decision also decides which affairs will be realized by villagers working directly and which affairs will be realized by paying money, how many days a villager must work, how much salma will be levied for every villager.

Besides the common imeces of the village, imece was performed for some small affairs which could be realized by a few households together. The owner of the affairs asked some villagers to apply imece. Imece was realized in an atmosphere of festival. Dances were performed, poems were read and folk songs were sung.

Imeces are divided into two, as imeces for social charity and imeces for economical solidarity (Kaderli; 2008- 96). As an example for social charity; repairing a poor man's destructed house, preparing for a marriage ceremony of an orphan girl or boy, farming the field of a woman whose husband is in the army can be listed. Those who can not meet economical needs through imeces are supported by all the villagers and any fee or compensation for this charity is not expected. Affairs realized during imeces related with economical solidarity is compensated in the ame way (Yavuz, 1944- 9; akt. Kaderli, 2008- 97). In some cases, those who have contributed imece voluntarily are paid some money by imece owner. For ex: those who have no land and can not get any compensation for his work are provided some income in this way (ibid- 97).

3. WORKS PERFORMED BY IMECE IN THE PAST

When we look at the examples in the past, imeces were usually realized when agricultural production required cooperation, common needs of the village needed meeting and for the purpose of social charity.

The most common imeces are, farming, raising crops and vine and gardening works. In those years, labour work was used in agricultural production and important part of young labour work could not join the production. These conditions made imece compulsory. For ex: harvesting has to be done just after grains mature. The owner of the land can not realize the harvest on his own within a limited time. Therefore, villagers start harvesting whosoever grains mature and the harvest of all the villagers are realized sequentially.

Imeces have been realized to meet the common needs of the villages as well. Basic substructure needs such as roads, water, scchools which are provided by local authorities or central government were met through imece.

Finally, it is seen that imeces are commonly applied for social charity. Fields, vines and gardens of those who are patients, soldiers or have no man in their families have been planted through imece. Those whose

could not meet basic needs were supported and helped through imece. Also, the owner of marriage ceremany or funeral was supported through imece at the time of wedding or funeral.

Imeces change according to the social needs of each regions. For ex: while imece for picking up nuts, paring corn was coming out in Blacksea Region, imece for shearing sheep-lamb was realized in Eastern Anatolia where stockbreeding was common. Also, preparing food for winter was a work realized through imece in each regions.

Although work realized through imece and their realization ways indicate differences according to the regions, we can usually list works realized through imece commonly as follows:

1. All kinds of works of those who are orphans, widows, soldier family, elders and women whose husbands are out of the region;
2. Building or repairing houses of those who suffered from fire, floods or earth-quake;
3. Bridal outfits and wedding ceremony affairs of the poor and orphans;
4. Farming field, harvesting, carrying crops, threshing, producing fruit and vegetables;
5. Constructing village room, sshools, mosque, road, bridge;
6. Carrying firewood and belongings for teacher, imam and widwife of the village;
7. Preparing food for winter (grinding flour, boiling grape molasses, grinding bulgur and chopping homemade pasta);
8. Cleaning wild grass and stones of the village;
9. Supplying food for animals for winter season;
10. Weaving rugs and canes and several similar works can be added to the above list (Kaderli, 2008-98).

3.1. AN IMECE SAMPLE

We are now listening to many people who have joined imeces realized in the past and are telling how imeces were done and what happened during imeces. We are now leaving the sentence to - one of our most important authors - Yaşar Kemal who is telling us about a grain imece that he joined during his childhood:

'I vaguely remember the first imece that I joined. A festival atmosphere was blowing in the village. Girls and young boys dressed-up their most lovely dresses. Somebody in the village was wandering, shouting 'to imece'.

We arrived at the field while it was dawning. The crop in abig field was going to be harvested. The owner of the field was patient for 6 months. After harvesting, the crops, it would be threated. Young boys and middle-aged men reaped and starded harvesting. Girls, women started to carry crop batches to the threshing floor soon. It was like a festival sung folk-songs. Before noon and hot sun, crops of the big field were harvested and threshed. Meals like wedding ceremany food were cooked in huge boilers and eaten. But, they didn't go back to the village. The big drums were banged Dances began. Imece fun continued until the sunset of that day. Everybody had forgotten everything, working, tiredness and had the sense of taste in their minds. The wife of the patient husband could not harvest and thresh the crops of this field in one month. It had been finished until noon.

Imece has a lot of sorts: There is also imece for the common properties of the village: There is imece for imam, teacher, muhtar, agha (landowner). Sometimes, two or three houses come together, they harvest and thresh the crop of the first house first day, then the second, then third, sequentially whosoever cropes mature early…

When imece needed in a place, in a house, it was informed 1 week or 10 days ago about the imece. I could not sleep until imece day. Now, I am thinking that, I wish all people worked like this. I never had difuculty in working in imece like festivals. No one has as well.

Floods take away the soils of the fields from hillsides in Blacksea Region. To carry this soil up to the field and spread can be done through imece. However hardworking a human-being is, he/she can never finish this work on his/her own.

I saw 50 or 60 women climbing a hillside formed into line consecutively around Sürmene in 1953. They had been carrying soil on their backs. I asked 'what is this?' … thay replied 'imece'. 'What is that you're taking' I asked. 'Soil' they replied. 'Floods took away soil in winter … filled the soil to the down wards', they added. Their imece was not so fun. The women were bent double under the heavy soil load (Yaşar Kemal, 17.11.1960).

3.2. SOCIAL FUNCTIONS OF IMECE

People whose economical and social conditions are similar work and produce together for a common purpose in imece system. First of all, working together for a common purpose strengthens the feeling of togetherness and the consciousness of working for society benefit between the members of the society.

Besides the pecuniary needs, members of the society who did not have possibility to come together outside imeces meet their social and cultural interaction atmosphere.

Values and common code of conduct that the village society has is farmed, applied, creates it's own customs and is transferred from generation to generation (Kaderli, 2008- 99). Young people meet each other and parents know about their bride and groom candidates during these activities.

Imece process has also created an oral cultural atmosphere. Works are usually done within a festival atmosphere in imeces. Workers sing impromptu folk songs and read poems while working. Also, a theatre play specific to ow culture- 'ortaoynu' (light comedy) is performed. When we check today, we can say that there is a rich cultural accumulation formed in imece atmosphere but it is vanishing gradually.

3.3. CONDITIONS THAT REMOVE TRADITIONAL IMECES

Economical, social and cultural structures have changed due to the industrialization and urbanization in our country. This process has naturally affected imeces which are our traditional solidarity way.

Mechanization in agricultwe has removed the obligation of doing field, vine and garden works which must be finished within a given period and depends on human labour. So, working together for agricultural production has been unnecessary. Basic substructure needs that were not met under the negative conditions of postwar era is now being met by central government and local autjhorities. Therefore, it can be said that imeces done to meet common needs of the villages are not necessary as in the past. Establishment and development of social security system and increase of state protection, especially before 1980, have been effective for decreasing of social solidarity aimed imeces.

Imeces is basically a way of solidarity based on cooperative working, meeting needs and solving problems. Migrations from villages to cities, development of labour, increase of persons who have jobs and that every person is not in a position to be able to do same job put away the conditions of 'working together'.

That market economy and division of labour has been widespread enabled products to be bought from the market and have the works realized by paying money instead of solidarity. For ex: preparing food for winter through imece done commonly in every region was unnecessary as those food could be bought from the market. That women labour force have been employed in production process in the cities and they have been deprived of ability to produce have been effective for disappearing of these imeces.

Neo-liberal policies applied commonly in our country have formed a a culture giving priority to market solutions and mattering individualism. This process can also be said to be efective to draw back social charity and solidarity.

3.4 IMECE SAMPLES IN THESE DAYS

Even though their numbers decreased and characters change in size, imeces continue their presence (existence). We can say that traditional imeces realized in the process of agricultural production have completely disappeared. Imeces realized to meet common needs of the villages continue even though they are decreasing. Works such as providing drinking water, constructing mosque, school, cemetery, village roads, canals, planting trees and maintaining pastures are major jobs realized through imece nowadays generally in the villages and small settlements.

Even if it is decreasing, there are some regions where preparation of food for religious feasts are realized through imece. An interesting example is that women in Güzelyurt District in Aksaray bake bread called 'Gelveri' bread commonly once a week for centuries. 'Gelveri' bread is not sold. It is completely and naturally baked in stone ovens through imece way and solidarity (Haberler.com 2015).

Under the conditions of today, imeces that can be applied are those realized for social charity purposeful imeces are usually organized by initiatives, associations and foundations.

There are several non-governmental organizations established for solidarity and charity in our country. We would like to give a few examples adopting 'imece way' for solidarity now. Our criteria for this is based on 'Working Together' to realize a common purpose beyond helping for charity purposes.

As will be understood by the below examples, current imeces indicate differences from traditional imece applications. Changing economical and social conditions for our country have naturally changed the organizations, applications fields and contributions ways of imeces. Now, let's give a few examples for today's imeces.

Imece Women Solidarity Association: The associations established by women who have different jobs and describe themselves as 'Women With Imece' focus on the activity for solidarity with poor workers women to struggle against man sovereignty and capitalism. It is interested in the problems of young women who are unconcerned, without guarantee and work in flexible part time jobs and who struggle against man sovereignty, greed capitalism and to survive. When the activites of the associations are investigated, it is seen that they are intensifying on daily working women's and housewives organizing. Imece Daily Working Women Association, established by daily working women in 2008, continues its activities as Imece Woman Union Initiative in 2011.Association center is mostly taking place as one of the active components and organizers in women patforms.

Imece Friendship and Solidarity Association: This associations is centered in Izmir and states its purpose as: 'to contribute the process of farming in a democratical culture by rejecting every kind of discrimination, identificaton hierarchy and having universal values established with struggle by humanity family… For this reason, we will try to produce devices to develop, strengthen and prevail solidarity and collective working against individualism, social and cultural attack of globalizing capitalism.
   Among its functions are, to arrange and organize several panel discussions, symposiums, a training course, concerts, exhibitions; to issue publications, to provide financial aid for health services privatizing gradually and grants to students (http://www.imece-der.com).

Çeşme Imece Initiative: It is an initiative that imece voluntaries gathering together to help the refugees that wish to pass to European countries escaping from syrian civil war over Çeşme, District of Izmir, that is on the way to European countries. The community, the majority of which is university students, provide food, cloth, medical support to the refugees every week in nine different points, mainly Çeşme, Izmir and Manisa regions. They are especially interested in their problems and trying to produce permanent solutions. It is stated that a lot of families who decide to stay in Turkey have been supported for working, accomodating and consulting and nearly 100,000.-refugees were helped in six months between October 2015 and March 2016 (http://imecesme.com/).

Bodrum Humanly Life Association: This association established by voluntaries in Bodrum for similar purpose struggles to meet the most basic needs of refugees through imece. They state that they help not only the refugees but also help every needy person without regarding language, religion, race, sex discrimination.

   What the chairman of the association says about their working ways are interesting; 'Our association is working through imece way. For example, we noticed a help call through social media when we decided to give out soup to homeless in Bodrum including refugees in the evenings. Next day, boilers, lentil, oil, bread, spoon, paper glass that we needed came from the voluntaries, someone volunteered to cook, another one volunteered to give out… That means, we don't start any project saying 'Let's take decision inside the association, get to work and buy the needs from the market'. Whatever we do, we include the civil society in which we live; we wish them to blend the soup while cooking and give out at least once'. (http://bodrumdainsancayasam.org/).

Imece Echovillage Natural Life and Echological Solutions Association: This association which describes themselves as Imece House in short explains its establishment purpose as follows: 'to form Echo Villages where sustainable, economical, fair and that people live together in solidarity and in peace; that is sufficient on its own, that is simple and in harmony with nature and a simple life style and also to support those people and institutions that want to keep it alive'.
   Founders of the association says that they aim to live a clean world in peace just now and they realize natural production together in their land in Menemen-Izmir by mixing ancient, local and traditional methods with modern science cheerfully. They state that they understand 'another world' is possible without creating

power in collective solidarity, in harmony with nature and exchange and with production which is sufficient for themselves in this process (http://www.imeceevi.org/).

Mathematics Village/Philosophy Village: Mathematich village which belongs to Nesin Foundation is near Şirince Village in Selçuk District of Izmir. It has been established completely by donations and voluntary works of young people through imece way and has been serving since 2007.

Teachers are the academicians coming voluntarily to village from all over Turkey and the World. It is open to every student from primary school to high school and university. It is a place where averagely 5000 young come and learn maths every year. Students learn maths at certain hours everyday and allocate 1 to 2 hours a day in turn to realize daily jobs such as doing dish-washing, cleaning, helping for cooking, watering garden.

Prof. Dr. Ali Nesin, founder of Mathematics Village, has stated that after succesful works of mathematics village, they started the project of establishing Philosophy Village in 2013, they completed half of the construction and expected help from supporters. Philosophy village has started summer schools to introduce students between ages 17 and 25 with philosophy since 2014 summer (http://nesinkoyleri.org/) (http://www.facebook.com/notes/ali-nesin/felsefe).

Turkey Society Services Foundation (TOVAK): This is a foundation established for the purpose of offering voluntary science, education and cultural services. One of the projects of the foundation is 'Tovak Imece'. This project has been described as a social service action that charitables', local authorities', village or neighbourhood inhabitants', teachers' and students' charities and works are brought together. Foundation states that they have completed repairing 300 schools through imece as an imece organizer foundation (http://www.tovakimece.org/).

Need Map 'Online Imece Platform': One of the most succesful initiatives in point of social benefit is Need Map. It is a platform that brings together those who are needies and those who are supporters to be able to meet needs. Founders of Need Map who can use technology very effectively state that they purpose to resfresh imece culture again (http://www.sivilsayfalar.org/mert-firad).

Even though they describe themselves as 'Online Imece Platform', if considered that supporters contribute needy persons or organizations individually, it is hard to say about an imece way solidarity depending on collective working for a common purpose (http://www.ihtiyacharitası.org/).

4. RESULT

Imece, existing in Anatolia for centuries, is a method of solidarty/charity that we referred to commonly during the establishment years of our republic in our near history. Prevalence of capitalist production relations, process of industrialization and urbanization put away the conditions that made imece necessary and possible gradually.

The problems we are facing today are different from the past but are not decreased. There are a lot of reasons that require our solidarity and charity. For ex: problems of agricultere sector in which imece was most commonly applied were diffrent in the past. Since production depended on labour force and labour force was scarce, it was necessary to work together for production. Agricultural production conditions changed now. We usually have convenient climate, natural sources and labour force for the production of every kind of product. But, structural problems of agriculture sector, decrease our competition chance with the world, import of cheap agricultural products cause agricultural production worked to be unemployed and to make those living in rural areas poor.

Ovacık sample which is the subject of our another paper, organic agricultural production has been achieved well through imece together organized by local authority of imece for agricultural production under today's conditions.

Besides agriculture, the renewal of imece way in the process of production in industrial and service sectors can create important social benefits. People combined usually their labour forces for a common purpose in traditional imeces. Various methods for joining imece instead of joining with labour force can be found under today's changing conditions. For ex: financial contribution, working voluntarily in a specialized field etc. can be provided for adapting imece to today's changing conditions.

The use of chances the communication and transportation technologies bring will enable imece to be applied in wider sizes beyond village society borders. Meeting of those who need help and those who can provide contributions will be easier and wider contribution to imece can be provided.

Finally, let's emphasize the need to sustain cooperation, solidarity and charity culture which make the essence of imeces, to adapt imece to today's conditions and to develop it using chances provided by technology. So, we can lessen the economical and social problems we face in size.

REFERENCES

Çağatay, Neşet. (1989) Bir Türk Kurumu Olan Ahilik, Türk Tarih Kurumu Yayını, VII. Dizi Sayı 104 Ankara Birinci Baskı

Demir, Galip. (1994) "Ahilik", Ahilik Yolu Dergisi Sayı 86 Nisan, İstanbul.

Eren, Hasan,(1974). "Anadolu'da Toplu Yardımlaşma Gelenekleri: İmece" (Türk Dili XXIX, 1974, 545-549.s.;

Kaderli, Zehra,(2008). "Deliorman'ın Aydoğdu Köyünde Meci/İmece Türkbilig.2008/16:90-112

Kemal, Yaşar,(1995). Ağacın Çürüğü Can Yayınları 34-36 İstanbul (Özgün Eser 1980 tarihlidir).

Köy Kanunu, (1924). http://www.mevzuat.gov.tr/MevzuatMetin/1.3.442.pdf

Özen, Kutlu,(2006). "Ekin yolma manileri Sarkışla" Sivas http://www.kutluozen.com/default.asp?part=yazilar &islem=oku&id=43 , Erişim 10.06.2016

Türk, Hüseyin,(1990). "Güneyevler Köyünde Yardımlaşma Gelenekleri" AÜDTCF Dergisi Cilt: 33 Sayı: 1.2 Sayfa: 493-504.

Türk Dil Kurumu (2005). Türkçe Sözlük (10.bs.) Ankara http://www.tdk.gov.tr/index.php?option=com_gts&view=gts , Erişim 15 Haziran 2016

Internet Resources, http://www.haberler.com/imece-usulu-yasatilan-lezzet-gelveri-ekmegi-7241196-haberi/, Erişim 21.05.2016

https://www.facebook.com/notes/ali-nesin/felsefe-k%C3%B6y%C3%BC/10152570236733578/ Erişim 27.05.2016

http://bodrumdainsancayasam.org/ Erişim 25.05.2016

http://imececesme.com/ Erişim 12 04.2016

http://www.sivilsayfalar.org/mert-firat-derdimiz-imece-kulturunu-yeniden-canlandirmak/ Erişim 1.06. 2016

http://www.ihtiyacharitasi.org/ Erişim 1.06.2016

http://www.kadinlarinimecesi.org/article.php?id=10 Erişim 1.06.2016

http://www.imece-der.com/index.php?option=com_ content&view=article&id=47&Itemid=54 Erişim 2.04.2016

http://www.imeceevi.org/deneyimler/mambots/editors/tinymce/jscripts/tiny_mce/index.php?option=com_ content&task=view&id=218&Itemid=37 tüzük Erişim 25.03.2016

http://www.imeceevi.org/index.php?option=com_content&task=blogcategory&id=13&Itemid= Erişim 2.04.2016.

http://www.tovakimece.org/ Erişim 4.05.2016

http://nesinkoyleri.org/hakkinda/tanitim.php Erişim 2.06.2016

http://nesinkoyleri.org/etkinlikler/2015-felsefe-yazokulu/index.php Erişim 15.06.2016

INCLUSIVE AND DEVELOPMENT-BASED SOLIDARITY EXAMPLE: OVACIK

Gülten Demir[1]

Abstract

A TCP candidate who had gone into 2014 elections held in Ovacik district of Tunceli province, with population of 3300, won local elections with a program by establishing "public solidarity committee" and by taking the preferences and discourses of the people living in the district into account. Post- election policy implementations of the municipality suggest that new social practices have been developing which are able to produce social utility in supplying necessities and in solving social and economic problems. In this context; we have seen that public participation has been provided in decision-making and resource allocation processes; public lands have been allowed for agriculture in order to promote and support organic farming; people's basic needs have been met free of charge or with very low price and many projects have been carried out with voluntary cooperation.

During the interview with the mayor he was reported that the local community of Ovacık has adopted and supported realized practices and demanded application of these new approaches for problem solving in other areas of social and economic life. Many projects will be designed in accordance with these demands of the local community by the "public solidarity committee".

In this context, new policy approach and implementation of Ovacık municipality constitutes an important example for development-oriented, social and economic solidarity. This paper aims to explore the policies of Ovacık municipality as an example of social and solidarity economy.

Keywords: Economic Development, Solidarity, Sustainability
JEL Classification: P00, O1, L3

I. INTRODUCTION

Economical crisis has been following each other. Unemployment is an important problem and income distribution is impairing gradually. Environmental disasters and compulsory immigrations are realizing. Upon erosion of social state, social protection is narrowing gradually. There are millions of people having difficulties in meeting humane needs. Not only for these people but also these conditions are threating people everywhere in the World and next generations.

The above mentioned processes develop opposite forces. Economical and social policies which have been said to have no alternatives and legality of life and employment styles have been discussed for long. Compromise about the efficiency of the market accepted for over 30 years is impairing gradually. Against the individualist and competitive human model which is wanted to be created upon inspiration of neo-liberal ideology, the importance of solidarity and co-operation has been emphasized for a better life.

In this context, efforts to develop alternative economical, employment and inter-generation environmental policies for inclusive and sustainable ecological growth has been observed. What is pleasing is that alternatives do not stay as theoretical and uthopic thoughts but turn into practices forming employment and social life with solidarity and cooperation (Altvater, 2006). Examples can be given from a lot of sectors from agriculture to technology production at local, regional and national level from everywhere in the World.

We will continue with an example from Turkey. We will discuss about innovative projects experienced in the last two years in a district in a less developed region of our country. Although our paper is on Ovacık district, it must be stated that local authorities in the other provinces of the region have similar efforts. For ex: 'Democratic Economy Conference' was arranged in 2014 with the participation of local authorities of Diyarbakır, Mardin and Van provinces and a result manifesto suggesting reforms on agriculture, education, health system, women labour, etc. was declared. (Democratic Economy Conference, 2014).

In general, solidarity economy stating economic activity styles through which human needs are met through voluntary co-operation, self-management and mutual aid (Ripess 1997 den akt. Dagmar and

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Giegold, 2008, p:12) includes a lot of practice and organization styles. Economical activities in this context are much more different from the others and specific on its own. What was experienced in Ovacık district of Tunceli is showing off an example of an inclusive and development focused solidarity example.

Ovacık takes place in Eastern part of Turkey, in a geoghraphy where winter conditions are hard in the important part of the year, unemployment is heavy and poverty is common very much. As of 2015, 3,274.- people live in the city center and 3,164.- people live in the villages, totally 6,438.- people live in Ovacık where industrial has not been developed and sources of income are agriculture and livestock production (TUIK, 2015a).

Mehmet Fatih Maçoğlu, common candidate for mayor of Turkish Communist Party and Democratic Rights Federation (DHF) joined the local elections with a programme considering preferences and expressions of inhabitants living in the city and supporting the depressed in 2014 in Ovacık and won the elections. The municipality starting work after elections implemented a lot of projects with a participant management understanding and solidarity/voluntary co-operation.

The municipality has limited sources and has taken over a quite bid debt. Somehow, it has gained effective results in meeting the needs of those who live in the city through new ways, organization styles and new arrangements after the elections. The projects led by the local authority have been implemented in accordance with the local area inhabitanta' choices and decisions and backed. So, extreme positive developments decreasing poverty and raising life standards have been experienced.

We can study the practices after the election in Ovacık under a few headings. First of all, restructing of local authority of the city has been taken up with a new approach. Then, studies on the development of agricultural production and meeting basic needs and lastly cultural, social and education purposed activities realized with voluntary co-operation and solidarity have been summarized. We should state that there are a lot of new projects planned in our paper together with the projects realized.

1. INNOVATIVE PRACTICES IN THE FORM OF LOCAL AUTHORITY IN THE DISTRICT

Local authority of the city was restructured with a democratic and participating understanding after 2014 local elections. The participation of the city inhabitants for management and source allocation decisions was provided with the adopted management understanding. In another saying, city management was formed in the axis of managing and producing together with the society.

We can summarize how the restructuring process was realized; 'Ovacık Democratic People Solidarity' was formed with the participation of all people through basic understanding of 'word, authority, decision for people' and 'it will be people that produce and manage' before the local elections. Ovacık Democratic People Solidarity has enlarged as a political organization with the participation of city people and non-governmental organizations and has taken a determining role in organizing elections works and determining the candidates.

Ovacık Democratic People Solidarity has especially valued the establishment and operation of people councils for reflecting people's own desire during the election works. People council consists of youth, women, neighbourhood, artisan, trade unions, non-governmental organizations representatives and people of the city. These councils have been said to be established because 'people should have the right to speak on management and their own destiny instead of being a managed society' (Mehmet Maçoğlu, personal interview, 18th Feb. 2016).

People Council is the most powerful organ. Mayor is the natural member of this council. People council can follow Mayor's Works closely. Council meets every 30-45 days and these meetings are realized with the participation of people living in the city. All neighbourhoods, democratic mass organizations, union trades, housewives, in short all city inhabitans are called to these meetings with the announcements. Projects are presented to the people council and decided upon the evaluations made here.

The mayor has stated that every topic is discussed in this platform and he has valued these meetings very much. He says that he has learned a lot from elders, youngs and women in the meetings. For ex: while discussing a street work arrangement, mayor wished a street to be moved forward, but a lady from people council said that 'We have an uncle who has asthma in Mercan Street. Every car driven bothers him because of the dust on the road. In my opinion, his street must be started firstly' and so Works were started from that Street (Mehmet Maçoğlu, personal interview, 18th Feb. 2016).

As a result, the municipality has developed a new understanding that gave priority to the choices and decisions of the people living in the city for the solution of social and economical problems and meeting basic needs of the inhabitants.

As a reflection of managing together with the society and transperancy understanding, the statement on which all revenues and expenditures of the municipality took place was both published on the internet and hung in the form of a banner at the main door of the municipality hall (CNN Turk, 2016).

2. PROJECTS REALIZED IN THE DISTRICT

We see that the municipality realized a lot of projects depending on participation and voluntary co-operation for the solution of social and economical problems and meeting the needs of the inhabitants. We can list these practices which focus on the struggle with economical development and poverty under a few headings:
- Meeting basic needs of the people living in the city for free or low prices
- Developing organic agricultural production in the region
- Other projects providing contribution for social life

2.1. Meeting Basic Needs Of the People Living In the City For Free or Low Price

One of the basic indicators of poverty is the difficulty people face in meeting their basic needs. W live in a World where social state has eroded and the assets that people have the right to use for free have desreased. The mayor states that poverty has been aimed to be vanished partially by meeting the needs of the inhabitants for free or very low prices.

The authorities of the municipality state that water, which is one of the most basic need of human, is not produced. It already exists in the nature. So, people of the region have the right to use it. In this context, they wish to develop the conscious that people have their own right on water and they need to have what is theirs (Mehmet Maçoğlu, personal interview, 18th Feb. 2016). Since laws forbid to distribute water for free, it is given to people for very low price in the district. Metercube of drinking water is priced as 50 kurush. It is also stated that those are disabled and have low level of income are tried to be given water at 50% discount.

Transprotation service, which is one of the most basic services, is provided for free in the city. Authorities state that their most important problem is to meet the fuel price and they provice it by a good planning. The fuel to be used for mayor's official automobile has been allocated to the city bus. So, people have been given transprotation service for free withour creating an expenditure load on municipality's budget.
Since the city bus was old and could not meet the need well, a bigger bus was bought in 2016 and it was stated that people would be continued to be moved for free as before.

2.2 Encouragement of (Organic) Agricultural Production Together

9.1% of GNP has been produced in agriculture sector in our country (TUIK, 2015b), and more than 1/5 (one fifths) of our population work in this sector (TUIK, 2015c). Businesses that are insufficient for capital and and technology and work with low productivitiy are common in this sector. Agricultural production depends on import of fuel, compost, agricultural components, seed, animal feed, etc. inputs. Due to the increase in imported input costs, the production cost of a lot of production exceeds product price and so, production removes from being attractive. These conditions lower our agriculture producers' competition chance against the World.

Agriculture depends on natural conditions and is a high risky sector. Therefore, it is backed by all the states almost all over the World. As of 1980s, incentives allocated to the agriculture sector were restricted in accordance with IMF policies and the institutions established to support stockbreedind were privatized. Our agriculture policies were formed to import the products the prices of which are higher than the world prices. Under these conditions, a lot of products which we were the producers in the past are now imported in our country where agricultural potential is very high. While the importation of cheap agricultural products from the World markets is causing the workers of this sector to be unemployed, it also has caused poverty of those who live in rural areas and immigration to bigger cities.

The most important source of income of Ovacık is agricultural production. The region is extremely eligible for organic agriculture. Somehow, the above mentioned problems about agriculture sector are the

same for this region. The municipality has aimed to encourage organic production to be realized, to have inhabitants of the region join the production and to realize it with co-operation and solidarity, by developing a long-term project. This process can be qualified as the refreshment of Imece Style solidarity experienced in the past commonly in our country. In order to provide and support organic agricultural production, chickpea, dry bean and potato were farmed on the Treasury's land which is nearly 650 acres and on the villagers's empty lands in 2015. Chickpea and bean are specific to the region and well-known in our country. The seeds of these products are organic and no chemical components were used during production process.

The mayor summarizes tha production process as follows; 'People of Ovacık know about agriculture well. We have produced chickpea and bean with solidarity soul without spending even 1 Lira of the Municipality. Seeds, workers' expenses were met by the voluntaries of this work from inside and outside the country. We have just allocated our labour, made the programme, worked on the land but all the remaining works were realized with solidarity soul. There were those who worked for four months during the production. Besides, there were those who worked daily and for free for solidarity. For ex: for gathering works of chickpea on Treasury's land, a voluntary group including 50 people from different provinces of Turkey joined Ovacık Municipality. So, region people were given a possibility to make a living and to be employed in this process' (Mehmet Maçoğlu, personal interview, 18th Feb. 2016).

The mayor has also stated that they will distribute the shares of the villagers whose lands were used and of the workers from produced crops by the municipality and he municipality will establish a seed bank with the remaining crops. They will also deliver the production to the co-operative to be established with the suppoprt of the municipality and provide seed to the co-operative. As stated, some part of the crops were distributed to people as seed, some were sold and the revenue was granted to university students. Besides, 100 poor families have been gives various aids.

Mayor Maçoğlu has stated that the municipality gathered 8 tonnes of dry bean and chickpea and added that the villagers whom the municipality delivered seed for free gathered tonnes of crops. The crops produced organically were highly demanded from inside and ourside the country and they were sold in a short time. Since the municipality could not meet the demands fo rthe products, the beans and chickpeas produced organically by the villagers in Ovacık's villages were presented for sale under the control of the municipality. Products of the villagers were delivered to the warehouse under municipality hall. 6 young people packed beans and chickpeas to meet the demands in the ground floor of the municipality hall, working 10 hours daily and the products were marketed through internet with 'delivery free to the door' method.

Mayor Maçoğlu states that they will provide seed for more people in the next years to meet high demands for their products and their aim is to enlarge production field more.

The municipality has led potato production out of beans and chickpeas. Potato seed will be provided for the villagers with whom the municipality signed agreement and the fuel expenses will be met by the municipality for this. It has been stated that the production will be realized by the villagers, the municipality will only deliver the seeds and so, the villagers joining the production will earn income. We understand by the mayor's interview taking place in the press that this project was realized in the next period as 'The villagers with whom we agreed started organic potato production' (Maçoğlu, 2015).

In this context, another project of the municipality is the organic wheat growing project. In order to understand the consistency with the soil, a field of 40 acres was farmed. It has been stated that wheat production will be realized on more land in the next years and completely organic wheat will be produced and the construction of water mills is being planned. Moreover, it has also been stated that demand for beekeeping came from region people and they requested the municipality to be the leader and supporter in this issue (Mehmet Maçoğlu, personal interview, 18th Feb. 2016).

2.3 Other Projects Providing Contribution For Social Life

The authorities of the municipality have stated that a lot of people and institutions from inside and outside the country have provided financial and moral contriutions. These contributions have provided necessary finance for organic production on one hand and a lot of projects providing contribution to the social life have been realized on the other hand.

We can list the projects realized with co-operation and solidarity under the control of the municipality and taking place on Ovacık Municipality Official Twitter Site as follows: arrangement book campaign and establishment of people's library with donated boks, various culture and art activities (meeting with poems,

theatre plays, etc.), starting the construction of municipality culture hall. It is also stated that substructure of children's park was completed, hearing handicapped citizens were started to teach reading, writing and maths by sign language (5N1K, 2015). Upon request of the village headman, the repair of Gülyazı Village Mosque was undertaken by Ovacık Municipality and people of Tunceli living in Austria provided financial aid for repair (Milliyet, 2015).

The mayor states in an interview that there are Munzur mountains, plateaus, valley, forests, rivers and a different herbal flora and they are seeing about mounatineering, trekking, water sports, rafting and nature sports to be evaluated in their region (Maçoğlu, 2014a). The mayor states that they aim to be able to attract tourists by introducing natural beauties of Ovacık with 'Take Your Tent and Come' Project (Maçoğlu, 2014b). In the activity realized on the said dates, participants coming from different cities of the country realized nature trekkings, panels, music concerts, short films, paintings, photograph taking and workroom exhibitions during 5 days.

Finally, a campaign in the library as 'one hour bicycle ride is for free for the one who reads book for one hour' was started. The mayor states that Mersin Mountaineering Club has donated 15 bikes to the municipality during their visit to the city and they started a campaign like this to have the children spend their holiday well and gain reading habits and people's interest was high (Hurriyet newspaper, 2015).

3. RESULT

Those who live in Ovacık district give a good example about the approach focusing on social benefit and human instead of profitability, competition and transformative potential in economical and social fields.

Realizing social benefit and human focused practices to meet the needs has been possible upon decisions of the region people that concern themselves. We understand that the necessary mechanisms for this have been established and democratical culture has been aimed to be developed. In this context, people organization starting from the bottom has been realized and people have been enabled to have 'freedom right for statement' fort he decisions effecting themselves through the established people's councils. In another saying, district management has been formed in the axis of democratic participation.

Agricultural production process (ecological-economical, protecting products specific to the region) started with co-operation and solidarity created important transformative effects. The lands which were not used before were allocated to production, employment was realized, so region people earned income to make a living. Products and seeds specific to the region were protected, the continuity and increase of production was encouraged by giving seed to the villagers from the gathered crops. Through direct marketing of the products, producers earned instead of middlemen. Cooperativization will also be encouraged in the next years with the transfer of production to the cooperatives.

Practices towards supporting low income people living in the city has been effective in struggling with poverty. Meeting basic needs for free or for very low prices, providing aids to those who could not earn in any way in the city from the revenue gained from agricultural prodeuction, allocating grants to the students and the practices in this context. It must be stated that a lot of social aimed projects realized with cooperation and solidarity have provided important contribution to the social development of the region.

We should state the fact that Ovacık has a small population, the region is eligible for organic agriculture, there is a leftist-socialist tendency tradition there, products demanded are well-known and specific to the district exist and providing important support and contribution from inside and outside the country has been effective very much in this achievement. Alternative macro economic policies must be developed to provide eligible atmosphere for economical solidarity at local level and realization of similar projects all over the country. Besides the allocation of economic sources glorifying markets, these policies should be formed with an approach completely different from neo-liberal policies removing the other fields of our previous lives such as health, education, social security, culture that are out of market relation to the market ascendancy in order to make economic solidarity possible. What have been experiences indicate that prioritizing profitability, competition, individual benefits ia not the only way, even no way, fort he solution of economical problems.

REFERENCES

Altvater, E. (2006) "Solidarisches Wirtschaften: prekär oder emanzipativ?" in *Elmar Altvater / Nicola Sekler (Hrsg.) Solidarische Ökonomie   Reader des Wissenschaftlichen Beirats von Attac* http://www.vsa-verlag.de/nc/detail/artikel /solidarische-oekonomie-1/

CNN TÜRK, (2016, 23 Şubat) http://www.cnnturk.com/turkiye/komunist-baskan-belediyenin-gelir-ve-giderini-kapiya-asti

Demokratik Ekonomi Konferansı (2014, 10 Kasım) http://www.milliyet.com.tr/demokratik-ekonomi-konferansi-sona-erdi-diyarbakir-yerel haber-466605/

Giegold, S./ Embshoff,D. (2008) "Solidarische Ökonomie im globalisierten Kapitalismus" in Sven Giegold/Dagmar Embshoff (Hrsg.) *Solidarische Ökonomie im globalisierten Kapitalismus*

Hürriyet Gazete (2015, 9 Temmuz) *http://www.hurriyet.com.tr/bir-saat-kitap-okuyana-bir-saat-bisiklet-turu-bedava-29508698*

Maçoğlu (2014a, 24 Nisan), Röportaj http://adhk.de/?p=4496

Maçoğlu (2014b, 30 Mayıs), Röportaj http://www.tunceliemek.com.tr/yazdir.asp?bolum =7972http://adhk.de/?m= 2014 &paged=46)

Maçoğlu (2015 27 Nisan), Röportaj http://ilerihaber.org/komunist-baskanla-ovacikta-tarim-devrimi/14329/

Milliyet Gazete (2015, 7 Ekim) http://www.milliyet.com.tr/komunist-belediye-baskani--gundem-2128380/

TÜİK, (2015a) http://www.tuik.gov.tr/PreIstatistikTablo.do?istab_id=2305

TÜİK (2015b) http://www.tuik.gov.tr/UstMenu.do?metod=temelist

TÜİK (2015c) http://www.tuik.gov.tr/PreTablo.do?alt_id=1007

https://twitter.com/ovacikbelediye

https://www.facebook.com/tunceliovacik/

5N1K (2014, 28 Kasım) https://www.kanald.com.tr/5n1k/ozel-klip/turkiyenin-ilk-komunist-belediye-baskani#/55ddcf28cbbf34147472f562

SOCIAL AND SOLIDARITY ECONOMY IN İZMİR

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Abstract

Social and solidarity economy (SSE) holds considerable promise for addressing the integrated objectives of the 2030 Development Agenda (UNTFSSE, 2014). According to UN Task Force, one of the thematic areas in transition to sustainable development is the relevance of SSE in local development. SSE provides a new vision of local sustainable development that recognizes the key role of local community based organizations, public institutions and cooperatives, NGOs etc., guided by principles of solidarity, cooperation and democratic self-management.

Izmir, endowed with high human, social and institutional capacity is one of the few regions in Turkey who has been proactive in crafting an enabling local policy environment for SSE and local sustainable development.

The aim of this study is to contribute to raising the visibility of SSE by examining the current situation and potentials of SSE and related organizations in İzmir within the context of local sustainable development. Sections 2 and 3, involve the theoretical, conceptual and practical issues related to SSE and its relevance to Agenda 2030 and local development. Section 4 presents a simple survey study which outlines the evaluations and expectations of university students on Agenda 2030 and the related global goals. Section 5, analysis the SSE organizations and enterprises situated in the İzmir region.

Keywords: Sustainable development; Social Economy, Solidarity Economy; Local Development of Izmir.
JEL classification: Q560, O15, R11

1. INTRODUCTION

AGENDA 2030 and the relevant 17 SDG's represent a challenge of enormous proportions in order to fulfil the integrated aims of ***people, planet and prosperity***. One important factor to the success of the Agenda is a fundamental change *in the way that our societies produce and consume goods and services*. Hence it is crucial to look at alternative forms of economy different than the *traditional economy that* are more aligned with the goals and integrated approach of the 2030 Agenda (Utting, 2014). At this point, the ***Social and Solidarity Economy (SSE) movement*** has been gaining visibility within the academy and on the agendas of national and international public policies (ILO 2014b). SSE, is a concept that refers to a broad range of enterprises and organizations, in particular cooperatives, mutual benefit societies, associations, foundations and social enterprises, which specifically produce goods, services and knowledge while pursuing explicit social aims and fostering solidarity and cooperation (UNTFSSE, 2014).

The aim of this study is to contribute to raising the visibility of SSE by examining the current situation and potentials of SSE and related organizations in İzmir within the context of *local sustainable development.* Sections 2 and 3, involve the theoretical, conceptual and practical issues related to SSE and its relevance to Agenda 2030 and local development. Section 4 presents the simple survey study which outlines the evaluations and expectations of university students on Agenda 2030 and the related global goals. Section 5, after presenting the socio economic and ecological profile of İzmir, *analysis the SSE organizations and enterprises situated in the region.*

2. SOCIAL AND SOLIDARITY ECONOMY

The SSE has positioned itself as an alternative economy and a socio-economic *space* between the capitalist (private) sector and the public sector. This umbrella term is used to refer to forms of economic activity that prioritise social and often environmental objectives and involve ordinary people, producers, workers, consumers and citizens, to play an active role in shaping various dimensions of their lives, *with*

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the main purpose of meeting the needs and objectives of their members rather than remunerating capitalist investors (maximize profits) (ILO 2015; Utting 2014; Laville, 2010).

SSE organizations include[3], traditional forms of cooperatives, mutual associations and non-governmental organizations, and also self-help groups, fair trade organizations, associations of informal sector workers, social enterprises, and finance schemes (Utting, 2013). Above all SSE and related organizations being an alternative to the traditional economy are distinguished by their principles and values. Social and Solidarity Economy is an ethical and values-based approach to economic development that prioritizes the welfare of people and planet over profits and blind growth (RIPES, 2013). Main principles of SSE involve; *solidarity; participatory and democratic management, voluntary involvement; community development; and collective dimension in terms of pooling resources, decision-making methods and benefits distribution* (ILO 2014a, p:14; UNRISD; 2014), SSE accepts the reality of the capitalist system and its core institutions or 'rules of the game'; *however it is* primarily about expanding the economic space where people-centred organisations and enterprises can operate (Utting, 2014). One important contribution to sustainable human development is that some SSE organizations are designed to fight poverty, marginalization and social exclusion. However SSE is ***not only about the poor***; solidarity economy based enterprises have the ability to enter strongly into dialogue with dynamics of endogenous development, *one that is self-managing and solidaristic making the local actors the prime protagonists responsible for local development and taking into account and expanding local capacities. (*ILO, 2014b, p: 122 and ILO, 2015)

SSE organizations and enterprises pursue some combination of economic, social, environmental and emancipatory objectives, According to UNTFSSE (2014: p: xi, x) *economic sphere* involves generation of job and income; *social sphere* offers comprehensive social protection and redistribution, strengthening of territorial ties; *environmental objective* supports economic activity which enhances rather than depletes the environment; *emancipatory sphere* refers both to economic and political aspects by supporting voice and representation through self-organization, participatory governance and collective action at multiple levels.

In various parts of the world spectacular growth of the SSE has taken place in the field of organisations engaged in producing what are known as *social or merit goods,* in creating and maintaining employment and correcting serious economic and social imbalances. (Table 1)

Table 1: SSE World Wide Some Numbers

Worldwide	Cooperatives provide jobs for 100 million people
Fair trade market	The global certified amounted to EUR 4.8 billion (2012)
European Social Economy	2 million enterprises, representing 10% of all European enterprises, and employ over 14 million paid employees (6.5% of the working population
France	SSE sector, 222.800 organizations employ 2.33 million
Brazil,	More than 20.000 SSE enterprises comprises almost 1.7 million people
Colombia	Over 10.000 SSE organizations provide more than 670.000 jobs

Source: EC, 2013 and 2016

3. LOCAL SUSTAINABLE DEVELOPMENT AND SSE

The UN Task Force (UNTFSS, 2014) identified eight thematic issue areas in order to position SSE more centrally in transition to sustainable development and the successful implementation of Agenda 2030. One of these thematic areas is the *relevance of SSE in local development.*

From a theoretical view point, the *three key concepts* that explain the contribution of SSE to local sustainable development are *endogenous development, inclusive growth* and *social capital (Dash, 2014; ILO 2015).* Endogenous and inclusive economic development are based on improvement in the living standard of the local population, creating employment, income and wealth by and for the community, through realizing the use and enhancement of local assets and human and material resources. Moreover as Putnam (2000) suggests; the fundamental explanation for endogenous development to occur lies in the high degree of *social capital.* The SSE presents a great potential for activating processes of endogenous and

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[3] During the past two decades there has been a considerable diversification of SSE organizations in Europe, Latin America and Asia. Hence there is a diversity of terminologies to designate this sector. Three well-defined theoretical approaches are (a) the "social economy" (SE) approach, used in Europe; (b) the approach of the non-profit organizations (NPOs); and (c) the " solidarity economy" (SSE) approach, which is mainly Latin American in origins (ILO 2014 a)

inclusive development; Solidarity-based economic enterprises are deeply rooted in the local economy, particularly they are knowledgeable about the interests and needs of the region/territory and is capable of promoting co-responsibility in terms of resource use and distribution of benefits (CIRIEC, 2007) Graffe, (2007), says that local economic and social development projects carried out by initiatives and organizations from the SSE brings an integration between the economic and social dimensions, in addition to driving new productive behaviours within the territory, based on partnerships, cooperation, bottom-up actions, community development and generation of *social capital* (ILO, 2014 south p:113-14).

According to various case studies undertaken by international organizations and SSE networks the main challenges' faced by SSE Organizations and Enterprises are stated as follows (EC, 2016; ILO, 2014a)

- Access to finance - social enterprises are struggling to find the right funding opportunities due to the lack of understanding of their functioning and their small size.
- Low degree of recognition - There is need for projects to review legislation, share good practices, awareness raising events and projects for the collection of statistical data, for cooperatives and mutual and social enterprises.
- Insufficient regulatory environments: legal forms of social economy enterprises – In EU for instance, Commission examines how best to respond to these problems in the area of state aids, public procurement or legal statuses to promote the appropriate policies.
- Difficulties in marketing the products; low levels of training and entrepreneurial skills[4].

## 4. AGENDA 2030: HOW RELIABLE AND PERSUASIVE ARE THE GLOBAL GOALS?

A simple survey was conducted among 140 students from 4th year economics department of Ege University. All of them were very well informed about the contents of post 2015 agenda and related goals as they had taken the three months long comprehensive course on "sustainable human development". The students were asked to answer a simple questionnaire with closed ended questions. The overall objective of the survey was to listen to these students' evaluations and expectations with regards the post 2030 agenda. More specifically:

- Weather they believe that this vision of agenda 2030 for a better world really can be achieved or whether they are sceptical about the agenda?
- What are the main obstacles and risks with regards achieving the SGD goals
- What recommendations/suggestions they might offer.
- A good gender balance was achieved with boys representing 46% and girls 54%. All Participants were university students aged between 22 and 24 years old.

4.1 Outcomes of the Survey
- Participants recognize environmental degradation and fight against poverty as the two most important priorities at the global level. Democratic participation comes as the third priority challenge. Economic growth goal ranked the last in the answers. (Figure 1)
- Sceptical about Agenda 2030: Only a minority of participants (28%) believe that the agenda can be achieved. (Figure 2) The remaining 72% either don't believe it or is sceptical about it.

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[4] For good examples of SSE organizations and networks worldwide, refer to ILO 2014a, b and 2015.

Figure 1. What are the tree most important global challenges?
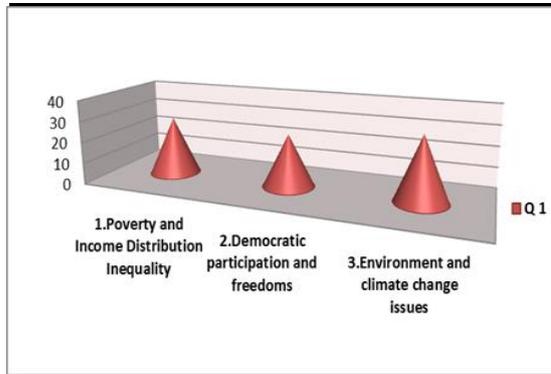
Figure 2. Do you believe that the vision of Agenda2030 can be achieved?
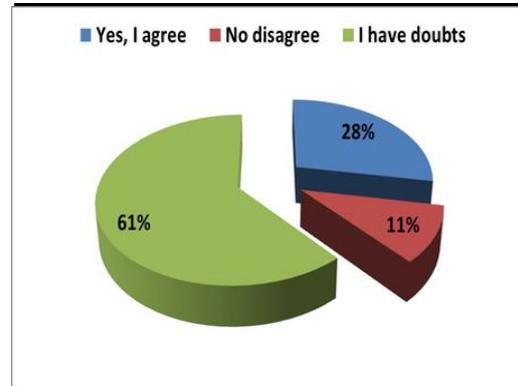
- The students were asked about the causes of their disbelief or scepticism about the agenda: A majority of the students (66%) believe that for the success of the agenda, there should be a radical in the prevailing life styles, production and consumption habits and norms of people which prioritize relentless and mindless pursuit of consumption growth and norms of people, 41 % of the respondents expressed that they don't see UN and other international institutions as trustworthy.
- The majority of participants emphasized the priority of (1) international monitoring; (2) national government's commitment to the goals and (3) participatory decision making process in achieving the SDG's (Table 3).

Table 2: What are the main factors of success?

Main factors for Success	Number of points
Government commitment	98
International monitoring	97
Democratic Participation	91
Finance	76
Data collection	58

5. İZMİR AND SOCIAL AND SOLIDARITY ECONOMY
5.1 Socio- economic profile in İzmir and Turkey Comparison

With a population size of 4, 005, 459 people as of the year 2012, İzmir region with its 26 provinces, constitutes 5.3% of overall Turkey population. The region ranks at the third place among 81 provinces regarding both population size and socio-economic development. Below Tables 3 and 4 provide data on the economic, social and environmental dimensions of İzmir region. İzmir is one of the fastest growing metropolises in the world. According to the 2011 Global Metro Monitor Report prepared by the independent USA research organisation Brookings Institute, İzmir is the fourth metropolis economies with the highest growth rate throughout the world during 2010- 2011 (IZKA, 2014). Turkey's overall GDP increased by %69 throughout 2000-2013 and reached 654 billion dollar's. İzmir, with a GDP of 51 billion dollars, constitutes approximately 7% of overall Turkey's GDP (TEPAV, 2015). The foreign trade volume in İzmir displayed an increase of 2.7 times throughout the 2002-2013 period, and reached a volume of 11 billion dollars in 2013. Exports from İzmir constitute 68% of Aegean region and 7% of overall exports of Turkey as of year 2013.

Table 3: Economic Dimension

	İzmir	Highest	Lowest	Turkey
GDP*				
2000 (2005 in fixed prices, million $)	29.642	82.188 (İstanbul)	201 (Bayburt)	386.579
2013 (2005 in fixed prices, million $)	51.558	116.965 (İstanbul)	299 (Ardahan)	654.061
Workforce Market Indicators				
Unemployment rate, 2013, %	15, 4	23, 4 (Batman)	4, 2 (Karaman)	9, 7
The labour force participation rate, 2013, %	55, 9	62, 8 (Ardahan)	36, 2 (Batman)	50, 8
The employment rate, 2013, %	47, 3	59, 1 (Ardahan)	27, 8 (Batman)	45, 9
Foreign Trade Indicators				
Import, 2013, Thousand $	10.653.188	136.505.745 (İstanbul)	216 (Ardahan)	251.661.250
Export, 2013, Thousand $	9.311.212	70.680.716 (İstanbul)	21 (Tunceli)	151.802.637

*Arranged from TEPAV (2014)

With regards labour market performance as of year 2013, unemployment is 15, 4% in İzmir significantly higher than of Turkey average (9, 7%). This is mainly due to the high unemployment ratios among women (21.2%) which are 9.6 points over that of men (11.6%) and unemployment among 15-24 years age young group. Moreover the overall workforce participation rate in İzmir (55, 9%) and that rate for women (38%) are all above that of Turkey average (50, 8% and 30% respectively) and yet quite below than the OECD averages. Literacy and schooling ratios are over the Turkey's average values. The province is 2 points over Turkey average in terms of literate population ratio and 6 points over Turkey average in terms of higher education. Regarding to healthcare services, İzmir fares better than Turkey average. As of the year 2012, the number of patients per doctor occurred to be 9, 068 while Turkey average was measured to be 129, 772. The ratio of population served for wastewater treatment displays a stable growth and reached 85% which is well above Turkey's average 62%. In solid waste management there are still severe capacity deficiencies. The most important environmental challenges in İzmir is reported as basin pollution due to industrial and agricultural activity; insufficiency in untreated waste water and solid waste and excessive use of fresh water resources (IZKA; 2014).

Table 4: Social and Environmental Dimension

	İzmir	Highest	Lowest	Turkey
Education Indicators				
Literacy rate (+6), 2013, person	98, 1	98, 1 (İzmir)	90, 1 (Siirt)	96
Net enrolment rate in secondary schools	96, 36	98, 34 (Amasya)	80, 77 (Gümüşhane)	94, 52
Net enrolment rate in high schools	82, 41	100 (Rize)	42, 42 (Muş)	76, 65
Health Indicators				
Infant mortality rate, 2013, %	7, 1	25, 1 (Kilis)	5, 3 (Tunceli)	10, 8
Number of patients/person, 2012,	9.068	26.587 (İstanbul)	0, 08 (Bayburt)	129.772
Environmental Indicators				
Ratio of pop. Served with waste water treatment (5) 2010	85	-	-	62

5.2 Social and Solidarity Enterprise in İzmir

SSE organizations and enterprises are evaluated under two categories. (a) Non market sector and (b) the market sector:

a. **Non-market (non-profit) sector:** These supply non-market services to individuals, households or families and usually obtain most of their resources from donations, membership fees, subsidies, etc. (NGO's, *charities, self-help groups, trade unions, consumers' associations, churches or religious communities, social, cultural, recreational and sports clubs etc.)* (Utting, 2013). In İzmir, a total of 11.373 NGOs were founded as associations or foundations. As of year 2011, there are 4.923 associations and 190 foundations active in İzmir province. With regards foundational

objectives of NGO's, the first four places are occupied by education (16%), economic solidarity (13, 2%), sports-youth (11, 2%), and religious issues (11, 1%). The majority of NGO's in İzmir are active in the field of education and training (71.7%), followed by arrangement of conferences and seminars (62%), Main challenges faced by NGO's in İzmir are similar to those of SSE organizations of Latin America and Asia as mentioned in section 2 above. Dialogue, networking and partnership on national and international levels with SSE organizations worldwide; awareness rising and increasing the visibility of NGO's among the civil society and supportive public policies will be necessary to foster the development of SSE in İzmir.

Table 5: NGO's in İzmir: Breakdown According to Foundational Objectives

	Number of Association	Number Foundations		Number of Association	Number Foundations
Culture	518	6	Social Solidarity	789	48
Art	269	13	Science	95	7
Religious	1.250	8	Sports-Youth	1.263	6
Politics	323	0	Hobby	625	0
Health	338	12	Gender	158	3
Social Worker	304	18	Citizen (local and others)	1.319	8
Environment-Tour.	459	6	City Club	207	0
Education	1.762	52	**TOTAL**	**11.167**	**205**
Economic Solidarity	1.488	18	**TURKEY TOTAL**	**92.166**	**4.603**

Sources: Kooperatifçilik Genel Müdürlüğü (http://koop.gtb.gov.tr)

    b.   *Market* **or business sector, Cooperatives**: The *objective is* to carry out a cooperativised or mutual activity to meet the needs of their typical members (who are mainly individuals, households or families). They are market producers; their output is mainly intended for sale on the market at economically significant prices. *Fair trade organizations, social enterprises and finance schemes* also fall in this category. In Turkey, cooperatives operate under three different ministries and this leads to differences in the master contracts prepared by these ministries, in the implementation, and in the audit. There are 84.232 cooperatives in 26 different types which carry out their activities under the assigned duties and responsibility of these ministries. If we divide cooperatives as agricultural and non-agricultural ones, we notice that about 13.000 out of 84.000 cooperatives were established as agricultural cooperatives, while about 71.000 was established as non-agricultural ones. The majority of cooperatives belong to the housing cooperatives. There are 54.996 housing cooperatives in total and this number accounts for the 65 per cent of the total number of the cooperatives (Table 6).

Table 6: Cooperatives According to Their Types, the Number of Members in Turkey, 2011

Relevant Ministry	Type of Cooperative	Cooperative		Union		Central Union	
		Number	Number of Members	Number	Number of Member Cooperative	Number	Number of Member Unions
Ministry of Food, Agriculture and Livestock	Agricultural Dev. Coop.	8.173	842.563	82	4.939	4	77
	Irrigation Cooperatives	2.497	295.984	13	733	1	10
	Fisheries Cooperatives	522	29.972	14	202	1	12
	Beet Planters Cooperatives	31	1.638.981	1	31	-	-
	Agricultural Credit	1.767	1.082.978	16	1.767	1	16
	SUB TOTAL	**12.990**	**3.890.478**	**126**	**7.672**	**7**	**115**
	Housing Cooperatives	54.996	1.985.076	338	10.525	3	62

Ministry of Environment, Urban Planning	Housing Cooperatives in Small Industry Areas	1.052	127.098	5	142	-	-
	Collective Workplace Housing Cooperatives	1.810	103.536	7	116	-	-
	SUB TOTAL	**57.858**	**2.215.710**	**350**	**10.783**	**3**	**62**
Ministry of Customs and Trade	Agricultural Sales Cooperatives	322	602.248	17	322	-	-
	Free Agr. Sales Coop.	22	2.245	-	-	-	-
	Tobacco Agricultural Sales Cooperatives	66	23.414	-	-	-	-
	Raw Vegetables and Fruit Cooperatives	37	2.886	-	-	-	-
	Consumers' Cooperatives	2.970	288.063	17	155	1	9
	Motor Carriers Coop.	6.734	199.220	42	754	1	15
	Tradesmen -Craftsmen	993	685.105	32	894	1	32
	Small Art Cooperatives	331	10.043	5	14	-	-
	Supply and Delivery Cooperatives	344	24.497	-	-	-	-
	Tourism Development Cooperatives	391	17.448	3	33	-	-
	Production Marketing Cooperatives	483	22.491	5	429	-	-
	Supply Guarantee Cooperatives	7	599	-	-	-	-
	Publishing Cooperatives	31	767	-	-	-	-
	Carrier's Cooperatives	11	586	-	-	-	-
	Management Cooperatives	585	98.769	1	7	-	-
	Insurance Cooperatives	3	15	-	-	-	-
	Solidarity Cooperatives	24	22.160	-	-	-	-
	Training Cooperatives	30	2.481	-	-	-	-
	SUB TOTAL	**13.384**	**2.003.037**	**122**	**2.608**	**3**	**56**
	FINAL TOTAL	**84.232**	**8.109.225**	**598**	**21.063**	**13**	**233**

Source: Ministry of Customs and Trade, Ministry of Environment and Urbanization, Ministry of Food, Agriculture and Livestock of Turkey

The majority of cooperatives are concentrated in the five prosperous cities (Ankara 940, İstanbul 670, İzmir 638, Antalya 509, Adana 464) while cities in the South-eastern part of Turkey and with the lowest socio economic development level have the fewest number of cooperatives (Bayburt 14, Ardahan 19, Kilis 27, Gümüşhane 32, Bingöl 33).

In İzmir there are a total of 3, 971 cooperatives with 33, 428 members. The majority of cooperatives (310) out of the total are mainly agricultural cooperatives with a total of 41, 140 members. The activity areas of agricultural cooperatives are; agricultural development (163); irrigation (100) and water products (47).

The cooperative policy in Turkey has taken a different form in due course due to the changes in the social and economic structures. Within this framework, the cooperatives served as agents to provide funds to the agricultural sector and tradesmen and craftsmen whom the state wished to give financial support to, as organized structures. Moreover, the State relied on cooperatives to solve the housing problems arising from the urbanization. According to a comprehensive survey study on the Cooperative in Turkey the following challenges and weaknesses are observed (Ministry of Customs and Trade of Turkey, 2014)

> ➢ Due to inadequate public support to cooperatives, lack of convenient and satisfactory environment for the development of cooperatives: (lack of regulatory standards, statistical data, auditing etc.)
> ➢ Inadequacies in the training, awareness raising and research activities (such as lack of established cooperative culture, lack of awareness with regards the benefits of cooperatives in regional development etc.)
> ➢ Low skills and education level of members;
> ➢ Lack of knowledge and experience of the cooperative managers regarding the business management and not being able to employ professional managers)
> ➢ Organizational and management problems due to small scale and small number of members.
> ➢ Inadequate training, audit, consultancy and technical service for the cooperatives,
> ➢ Low social capital which also covers 'interpersonal confidence, solidarity and the culture of carrying out business together in the overall society
> ➢ Lack of physical capital and also problems in access to suitable finance
> ➢ Problems stemming from the legislation and the implementation

ILO (2014b and 2015) suggests two key issues amoung others, for the success and development of cooperatives in particular and SEE organizations in general for local sustainable development. *Firstly,* public policies to create a favourable environment to enable social and solidarity economy to flourish, in terms of funding, supportive tax measures, specific criteria for inclusive public procurement, adequate legal frameworks and access to education. *Secondly*, regional, national and international *networking*s among SSE organizations are crucial in promoting the specific characteristics of the SSE. Networking provides (a) sharing of best practices in the formulation and adaptation of micro-finance schemes, fair trade, solidarity finance etc. (b) sharing of experiences in new incentives and mechanisms for the creation of companies, in particular micro- and small-scale firms, which in the developing countries make up the majority of the sustainable and growth-generating employment (c) promoting the replication and adaptation of programmes/systems.

6. CONCLUSIVE REMARKS

Global goals of Agenda 2030, address the most pressing global challenges of our time by putting people at the centre of sustainable development and calling upon collaborative partnerships across and between countries to balance *the three dimensions of sustainable development* –inclusive economic growth, environmental sustainability, and social inclusion. The global goals are a historical opportunity but the most important question to be addressed is that "*can this vision for a better world really be achieved*?" We believe that, alternative business visions which emphasize *inclusive growth* and *inclusive societies*, to the traditional *business as usual* model based on profit maximization, are necessary to achieve the global goals.

This has been the recent trajectory of *social and solidarity economy (SSE)* movement expanding during the last decades. SSE is expanding as a pole of *social utility* between the capitalist sector and public sector; it accepts the core institutions of the capitalist economy and yet it expands the economic space by reasserting social power over the economy by giving primacy to social and often environmental objectives above profits. It emphasises the place of ethics in economic activity and conceives economic practice in terms of solidarity, democratic self-management and active citizenship. Likewise, local sustainable development, as an *endogenous and inclusive process* is the fruit of joint collaborative and participative actions, mediated and driven by the articulations of key local actors such as the *local government, the private sector, civil society, social partners, organizations and local communities*, through the social and productive mobilization of the region. Hence SSE has great potential in local development as it is not only

a project built *from the bottom up* but also is based on *administrating and managing the regional endogenous resources*. To foster SSE opportunities in **İzmir,** there is need to establish and expand the networks and partnerships among SSE organizations on inter-regional and international levels. Moreover it is essential to identify a set of public policy initiatives especially in the fields of production and services such as, waste collection and recycling, locally-based industry, agro-ecological production, sustainable extraction resource, renewable energy sources and community-based tourism.

Investment which may be defined as a relationship between the present and the future is the main factor that nurtures growth. In order to achieve the vision for a better world that prioritizes sustainable and inclusive growth and societies, we need to invest more not only in low carbon economy but also in assets that nurture solidarity, commitment, participating in the life of society and social values.

REFERENCES

Başıhoş, S. ve Düşündere A.T. (2016) *Gelişmişlik Göstergesi Olarak Gece Işıkları: İller Arası Gelir Eşitsizlikleri Ne Durumda?* Türkiye Ekonomi Politikaları Araştırma Vakfı (TEPAV), Mayıs 2016, Ankara

CIRIEC (International Centre of Research and Information on the Public, Social and Cooperative Economy) (2007) *the Social Economy in the European Union,* Report by Rafael Chavez and Jose Luis Monzón, EESC

Dash, A., (2014) "Towards and Epistemological Foundation of Social and Solidarity Economy", *UNRISD, Occasional Paper 3*

EC-European Commission (2013) *Social Economy Synthesis Report*, EC Publication Luxemburg

EC-European Commission (2016) *Social Economy in the EU*, Accessed on: 10.06.2016, http://ec.europa.eu/growth/sectors/social-economy/index_en.htm

Greffe, X. (2007), "The Role of the Social Economy in Local Development". In: Noya, A . And Emme, G. *Social Economy: Building Inclusive Economies.* OECD, 2007

ILO (2014a) *Social and Solidarity Economy and South-South and Triangular Cooperation in Latin America and the Caribbean: Contributions to Inclusive Sustainable Development,* Italy

Izmir Development Agency-IZKA (2013) *İzmir Regional Plan 2014-202,* İzmir

İzmir Kalkınma Ajansı-IZKA (2012) *İzmir Sivil Toplum Araştırması*, İzmir

---- (2014b), *Social and Solidarity Economy: Towards Inclusive and Sustainable Development*, Campinas, Brazil

---- (2015), *Social and Solidarity Economy in Asia: A South-South and Triangular Cooperation Perspective*, Geneva

Laville, J.L., (2010) "The Solidarity Economy: An International Movement." *RCCS Annual Review* [Online], Vol. 2. Accessed on: 15.02.2014, http://rccsar.revues.org/202

Putman, R.D. (2000) *Bowling Alone: The Collapse and Revival of American Community,* New York: Simon and Schuster

Republic of Turkey Ministry of Customs and Trade, General Directorate of Cooperative (2012) Cooperative Development Strategy and Action Plan of Turkey (2012–2016), Ankara

RIPESS, (2013), *Social Solidarity Economy recommendations for the Post- 2015 Development Agenda*, Downloaded on: 02.06.2016 http://www.ripess.org/wpcontent/uploads/2014/08/SSE_recommendations_post2015_SDGs_EN_with_endorsements1.pdf

T.C. Gümrük ve Ticaret Bakanlığı (2014) *Türkiye Kooperatifçilik Raporu 2013*, Ankara

T.C. Gümrük ve Ticaret Bakanlığı, Kooperatifçilik Genel Müdürlüğü, *Türkiye Kooperatifçilik Stratejisi ve Eylem Planı 2012-2016*, Ankara

TÜİK (2014) *Seçilmiş Göstergelerle İzmir 2013*, Ankara

UNTFSSE- UN (2014) *Interagency Task Force on Social and Solidarity Economy and The Challenge of Sustainable Development*, Accesed on: 15.05.2016, http://unsse.org/wp-content/uploads/2014/08/Position-Paper_TFSSE_Eng1.pdf

Utting, P, (2013) "Social and Solidarity Economy: A Pathway to Socially Sustainable Development?" *UNRISD Think Piece*, Accessed on: 02.06.2016, http://www.unrisd.org/unrisd/website/newsview.nsf/%28httpNews%29/AB920B156339500AC1257B5C002C1E96?OpenDocument

Utting, P. (2014) "Introduction" (ed) P. Utting, *Social and Solidarity Economy: Beyond the Fringe,* UNRISD Publication