GLOBALIZATION POVERTY INEQUALITY & SUSTAINABILITY



Editors Stavros Mavroudeas Sevda Akar Julia Dobreva



GLOBALIZATION, POVERTY, INEQUALITY, & SUSTAINABILITY

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Globalization, Poverty, Inequality, & Sustainability

(Edited by: Stavros Mavroudeas, Sevda Akar, Julia Dobreva)



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INTRODUCTION

Stavros Mavroudeas, Sevda Akar, Julia Dobreva

This e-book is part of the series that come from the proceeding of the International Conference on Political Economy (ICOPEC) 2019 that was held at Marmara University, Istanbul, Turkey in June 2019. The general theme of ICOPEC 2019 was **'If Globalism is Dead—Long Live What?'** and touched upon a crucial issue of the contemporary global economy. The volume at hand carries the title **'Globalization, Poverty, Inequality, & Sustainability'.** It contains ten selected papers from the conference that benefited from comments and discussion during the conference and were subsequently significantly improved.

The first chapter is titled 'The survival of modern economies – challenges and remedies" and it is authored by Julia Dobreva. It aims to delineate the basic problems and challenges facing the economies of the 21st century as differentiated from those of the previous centuries. The author identifies corruption, state bureaucracy, low infrastructure and population growth as key impediments to the process of modern economic development. Then she argues that four key factors have a special impact on economic growth in modern-day economies: human resources, education, healthcare, and energy resources. These are considered as the main drivers of economic development. Finally, the author analyses these key factors and proposes remedies to current economic problems.

The second chapter is authored by Emilia Alaverdov, Salome Pipia and Eka Rusieshvili and it is titled 'The Impact of Migration Processes on the Modern World'. It argues that the growing migration currents were a crucial feature of the globalization era. These currents, in the area of Eurasia and Africa, were directed primarily to the countries of the European Union. As it is well known, this created economic, social and cultural tensions as the majority of the migrants came from very different socio-economic and cultural environments. The authors of this paper argue that it would erroneous to consider asylum seekers and immigrants as a threat. On the contrary, legal mechanisms and copious social work are required to overcome tensions and to avoid racial and religious intolerance.

The third chapter of this volume is authored by Ioannis Zisimopoulos, Kostas Fagogenis, and George Economakis. It is titled 'Sectoral distribution of collective agreements in a decentralized collective bargaining system' and analyses' and analyses what happened in Greek industrial relations after the imposition of the authoritarian Economic Adjustment Programs (EAPs) of the EU-ECB-IMF troika. The authors show that these policies, that were accepted by all recent Greek governments, led consciously to the tremendous deregulation of the labour market. Whereas before the recent Greek economic crisis the vast majority of the wage labour was covered by collective bargaining and collective agreements at sectoral/occupational level, after the EAPs the collective bargaining system was radically changed through a process of disorganized decentralization. Nevertheless, a limited number of sectoral/ occupational collective agreements has survived. The paper analyses: (a) the aspects of the Greek collective bargaining system transformation; (b) the sectors of the economy in which collective bargaining and collective agreements have been retained; (c) the prospects for the revival of the collective bargaining at sectoral/occupational level.

The fourth chapter of this volume is authored by Ahmet Utku Erdayi and Hatice Dilara Tekbas. It is titled 'Home-Based Working Women as Cheap Labor in the Context of Neoliberal Globalization: Results of a Field Study in Aksaray Province'. The authors argue that one of the defining aspects of neoliberal globalization is to boost firms' competitiveness by suppressing the labour costs which are deemed a crucial cost element. Consequently, labour markets were deregulated. Women featured as one of the most important pools of cheap labour. In several sectors, home-based work was embraced by the firms, as the preferable model, given its low-cost and unorganized nature. The chapter presents the problems home-based work poses for women analyses how women face homebased work. The study area is the Aksaray province. It is shown that home-based working women were (a) employed with low wages and in grey market without any social security registration, (b) did not get regular income, (c) suffered from health and marital problems and (d) their home-based work was a necessity brought about gender-biased division of labor and unemployment rather than a result of their preferences. On the other hand, they received some income and were nominally employed. These benefits hid the negative aspects of home-based work.

The fifth chapter of this volume is authored by Hilal Gorkem and it is titled 'Tracing Environmental Policies in Public Budget: The case of Turkey (2006-2019). The chapter investigates the extent to which environmental policies implemented in Turkey impact the central government budget between 2006 and 2019. It shows the ups and downs of environmental policies and their funding within the government budgets. Moreover, it pinpoints that although environmental policies acquire overtime an increasing significance in policy documents, environmental protection services continue to lack sufficient funding from the state budget.

The sixth chapter of this volume is authored by Cihan Kizil and its title is 'Adverse effects of Sin Taxes: Illicit drug use and unrecorded alcohol consumption in Turkey'. The authors argue that, during the recent years, despite the dramatic increase in the prices of alcoholic beverages (due to tax hikes) the total number of mass alcohol-poisoning incidents and deaths caused by drug use have also increased. This study argues that excessive taxes on alcohol may do more harm than good to the economy and society. High taxes may not break an alcohol habit, but rather replace it with a more deleterious addiction or push drinkers to unrecorded alcohol. Hence, although governments justify these so-called sin taxes as a means for reducing social problems and also enriching the fiscal revenues, they may increase social and economic problems.

The seventh chapter of this volume is authored by Leyla Firuze Arda Ozalp, Huseyin Ozalp and Fatma Esra Soylu and its title is 'Troubled Prosperity: The Economic Divide'. This study focuses on the increasing inequalities in income or wealth that characterize the contemporary developed and developing economies. The authors argue that the polarization of income distribution increases social tensions. Then they evaluate inequalities from labour, from capital and overall inequalities. The main conclusion of their analysis is that labour income inequalities have always been more moderate than inequalities from capital. Inequalities from capital, which contain larger inequalities than labor income inequalities, are transferred between generations and aggravate social inequalities even more.

The eighth chapter of this volume is authored by Binhan Elif Yilmaz and its title is 'The Universal Basic Income: An Alternative to Public Social Welfare Expenditures'. The author argues that the social welfare state should expand individuals' rights from political rights to economic and social ones. More specifically, it should guarantee that everyone who lacks enough resources has the right to social and health benefits. He maintains that the Universal Basic Income (UBI) is the way to do so. His study proceeds to survey contemporary UBI experiments. It subsequently offers reasons for supporting UBI and replies to criticisms. Finally, the author proposes methods of funding UBI.

The ninth chapter of this volume is authored by Peter Willans and its title is 'The Social Consequences of Australia's Market Economy'. The author argues that, despite Australia's good economic growth record and its equally positive prospects, serious problems are lurking underneath this glossy surface. He contends that the growing inequality is rapidly becoming such a major problem. Moreover, financialization and speculative financial markets have a growing detrimental effect on the Australian economy. Concentrated wealth is resulting in rising levels of inequality. As a solution to these problems, the author supports the restoration of the notion of fairness, egalitarianism, and inclusion.

The final chapter of this volume is co-authored by Reside Adal Dundar, Onur Dundar, Mine Polat Alpan, Mustafa Tanis, and Ismail Hakki Ozolcer. It is titled 'The socio-economic analysis of using historical water mills for electricity production: Zonguldak case'. As the title reveals, this study analyses the beneficial effects of using micro-hydroelectric facilities in terms of developmental sustainability. More specifically, the authors argue that although hydropower structures are a crucial key to economic and social development gigantic projects of this kind can have serious negative effects. On the other hand, the impact of micro-hydroelectric facilities on the environment is minimal and they are more effective when they serve local production and consumption. The arguments of this study are supported by the examination of the case study of ten historic water mills in the Zonguldak region.

1 The survival of modern economies – challenges and remedies

Julia Dobreva¹

Abstract

Economic development in the 21 century differs in many aspects from the development we have experienced in previous centuries. This paper discusses the current challenges faced by modern economies. It highlights the main problems and impediments to growth and explains why economic development cannot be achieved or is at unsatisfactory levels both in developed and developing economies. The paper also addresses the key factors for economic growth of modern economies. It explains the main drivers of growth and how they can be appropriately and effectively used as remedies to achieve economic development. Some examples are provided to illustrate the main points.

Keywords: Economic Development, Drivers of Growth, Economic Growth, Developing Economies

1. Introduction

Ever since the late 80s humanity has gone through a major shift in its understanding of what factors matter for sustainable economic growth and development. The role of such factors as education, healthcare, institutions, and technology is becoming more and more debatable with regard to their contribution to the advancement of modern societies.

In the late 80s and early 90s there was a shift in thinking within the development community and at the international financial institutions about the role of corruption in the development process. The most outstanding one is the fall of the Berlin Wall and the associated collapse of central planning as a supposedly viable alternative to free market capitalism. Obviously, it was not inappropriate monetary policies that led to the collapse of central planning but rather widespread institutional failure, more precissely authoritarianism and corruption. Also, another major event was the collapse of central planning in the late 1980s and the need for the international community to assist countries from Central and Eastern Europe for a successful transition to democratic forms of governance and economies based on market principles. It was a challenging time for those economies, struggling to make vital reforms while at the same time preparing to enter the new millennium and to compete with western economies that were making major technological advancement. The challenge still continiues and factors outside the conventional maroeconomic indicators like inflation and unemployment are playing a significant role in determining the development of certain regions in Europe and elsewhere.

Another factor, which had the same effect in the beginning of the century, was the growing frustration with the increasing population both in Asia and Africa and the rising levels of poverty. This, by itself gradually led to increasing waves of immigrants from Africa and other parts of the developing world, who made their way to Europe

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in search of better conditions for working and living. Some advancement in the global fight against poverty was achieved but that was largely in China, while Africa experienced further increases in the poverty levels – the number of poor people rose as absolute numbers and also as a proportion of the population. The immigration from the African continent to Europe has been named generally "environmental immigrants".

Furthermore, it is already widely acknowledged that the major problem of GNP as a measure of welfare is that it measures the commercial transactions taking place in the economy while the welfare of the individuals depends on many other non-transactional aspects. This paper distinguishes four major factors that contribute to economic growth, while at the same time they neutralize the disadvantages of GDP (GNP). More specifically, the combination of well-developed human capital in the form of human resources along with their education and health-care, as well as the availability of energy resources provides the required means to achieve sustainable levels of economic development beyond the growth registered through the GNP.

This paper argues that modern economies, both developed and developing ones, experience a number of similar problems which hinder their development. Therefore, the analytical aim and scientific thesis of the paper is that in order for economies to overcome current impediments to growth and prosper, they need to direct all efforts towards ceratin major development factors and thus increase their economic potential.

Hence, the paper firsty addresses the major challenges which economies nowadays are facing amids constantly changing poitical contexts and climate changes, while at the same time it proposes efficient remedies for both developed and developing countries. The analysis examines corruption, state bureaucracy, low infrastructure and population growth as key impediments to the process of economic development. Furthermore, the paper discusses the major issues which undermine economic development and impede economic growth in modern-day economies. Even tough as factors they are more attributable to developing economies, their overreaching effect is affecting developed economies as well and creates burdens to the global economic development.

Secondly, the paper defines and examines four key factors which trigger economic growth in modern day economies and proposes them as remedies to current economic problems. It distinguishes human resources, education, healthcare and energy resources as the main drivers in the process of economic development and discusses the major issues which facilitate economic growth in the modern world.

2. General Impediments to Economic Growth

2.1. Corruption

At the macro level, the literature generally shows that corruption has a negative, direct impact on economic growth and development (Chene, 2014). Corruption also has an indirect effect on a country's economic performance by affecting many factors leading to economic growth such as investment, taxation, and effectiveness of public expenditure. There are a number of channels through which corruption may affect economic growth:

- Corruption distorts incentives and market forces, leading to misallocation of resources.
- Corruption diverts talent and resources, including human resources, towards "lucrative" rent-seeking activities, such as defence, rather than productive activities.
- Corruption acts as an inefficient tax on business, ultimately raising production costs and reducing the profitability of investments.

- Corruption may also decrease the productivity of investments by reducing the quality of resources for example, by undermining the quality and quantity of health and education services, corruption decreases a country's human capital.
- Rent-seeking behaviour is also likely to create inefficiencies, fuelling waste of resources and undermining the efficiency of public expenditure.

In addition, corruption is known to distort the decisionmaking process associated with public investment and it affects the composition of government expenditure. This is because it may lead public officials to allocate public resources less on the basis of public welfare than on the opportunity they provide for extorting bribes, such as large infrastructure or defence projects. It generally lowers capital productivity and constitutes an important element of investors' decision-making processes, while also increasing the costs of investment. This is due to the fact that corruption not only appears to increase costs and reduce levels of FDI, but it also affects the economies of those countries where FDI originated.

When it takes the form of tax evasion, corruption may lead to a significant loss in tax revenue collected in a country, which causes adverse budgetary consequences. Countries with high levels of corruption tend to collect less tax revenues, suggesting that only relatively incorrupt governments can sustain high tax rates. Corruption not only lowers the tax to GDP ratio, but it also causes long-term damage to the economies by increasing the size of the shadow economy, distorting the tax structure and corroding the tax morality of taxpayers. This is likely to further reduce the tax revenue base of a country (Atilla, 2008; Nawaz, 2010).

At the company level, corruption raises costs, introduces uncertainties, reputational risks and vulnerability to extortion. It decreases a company's valuations, makes access to capital more expensive and undermines fair competition. Also corruption may have a negative, indirect impact on companies through its effects on many factors affecting firms' growth and productivity such as investment patterns, efficiency, and innovation.

Another effect of corruption is that it reduces the resources available for other uses, including the financing of social spending, which primarily affects the poor. Corruption in social programmes may reduce the potential impact of social welfare programmes on poverty alleviation. A study examining the extent of corruption in a large Indonesian transfer programme distributing subsidized rice to poor households found that an average of 18 percent of the rice disappeared between the time it left government warehouses and the time it reached poor households (Olken, 2005).

The definition of corruption for many development economists is generally the "abuse of public office for private gains." Some economists like Andrei Shleifer and Robert Vishny (1993) defined government corruption as "the sale by government officials of government property for personal gain." Also according to Nathaniel Leff "corruption is an extra-legal institution used by individuals or groups to gain influence over the actions of the bureaucracy" (Leff, 1964). Joseph Nye claimed that corruption is "behaviour which deviates from the formal duties of a public role because of private-regarding (personal, close family, private clique) pecuniary or status gains" (Nye, 1967), and includes bribery, nepotism and misappropriation, while 30 years later Bardhan clarifies that in most instances "corruption ordinarily refers to the use of public office for private gains, where an official (the agent) entrusted with carrying out a task by the public (the principal) engages in some sort of malfeasance for private enrichment which is difficult to monitor for the principal" (Bardhan, 1997).

Furthermore, Banfield establishes an interesting distinction between personal corruption, in which the agent "sacrifices his principal's interest to his own, that is, he betrays his trust" and official corruption in which the agent violates a law and "acts illegally or unethically albeit in his principal's interest" (Banfield, 1975). Klitgaard (1988) draws on the principal/agent formulation to say that corrupt behavior occurs when "the agent is betraying her role as a public servant for her own private interests". In more recent studies, the principal/agent formulation has been developed by Banerjee, Mullainathan and Hanna (2012) as a new theoretical framework for analysing corruption (Banerjee et al., 2012). In their model, corruption is a consequence of the interaction between the task being performed by the bureaucrat, his/her private incentives and what the principal can observe and control. In his research Kaufmann (2005) makes a strong case for a broader definition of corruption, not necessarily restricted to an exclusive concern with illegal acts involving the public sector. His idea is that corruption generally involves collusion between two or more parties, at least one of which operates in the private sector, as when a transnational company pays bribes to the president of an African country to obtain an oil concession.

Another point argued by Tanzi (1998) is that the tax system itself is often a source of corruption, particularly in those cases where the underlying legislation is unclear or otherwise difficult to understand. Unclear tax laws will give rise to "compromises" between tax inspectors and taxpayers. There are various ways in which various features of government organization and policy create incentives for the emergence of corrupt behavior. An important point is that the imposing presence of the government in the economy and, in particular, the provision of goods and services at below market prices create fertile ground for corruption. This is because they give rise to the creation of some form of rationing mechanism to manage excess demand, requiring the exercise of discretion on the part of some government official(s). Claros (2013) argues that the Russian government in 1992 operated under a system of export quotas, for which licenses were needed. Since the difference between the export price and the domestic price was often enormous (a ratio of 50 to 1 was not at all unusual), securing an export license was a key to vast riches and, indeed, fortunes were made during this period, sometimes by government officials themselves who found the system just too tempting to scrap (Claros, 2013). The IMF pressed hard for the elimination of these quotas and the meetings where the case was raised were often hostile. It was obvious that powerful vested interests would hold out as long as possible and, indeed, it took two years to begin to remove them. Another legacy of the Soviet Union was a system of directed credits, essentially highly subsidized loans to agriculture and industry. At rates of interest that were absurdly negative in real terms, the demand for them was unusually strong and, of course, the criteria for allocation opaque in the extreme.

Another example, provided by Claros (2013) is Spain in the late 1980s, when the Spanish government was engaged in a program of ambitious economic reforms as part of which they were trying to improve the administration of various social benefits. One issue of particular concern to the authorities was the unusually high number of individuals who were being granted invalidity pensions, made possible by false certifications being provided from doctors who were either being bribed or were doing friends favours. Thus, an unusually large number of disability pensions were putting a heavy financial burden on the pension funds and were also unfair to those who opted for honest behaviour. While it is easy to see the incentives for bribes provided by such examples, the resulting losses in economic efficiency are evident.

2.2. State bureaucracy

An important source of corruption stems from the distributional attributes of the state. The role of the state in the economy has expanded significantly over the last century and this has led to the proliferation of benefits under its control, as well as in the various ways in which the state imposes costs on civil society and the business community. A large state is not necessarily associated with higher levels of corruption – e.g. the Nordic countries have the highest levels of public spending in the world but are also the least corrupt. The larger the number of interactions between officials and private citizens, the larger the number of opportunities in which the latter may wish to illegally pay for benefits to which they are not entitled.

Fan, Lin and Treisman (2012) observe data from 80 countries which provides evidence that firms are more likely to report bribery in countries with more government tiers, or with a larger number of local government employees. In such countries the state is involved in the distribution of social benefits in ways that are not transparent which may involve corruption. Governing often translates into the issuing of licenses and permits and hence the average citizen has to enter into transactions with some government office or bureaucrat to engage in one of the following: to obtain a birth certificate, to get a passport, to pay taxes, to open up a new business, to drive a car, to register property, to engage in foreign trade, to sell a good or service to the government, to hire an employee, to use the publicly provided health services, to be allowed to build a house, etc.

The World Bank's Doing Business Report (DBR) covered a summary of the burdens of business regulation in 183 countries. It becomes clear, for example, that it takes 18 procedures in Equatorial Guinea to start a new business and an average of 135 days to fulfill them. Also, it takes 1,442 days to enforce a contract in Bangladesh and 1,300 in Greece. In Argentina it takes 24 procedures to get a construction permit and 365 days to actually receive it. The data in the report highlights the extent to which many countries discourage the development of entrepreneurship in their own private sectors. The countries with the greatest need for entrepreneurship and private sector development are those that generally create the greatest obstacles for the creation of new enterprises and entrepreneurial capacities which are vital for the development of an appropriate environment for innovations.

2.3. Low infrastructure

Inadequate infrastructure, including unreliable energy, an ineffective urban-rural road network, and inefficient ports, is considered one of the largest impediments to economic growth in Africa. It limits the returns from human capital investment such as education and health. Hospitals and schools cannot function properly without electricity (*Sy. 2016*). According to 2009 World Bank study it was estimated that sub-Saharan Africa's infrastructure needs are about \$93 billion a year. Also according to IMF estimates the budget spending on infrastructure by sub-Saharan African countries reached about \$51.4 billion, meaning a financing gap of about \$41.6 billion (*IMF, 2014*).

Furthermore Sy (2016) observes that except for Nigeria and South Africa, sub-Saharan African countries have been unable to attract significant private investment outside the telecommunications sector. In 2013, sub-Saharan Africa received about \$17 billion in private funds, of which all but \$2 billion went to South Africa and Nigeria in sectors other than telecommunications. Overall, private investment (which includes public-private partnerships) went mostly to information and communications technology and electricity from 2005 to 2012. Hence, a policy agenda for building and maintaining infrastructure in sub-Saharan Africa under these circumstances should have at least three priorities:

- First, domestic budget spending-the largest source of African infrastructure financing-should be increased.
- Second, sources of domestic revenue should be broadened.
- Third, funds must be spent efficiently.

The above priprities can be widely applied to other developing countries or, in general, countries experiencing economic and financial difficulties. It is evident that most of the debate on infrastructure needs in sub-Saharan Africa focuses on financing issues. *However, there is also evidence that efficiency, not financing, is often the barrier to investment.* According to IMF estimates (IMF, 2015) about 40 percent of the potential value of public investment in low-income countries is lost to inefficiencies in the investment process due to time delays, cost overruns, and inadequate maintenance. It is pointed out that such inefficiencies are often the result of various factors, icluding undertrained officials, inadequate processes for assessing needs and preparing for and evaluating bids, as well as corruption. Hence, reducing inefficiencies could substantially increase the economic dividends from public investment.

2.4. Growing population

The first and foremost economic explanation of underdevelopment or the existence of mass unemployment and poverty of today's developing countries is the serious imbalance between population and productive resources, especially the stock capital. This imbalance between resources and population has manifested itself not only in low per capita income and poverty, but also in the existence of huge unemployment and disguised unemployment in the underdeveloped countries. The present capital (including land) is quite insufficient to employ the entire working age population and at a reasonable level of real per capita income.

For several decades in the past the rate of investment and therefore the growth of the capital stock has not been folloing the rate of growth of population in underdeveloped countries like India, Bangladesh, Yemen, etc. This implies that opportunities for productive employment have not been increasing commensurate with the growth of population and labour force and this has resulted in mass poverty and unemployment.

The lack of real capital per head of population is a characteristic feature of the developing economies and they are often called "capital-poor economies". Low productivity of the population and therefore their low income in the developing countries is considered to be due to the small amount of capital per head of population. Hence the most important economic explanation for underdevelopment and poverty is the imbalance between capital and population. Capital is too small in relation to the huge amount of population in developing economies.

One of the reasons why poor underdeveloped countries have failed to grow economically is that they are trapped in vicious circles of poverty. These vicious circles of poverty operate both on the supply and demand sides of capital formation. Supply side of capital formation refers to saving required to accelerate capital formation to raise productivity and per capita income. Investment being low leads to a lack of capital per head and because there is small amount of capital per head the productivity of the people or real income per head will also be low. Thus, the vicious circle is complete. (Fig.1)



Figure 1. Vicious Circle of Poverty on the Supply Side of Capital Formation.

When the average productivity of a community is low, it will have the greatest difficulty in producing enough consumption goods to satisfy the basic human needs. Thus it will have little productive power to spare for the production of investment goods and countries which are in this position are involved in a vicious circle. Hence, a larger supply of capital equipment would enable them to escape from the toils of over-population but unfortunately they are already too deeply caught in those toils to be able to produce that equipment for themselves. Therefore they cannot escape without assistance from outside. Apart from the low level of per capita income, the low relative level of real income in developing countries as compared with the developed countries also makes their capacity to save very low. The great and growing inequalities between the income levels and the living standards of different countries, combined with increasing awareness of these inequalities, have pushed up the general propensity to consume of the underdeveloped countries and have reduced their capacity to save.

In order to break the vicious circle of poverty and restore economic growth, it is important that in developing countries the rate of saving and investment can be increased without the reduction in consumption. It is well-known that the rate of saving in underdeveloped countries is low and with a given rate of saving and investment some rate of economic growth can be achieved. If out of this incrementing-income proportionately greater part is saved, the rate of saving of the economy will rise and this will eventually contribute to economic growth.

3. Key Factors for Economic Growth

3.1. Human resources

Human development has important effects on economic growth. An increase in the capabilities and functionings available to individuals should allow more of them to pursue occupations in which they are most productive. These capabilities of the human capital are increased mainly through education and health and we will consider these to factors as contributing to economic growth. Most certainly, human development can be seen as the relaxing of constraints which may have interfered with profit maximization and hence leading to income generation and economic development. Furthermore, although human development represents a broader concept, many of its elements overlap significantly with the more traditional notion of human capital.

More specifically, each of the various components of human development is likely to have a distinct impact on economic growth. Education, for instance, has a strong effect on labour productivity. In addition to its direct effect on productivity, education also affects the rate of innovation and technological improvements. The quantity and quality of investment, domestic and foreign, together with the choice of technology and overall policy environment, constitute other important determinants of economic performance (Ranis, 2004). Health has also demonstrated positive effects on economic growth beyond its inherent desirability as an end in itself. Strauss and Thomas (1998) review a large literature documenting how improvements in health and nutrition improve productivity and incomes. Education and health may also have strong indirect impacts on economic growth through their effect on the distribution of income, and education even more so through its impact on health. As education and health improve and become more broadly based, low income people are better able to search for economic opportunities (Strauss & Thomas, 1998).

Furthermore, evidence shows that only a portion of the growth of output over time can be statistically explained by changes in the quantity of conventional factors of production. The residual growth must be explained largely by changes in the quality of the labour force, that is, by the development of human resources. Empirical work relating to the improved education of labour and to entrepreneurship, only reinforced this now widely accepted proposition (e.g. Schultz, 1964; Schultz, 1974; Schultz, 1980). The importance of human resources development for overall economic growth has been further documented by the more recent experience of the so-called newly developed countries, such as those of East Asia and particularly China.

It has become clear that social problems that may accompany economic growth cannot be left aside until economic development has taken place, because development is a neverending process and cannot be sustained in the long run while social ills are increasing. Furthermore, social problems are best and most economically solved when economic development is taking place and not after it is a fact. Solving the problem of crime at its beginning is exceedingly easier than after it has taken root or become organized. On the contrary, social development, in terms of greater participation of the population in decision-making and in the execution of development activities, that minimizes poverty and promotes equity, advances the status of women and integrates youth in the development process, itself plays a major positive role in the intensity and sustainability of economic development.

The most important step towards the implementation of a human development approach is in the design of specific policies that lead to the empowerment of people and their participation in development, particularly those that are marginalized because of limited income, their place of living, disability, gender or age. For example, youth unemployment always keeps high levels in both developed and developing economies. Human development cannot take place except in a free and democratic environment where the civil society is invited to participate in the design and implementation of policies directly affecting people and local communities.

3.2. Education

Education is one of the major factors in developing human capital and therefore it plays a major role in the economic development of any country, developed or developing one. Many resources play a part in the growth of a country's economy one of which and perhaps the most important is human capital, which means the workforce of the country. Thus, a good and productive workforce by making use of other resources can lead an economy to growth and prosperity. Therefore education is one of the most important factors that leads a given economy to sustained economic growth. Education has become a very important part of every government policy and much effort has been done with respect to improving education in many developing countries (e.g. India, Pakistan, Bangladesh, Afghanistan, etc.). Many studies have been conducted in the past to examine the relationship between education and the economic development of a country.

Hanushek (2010) posits that education has long been viewed as an important determinant of economic well-being. He notes that despite the theoretical predictions, the empirical evidence on the impact of education on economic growth has long been mixed due to measurement problems. According to his findings, most people would acknowledge that a year of schooling does not produce the same cognitive skills everywhere and they would also agree that families and peers contribute to education. Health and nutrition further impact cognitive skills. Yet, until recently, research on the economic impact of education has almost uniformly ignored these aspects.

The theoretical growth literature emphasizes three mechanisms through which education may affect economic growth:

- *First education can increase the human capital inherent in the labor force*, which increases labor productivity and thus transitional growth toward a higher equilibrium level of output (as in augmented neoclassical growth theories, (Mankiw et al., 1992);
- Second education can increase the innovative capacity of the economy, and the new knowledge on new technologies, products, and processes promotes growth (as in theories of endogenous growth, e.g. Lucas, 1988; Romer, 1990; Aghion & Howitt, 1998); and
- Third education can facilitate the diffusion and transmission of knowledge needed to understand and process new information and to successfully implement new technologies devised by others, which again promotes economic growth (e.g. Nelson & Phelps, 1966; Benhabib & Spiegel, 1994).

Furthermore, Hanushek (2010) claims that primary schooling turns out to be the most robust influence factor on growth in GDP per capita in 1960–1996 in the extensive robustness analysis of 67 explanatory variables in growth regressions on a sample of 88 countries by Sala-i-Martin et al. (2004). It provides a basic representation of the association between years of schooling and economic growth on the most recent version of available data. This research suggests that each year of schooling is associated with long-run growth that is 0.58 percentage points higher.

The educational provisions within a given economy represent one of the main determinants of the composition and growth of that country's output and exports and constitute an important ingredient in a system's capacity to borrow foreign technology effectively. Health and nutrition, and primary and secondary education all raise the productivity of workers. Secondary education facilitates the acquisition of skills and managerial capacity. Tertiary education supports the development of basic science, the appropriate selection of technology imports and the domestic adaptation and development of technologies.

Secondary and tertiary education represent critical elements in the development of key institutions, of government, the law, and the financial system, among others, all essential for economic growth. Empirical evidence available at both micro and macro levels further illuminate these relationships: at a micro level, numerous studies indicate

that increases in earnings are associated with additional years of education, with the rate of return varying with high level of education (Behrman, 1990; Psacharopoulos, 1994).

3.3. Healthcare

Healthcare is not only a desirable, but also an essential priority, ensuring the development of most societies. However, modernday health systems face complex challenges, which are partially derived from new global pressures, such as ageing population, growing prevalence of chronic illnesses, and intensive use of expensive but vital health technologies. Health performance and economic performance are deeply interlinked. Wealthier countries have healthier populations and also poverty, mainly through infant malnourishment and mortality, adversely affects life expectancy in developing countries. National income has a direct effect on the development of health systems, through insurance coverage and public spending.

Moreover, the expectations of citizens are also growing, while in some parts of the world there are still persistent inequities in access to healthcare and in health conditions among different social groups. The issue of how to ensure the financial sustainability of health systems, while making a positive contribution to macroeconomic performance, has moved to the top of the policy agenda in many countries. A basic message is that investments in health and the design of health financing policies should be addressed in terms of the interraction between health and economic growth. It is acknowledged that growth, income, investment and employment are a function of the performance and quality of the economic system, its regulatory frameworks, trade policies, social capital, labour markets, etc. The same refers to healthcare conditions (like mortality and disability) – they depend not just on standards of living, but on the actual performance of health systems themselves.

Furthermore, the effects of health on development are clear. In some countries with weak health and education conditions it is hard to achieve sustained economic growth. Economic evidence provided by the WHO proves that a 10% improvement in life expectancy at birth is associated with a rise in economic growth of some 0.3-0.4 percentage points a year. This evidence is available at the micro-disease level as well: a 10% decrease in malaria is associated with an increased annual economic growth of 0.3%. An example to this are Asian countries such as Malaysia, China, South Korea and Thailand. Plotting their economic growth along two key health indicators reveals an astounding fact - they have succeeded in improving health as well as attaining sustained economic growth.

Additionally, data over decades reveals that health improvements, illustrated through the infant mortality rate and life expectancy, actually preceded their economic surge. This can be observed most dramatically in China, where both infant mortality and life expectancy improved significantly in the 1960s, before the beginning of the dynamic changes in Chinese economic performance. This points to the fact that countries improve their health status before they become wealthy.

It is acclaimed that healthier workers are physically and mentally more energetic and robust, they are more productive and earn higher wages. Also they are less likely to be absent from work because of illness. It is a major belief that illness and disability reduce hourly wages substantially, with the effect especially strong in developing countries, where a higher proportion of the work force is engaged in manual labor than in developed industrial countries. Several research works comment on many of these effects (Strauss & Thomas, 1998). Also, health in the form of life expectancy has appeared in many cross-country growth regressions, and investigators generally find that it has a significant positive effect on the rate of economic growth (Bloom & Canning, 2000; Bloom & Canning, 2001).

3.4. Energy resources

Both developed and developing economies are dependent on energy supply. Both heavy and light industry require energy, it is necessary to build and to light new homes, to transport goods, to practice modern intensive agriculture, and for practically every aspect of modern society. As societies develop, their demand for energy grows, requiring some sort of national energy policy in order to maintain the rate and level of development. Since energy use results to some extent in an environmental effect, a nation's environmental goals are meant to affect its energy and economic policies and vice versa. Many developing economies are pressured by developed economies to exhibit a high degree of environmental awareness and protection. This also has an effect on a nation's economic growth as well as its energy policies.

There are various ways to create intelligent and efficient energy policies. In order to attain high levels of efficiency it is important to consider the following: utilizing existing energy sources in more efficient ways, distributing energy to all people fairly, creating rules which facilitate wise energy use, problems involved in creating such rules (both within countries and throughout regions within and between countries), creating new energy sources and supplies, transitions to utilizing new energy sources, creation and upkeep of infrastructure for an energy source, using energy for economic gain, countries' interests in possessing its own energy, and concerns for the environment in using energy.

It is often the case that a particular country lies in a region which has few natural resources, or resources which have been depleted (like the Aral Sea in Khazahstan). It is then necessary for that country to use what they do have to the best of their ability. For example, Japan has little in the way of energy-producing natural resources. To help reduce Japan's dependence on imported petroleum, the Japanese government began emphasizing the use of nuclear power to the extent that well over half of Japanese electrical energy is supplied by nuclear reactors. This energy policy has helped to significantly improve the quality of Japanese air. Another resource-poor nation, Lithuania, relies on nuclear power for nearly eighty percent of its energy production as well as selling extra energy as a major source of hard currency.

One of the most obvious ways to reduce energy consumption by nations or individual consumers is to implement improvements in energy efficiency. In some nations, this is used as an alternative to constructing new energy production capability and, in fact, there are some instances in which utilities or governments will help to pay the cost of replacing old light bulbs, air conditioners, refrigerators, and so forth with more energy efficient models. The rationale behind this charity is that paying for these replacement costs is often less expensive than building a new power plant, with the added benefit that the replacements are a one-time cost for the utility, which does not then have to maintain a new power plant on a continuing basis. Hence, improving energy efficiency helps a nation to do more work with the same amount of energy, freeing up more money to use for other purposes. In addition, this practice makes less use of irreplaceable fuels, results in less environmental degradation, and generates less waste.

4. Conclusion

This paper analyzed the major concerns which economies nowadays are facing. It highlighted four major impediments to economic groth and development, i.e.: corruption, state bureaucracy, low infrastructure and population growth. Furthermore, the paper focused on the major issues which undermine economic development and impede economic growth in modern-day economies. It stated clearly that such impediments are detrimental both to developed and developing economies and affect both in many cases. Even tough as factors they are more attributable to developing economies, their effect is impacting developed economies indirectly and may significantly affect global economic development.

Secondly, the paper analyzed the major factors which contribute to the growth of modern economies and identified them as remedies. It highlighted four major factors ensuring economic growth and development, i.e.: human reseources, their education and health, as well as energy resources. Furthermore, the paper focused on the major issues which boost economic development and generally set the environment for economies to thrive. It stated clearly that these key factors are vital for both developed and developing economies and affect both in many cases.

A significant proposition, discussed in the analyzsis, is that the combination of well-developed human capital in the form of human resources along with their education and healthcare, as well as the availability of energy resources provides the required means to achieve sustainable levels of economic development beyond the growth registered through the GNP.

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2 The impact of migration processes on the modern world

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Abstract

The international movement of people is an integral part of a globalizing world; with more than 215 million international migrants currently living outside their country of origin, migration is also a response to growing global inequalities. Refugees and migrants arriving in EU countries are mainly from South and West Asia, Africa and the Balkans. However, the EU refugee crisis that is mainly caused by the Syrian conflict. Here, we have to highlight the fact that the majority (if not all) of these people are Muslims, strictly followering its rules and customs. Due to this, some politicians say that Europe is facing a serious challenge. However, it is impossible to consider asylum seekers and immigrants as a threat for the particular country or the whole Europe just because of their religion. Especially, when these people became war victims, who involuntary left their homes. The reality shows that migration processes in the modern world have already got a global scale. Indeed, this fact affects every country and existing political situation and instability. The process requires certain legal mechanisms and a great deal of work to overcome the tensions and avoid racial and religious intolerance.

Key words: Refugees, Migrants, Multiculturalism, Globalization, Inequality, Muslims, EU

1. Introduction

Many EU countries, in particular the UK and France (which represent large industrial and educational centers) are traditionally attractive to emigrants due to their high living standards. These high standards also mean the development of democracy, human right protection, which is expressed in the freedom of race, language, historical roots, religion and traditions, equal approach to the national and religious minorities, etc. It is noteworthy that a special attention is paid to the human right protection by many human rights defending institutions and organizations.

In Western Europe, multiculturalism has focused mainly on the aspect of race and equality: the main task is eliminating any kind of discrimination at the institutional level and at the same time ensuring an equal environment for all citizens.

The purpose of the paper is to study the development and implementation of EU policy towards the refugees and asylum seekers. The paper examines the refugee's crises and EU political approach toward the religious and ethnical minorities and refugees.

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The research mainly uses an analytical method based on the study documents, statistics of such sources as Eurostat and other and empirical materials and researches. The basis of source - scientific articles, statistical sources, the press materials and documents published on official websites in the field of migration policy.

The hypothesis of the study is to analyze the modern European crisis, the legal aspects and regulations of migration, implemented EU policy and consider and comprehend modern challenges.

2. The Literature Review

In his research article "Human Migration and the Conceptualization of pre-modern World Politics" Rey Koslowski asserts that migration is not only characteristic of the modern world. This phenomenon originates from the pre-modernist era. During the ancient civilizations, migration defined social, political, and demographic dynamics. Moreover, migration was a major medium of interaction between civilizations and their external environments, including other civilizations. To prove that international migration is still one of the most important determinant factors of the world politics, he cites examples such as: refugee crisis, human smuggling and the terrorist attacks in western countries. (Koslowski, 2002)

With the fact that migration has a big impact on political processes, it also plays an important role in the economic field. Anna Zamora-Capoor and Xavier Caller believe that the economic crisis which began in Europe in the late 2000s, among other factors, is due to increased number of migrants. (Zamora-Capoor, Caller, 2014)

Because Europe was facing a new reality – growing number of migrants and refugees, some European countries introduced policies that created new obstacles to the integration of immigrants, asylum seekers, refugees and beneficiaries of subsidiary protection into European societies. The issue paper "Human rights aspects of immigrant and refugee integration policies" which was published by the Special Representative of the Secretary General on migration and refugees, addresses four main research questions: first, what are the key human rights standards at stake when restrictive integration policies are applied to immigrants and refugees? Second, which national policies on integration exist in the selected Council of Europe countries? What are their form and content? Are they voluntary or obligatory? What are the implications of failing to pass a mandatory integration policy requirement? Third, what are the human rights implications of restrictive integration policies? The focus is on integration policies which set out conditions or requirements to be met by third-country nationals in order to benefit from family reunification or to obtain long-term residence; and fourth, are there any national integration practices presenting positive features or constituting "promising practices" in facilitating and fostering socio-economic inclusion and human rights? (Special Representative of the Secretary General on migration and refugees, 2019)

Some European countries have adopted an open door policy on migrants, such as Germany. When discussing this policy and the refugee crisis caused by it the author Claudia Theresia Schmid identified fifteen themes and reasons, with the three most frequently occurring themes, Capacity and Capability, Humanitarian Responsibility, and Demography and Economy, making up about half of the number of themes found. Her analysis also showed that both constructivist concepts – such as identity – as well as structural realist notions – for example national interests and capabilities – were largely contributing factors with regards to guiding, shaping and deciding on Germany's refugee policies. Germany's intake of about one million refugees was – in the context of identity – an acceptable decision, following its normative, national, moral, historical and humanitarian standards; and

the perceived benefits of the policy provide strong arguments in regards to the country's capabilities and national interests. (Schmid, 2016)

3. The Legal Aspects of Migration

The mobility of people across international borders dates back to the creation of borders themselves, and the vulnerability of non-nationals is not a new phenomenon. While many migrants move to take advantage of increased opportunities out of genuine, free and informed choice, many others are compelled to move as a result of poverty, lack of decent work, social exclusion, generalized violence, persecution, human rights violations, armed conflict, xenophobia and environmental degradation. In the absence of sufficient regular migration opportunities, migrants can be forced to resort to irregular migration channels including seeking out the services of smugglers or even falling prey to traffickers. Access to territory and procedures can be denied to those seeking asylum. Migrants can be stranded in transit, unable to move onwards, often subject to prolonged detention. At destination, while many migrants are able to live and work in safety and dignity, many others face violence, abuse, discrimination, xenophobia and exploitation in the work place and in their private, social, cultural and public life. (Hayward, 2012)

When it comes to migrants' rights and migration law, it is important to mention that many norms of different law branches apply in this area. Such as: International Refugee Law, Diplomatic Law, Consular Law, Maritime Law, Labor Law, International Criminal Law, Air Law etc.

There are several legal documents that are directly related to migration. One of them is the Convention on the Status of Refugees, created in 1951 and the main reason for its creation was to protect refugees during World War II. However, in 2016, the Convention has been ratified by 145 countries and adopted on a much wider scale. It should also be noted that, unlike refugees, there is no international law regulating the rights of Internally Displaced persons. This group of migrants should not be considered as part of the same protection regime that applies to refugees. In this case, states must comply with the basic principles of international human rights law and humanitarian law.

Considering international documents on migration, particular emphasis should be given to the regulations against the illegal entry of migrants into the territory of the State and human trafficking. The first is a crime against the state, and the second is a particularly brutal violation of human rights. Any kind of data on this latent crime are so scarce that many scientists believe that this phenomenon is not fully known and that we can only see the tip of the iceberg.

Two main legal documents have been created in relation to these two types of crimes: first one is - Additional Protocol to the United Nations Convention against Transnational Organized Crime on the Prevention, Suppression and Punishment of Human Trafficking, especially of Women and Children. (Meskhi, 2014). Second one - Additional Protocol to the UN Convention against Transnational Organized Crime against the Illegal Transfer of Migrants by Land, Sea and Air.

One of the important documents regulating the rights of migrant workers is 1990's International Convention for the Protection of the Rights of all Migrant Workers and their Family Members. According to this Convention, a migrant worker is a person who will be involved in paid work or was engaged in the past in a foreign country.

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Unfortunately, this Convention is recognized as compulsory only by 41 states and this number does not include any major migrant recipient countries. (ICMPD, 2017)

4. European Countries Politics toward Migrants (on the Example of German Open and Close Door Policy)

Migration processes in the modern world have already got a global scale. According to the data published by UN in 2016, there were 232 million international migrants worldwide, as for the EU there were recorded 72 million migrants. Of course, this fact affects every country and existing their migration systems. This process requires a great deal of work to avoid racial and religious intolerance, certain legal mechanisms which not only at the state level but at the level of regional international organizations as well. The constant increase number of migrants is followed by the following factors: human self-determination and its defense and human consciousness. We have to highlight that here that the policy of multiculturalism has proved its ineffectiveness, as it divides population by ethno cultural and religious characteristics. At present, the idea of human integration into society is gradually we akening. In a modern society which depends on the powerful processes of globalization, state identity (citizenship) often becomes certain type of abstraction, as for the pluralization of identity, it is accompanied by an increase in violence and xenophobia. (Eremina, Chikhachev, 2016).

Type of Migrated People	Number of Migrants
Citizens of non-EU countries	2 million
People with citizenship of a different EU Member State	1.3 million
People who migrated to an EU Member State of which they had the citizenship	1 million
Stateless people	11 thousand
Total	4.4 million

Table 1: Statistics of Migrated People to the EU Member States for 2017

Relative to the size of the resident population, Malta recorded the highest rates of immigration in 2017 (46 immigrants per 1 000 persons), followed by Luxembourg (41 immigrants per 1 000 persons). According to Eurostat, table 2 shows the list of highest rated countries by number of migrated people in 2017.

Table 2: Highest Rated Countries by Number of Migrated People in 2017

Country	Luxemburg	Cyprus	Lithuania	Malta
Number of migrants	23 migrants	18 migrants	17 migrants	15 migrants
per 1000 persons				

Now about the situation about 2018, by 1 January 2018 it was the following: the number of people residing in an EU member state with citizenship of a non-member country was 22.3 million, representing 4.4 % of the eu-28 population. in addition, there were 17.6 million persons living in one of the EU member states on 1 January 2018 with the citizenship of another EU member state.

State	Number of non-nationals
Germany	9.7 million persons
the United Kingdom	6.3 million persons
Italy	5.1 million persons
France	4.7 million persons
Spain	4.6 million persons

Table 3: Statistics Of Non-Nationals Living in the EU Member Major States For 2018

Non-nationals in these five member states collectively represented 76 % of the total number of non-nationals living in all of the EU member states, while the same five member states had a 63 % share of the eu-28's population. foreign population made of non-EU citizens in most member states on 1 January 2018, Belgium, Ireland, Cyprus, Luxembourg, Malta, the Netherlands, Austria, Romania, Slovakia and the United Kingdom were the only eu member states where non-nationals were mainly citizens of another member state. this means that in most EU member states, the majority of non-nationals were citizens of non-eu countries. in the case of Latvia and Estonia, the proportion of citizens from non-member countries is particularly large due to the high number of recognized non-citizens (mainly former Soviet Union citizens, who are permanently resident in these countries but have not acquired any other citizenship). share of non-nationals in the resident population, 1 January 2018(%) source: euro stat (migr_pop1ctz) highest share of foreign population in Luxembourg, lowest in Romania. in relative terms, the EU member state with the highest share of non-nationals was Luxembourg, as non-nationals accounted for 48 % of its total population. a high proportion of foreign citizens (10 % or more of the resident population) was also observed in Cyprus, Austria, Estonia, Malta, Latvia, Belgium, Ireland and Germany. in contrast, non-nationals represented less than 1 % of the population in Poland and Romania (0.6 % in both countries) and in Lithuania (0.9 %). (migration and migrant population statistics, euro stat 2019)

So, while studying migration problems, we should focus on the following aspects.

The constant increase number of migrants is followed by the factors: human self-determination, its defense and human consciousness. We have to highlight that here the policy of multiculturalism has proved its ineffectiveness, as it divides population by ethno cultural and religious characteristics. At present, the idea of human integration into society is gradually weakening. In a modern society which depends on the powerful processes of globalization, state identity (citizenship) often becomes certain type of abstraction, as for the identity; it is accompanied by increase in violence and xenophobia. (Eremina, 2008)

It is worth to notice that participating in the construction of a common European space, EU Member States; besides the development of their state migration policy also have a great impact on the development of community migration policy standards. It is obvious that EU countries have different migration policy experiences. They are still independent players in the field, however, Brussels, cannot make more concessions on states' migration issues. Though, the United Kingdom, Germany and France have all suffered from a great flow of migration processes and "open door" policy.
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Within the scope of international relations, migration has traditionally been considered as a global process. For instance, world systems theory shows that the constant confrontation between the north and the south, especially when the core wealth is stored in the north, will always provoke the migration flows from south to north. In this regard, the concept of "center-periphery" is discussed as well, which points to the impact of the economic and technological advantage of the migration center on the periphery. (Agnew, 2005) This approach gives us a chance to consider migration research within the framework of the system of dependency and to predict their changes. A constructive approach to the migration study has reached a new level, thereby linking aspects of the identity complex to overall migration policy. It is noteworthy to say that in the context of constructivism, researchers have foregrounded the migrants and their interests, the requirements of their identification, opportunities and failures. It has made possible to identify the general statistics of ongoing processes (Berger, 1966). Within the framework of social constructivism, were developed such security models which are relevant to modern migration flows and confirm that migration issues - are primarily connected to security problems.(Huysmans, 2006). Exactly these constructivist approaches have raised the issue of identity today. This is very important for today's analysis, as many of the problems of migration policy are caused by the thoughts that migrants have a "different" (religious, ethnic) identity compared to local residents. Representatives of another modern school in the theory of international relations - the postmodernists attempted to alienate and separate individuals coming from the other countries, and gave them the statement of people wandering around the world without citizenship. Thus, the mentioned processes have made them one of a main subject of international relations and the key referent of international security.

We can claim that, the growing influx of immigrants has become the most pressing challenge in the EU's overall migration system. Currently, the situation is complicated by the influx of numerous refugees from the Middle East and North Africa. There are two main documents regulating migration and refugee issues: 1997 Amsterdam Treaty, which regulates asylum standards and procedures and the Lisbon Treaty of 2009, which also emphasizes the need for common procedures to obtain the statement of refugee, however, each country is responsible to control its border and has its own quota.

5. Irregular Migration and Trafficking

One of the most problematic types of migration is the so called irregular migration. According to the International Organization of Migration (IOM) irregular migration is "Movement of persons that takes place outside the laws, regulations, or international agreements governing the entry into or exit from the State of origin, transit or destination." The types of irregular migration are the following: human trafficking, illegal border crossing, illegal transportation of a person across the border (smuggling), and overstay on the territory of the country after the period of the legal stay expires. Upon a preliminary agreement and in return for a certain sum paid crime gangs illegally transfer migrants across a border into the countries where they have neither a citizenship, nor documents for legal entry. In such cases, the relationship between crime gangs and migrants ends upon the crossing the border. However, due to an illegal status in the foreign country, these migrants may easily become dependent on the people who smuggled them in. Crime gangs often get advantage of such situation and force migrants to work without any reimbursement and thus cover the costs which the smugglers spend for their transportation.

A migrant in an irregular situation may fall within one or more of the following circumstances:

- He/she may enter the country with fake documents or without crossing at an official border crossing point;
- He/she may reside the country in violation of the terms of an entry visa/residence permit;
- He/she may have the right to reside but not to take up paid employment in the country.

It is important to note that "irregularity" refers to the status of a person at a certain point in time or during certain period, not to the person. For example, migrant escaping conflict and persecution in their counties and seeking protection in another country may be counted as irregular migrant at the moment of crossing border, but their status may become regular once they apply for asylum. Also, migrants with regular status in a country may become undocumented upon expiration their visa or permit. (Global Migration Data Portal, 2017)

After the collapse of the Soviet Union, border control in the newborn independent republics were significantly weakened, causing the Commonwealth of Independent States (CIS) countries to open their doors to criminal networks and migrants from South Asia and Africa to Western Europe. Many CIS countries, especially Russia and Ukraine, which are strategically located between the East and the West, bear the brunt of the intense flow of transit migrants who either travel on their own initiative or become victims of organized trafficking.

CIS countries also are increasingly presented as the origin countries of migrants from where people are looking for a better life in Western Europe, North America and so on. Most of the former Soviet republics are undergoing transitional process in market economy and hence they have to cope with economic crisis and the disappearance of traditional social provision from the past. Many CIS countries have been heavily influenced by wars and conflicts inside and outside their borders, which have resulted in massive flows of refugees and IDPs and the general poverty in these countries. Since the early nineties, many people have left their countries of origin to escape wars and conflicts, or simply seek better living conditions. In this way, many have been able to improve their financial situation, and often even send a little amount of money back home to help their families. Not only is immigrant financial aid an important source of income for individual families, it has also become an indispensable source of income for the economy of CIS countries. (International Organization of Migration, 2000)

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Among post-soviet countries Ukraine can be identified as the most important source country for persons being apprehended for irregular migration. Ukrainians were most often apprehended in Hungary. The second most important group is Bosnians, who were mostly apprehended in Bosnia. Serbs are another important group mostly found in Hungary, while Russian citizens are often apprehended in Latvia. Among the important source countries, citizens of the Western Balkans play an important role. This is however due to the fact that irregular migration is predominantly an issue of neighboring countries and there are not so many persons coming from countries farther away. (ICMPD, 2013)

Some of Post-Soviet countries are not considered as a destination country for irregular migration, but rather serve primarily as transit countries for those migrants travelling from Russia to Nordic countries or to Western Europe.

As it goes to Lithuania, the largest migration flows across the EU external border originate in Belarus. For example, in 2009 the most important nationalities of persons trying to enter Lithuania illegally from Belarus were: Georgia, Russia, Belarus, Vietnam and Pakistan. Nevertheless, the main nationality of border violators was Lithuanian. On the other hand, at the border with Russia (Kaliningrad), it was mostly Russian nationals, who were apprehended, though this was largely on the grounds of cigarette smuggling and not illegal migration. There were slight increases in the numbers of Russians and Georgians engaging in border violations from 2009 to 2010. Citizens of Armenia, Kazakhstan, Georgia and Afghanistan were also apprehended at the border with Russia. In addition, there have been more frequent detections of Georgian nationals illegally crossing the border between BCPs in Lithuania. Georgian nationals have also increasingly attempted to obtain visas on false grounds. (International Centre for Migration Policy Development, 2013)

On some CIS countries, one particularly troubling event has a major influence - the trafficking of people organized by local and international criminal groups. The most serious aspect of this process is the mistreatment of women and children. They are illegally hired and sometimes even kidnapped by criminal gangs that move them to Central and Western Europe, North America and some of the Middle East. Many women are attracted to promises of a good job, but are then forced to work in abusive conditions, such as strip bars and brothels.

Human Trafficking is a modern day slavery, in which people are involved by deception, coercion, threat, or other forms of violence. The victims of the trafficking are restricted independence, free movement and choice, and become victims of physical, psychological, or sexual violence. The most common forms of human trafficking include: trafficking in women and children for sexual exploitation; forced labor in agriculture, construction, household and other sectors; trafficking in human organs.

Human trafficking and illegal border crossing is the second largest crime industry in the world and is run by the large international criminal networks. Due to present-day toughened immigration policy and improved border monitoring technologies in developed countries, an increasing number of irregular migrants become victims of those criminal groups.

Even if a migrant legally enters and stays in a foreign country and intends to stay there for a long time, he/she must take into account that upon the expiry of the term of visa or residence permit, his/her legal status becomes illegal. Illegal status is associated with increased risks to physical safety and personal freedom of a person; moreover, those staying illegally cannot use health care, education and other community/social services available to the holders of the legal status. These risks can only be avoided by maintaining a legal status abroad and by legal migration.

Usually, the living conditions of irregular migrants are poor. They often cannot afford renting a decent apartment; while those who agree to provide housing to irregular migrants usually offer accommodations with unsatisfactory living and safety conditions in dangerous districts.

Research and anti-trafficking activities are carried out by the World Trade Organization (WTO) and other organizations in Russia and Ukraine - the two CIS countries that have experienced the most trafficking in human beings. Other countries of origin and transit of irregular migration are Belarus, the Baltic Republics and Moldova. According to figures, the republics of the Middle East and Transcaucasia are increasingly playing the role of transit countries from East to West and some countries of origin. This information is confirmed by recent WTO surveys in Azerbaijan and the Kyrgyz Republic.

6. Cultural and Religious Problems of Migration

Today Islam is a second religion after Christianity, in terms of territorial distribution and in the number of followers. Unlike other religions, Islam is a rapidly growing relatively young religion not only from the point of high birth rate but at the expense of other religious conversion to Islam. (Tsourdi & De Bruycker, 2015)

As we know Europe is not just a continent, it is a whole civilization. The word "civilization" is no longer as popular in the West as it was in the late 19th century. It is well known that the West has always been the largest heart of world civilization, which has been accumulating the best experiences of the Eastern countries civilizations for centuries, carrying all the novelties of rationalism in the various sciences of different countries and which, according to the great German scientist Max Weber (1864-1920), is based solely on the "rationalism specific to Western culture". (Veber, 1990)

For centuries there has been a kind of diffusion between the civilizations of the West and the East. They took from one another what was acceptable for their world view, traditions, and nature. As for the modern Europe, with its 21st century innovations, the protection of the rights of global sexual minorities and its globalization, in deed it does not fit the framework of Islam, and therefore Europe is an unacceptable phenomenon for some of its genuine followers. Islamic antagonism to European civilization is very dangerous for Europe. As for Islam itself, it has a quasi-civilized identity as the enemy: one aspect of this identity is related to the inside destruction and the other from the outside.

The lives of most European Muslims, even though they live in the middle of Europe, are regulated by the rules of the Koran and the Sunnah. There are no secular laws for them, and any attempt to make them avoid the dogmas of Islam or follow European lifestyles results aggression and protests in Muslim society. The hosting country should ensure Muslim immigrants to feel themselves as a part of the its community. This means that they should be assimilated to the country's society and at the same time preserve their cultural and religious identity, as for an original Muslim, identity it is the base of his faith, and faith is the essence of life.

It is indispensable to have a dialogue between these two religions: Christianity and Islam. Both of these religions have a claim to universality and have a number of disagreements and controversies. But, if we focus on the differences and disagreements, then dialogue between the two religions is practically impossible. Here, we have to consider the Prince of Wales words, while presenting his article "Islam and the West" in Oxford University in 1993, he said, "Believe wholeheartedly that the links between these two worlds matter more today than ever before,

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because the degree of misunderstanding between the Islamic and Western worlds remains dangerously high, and because the need for the two to live and work together in our increasingly interdependent world has never been greater " and added that "Disagreements arose when we disregard Muslims world view, history, and its role in the world." (Prince of Wales Speech, 1993).

The problem of Muslims in Europe relates not only to cultural and religious differences but also to very important socio-economic dimensions. Most immigrants, although living in a European country and perhaps even in the city center, are illiterate. Certainly, they are isolated from European society and have their own mini-world in the foreign for them country. It is here, in this Mini-Islamic world of Europe where extremist ideas are born and spreading.

As it seems, the Muslims and Western world are not well aware of one another's culture and civilization, and this of course leads to the mutual misunderstandings. Establishing mutual trust must begin precisely with understanding each other's culture and civilizations. Religious leaders and scholars must be given a chance to participate in this processes and prevent existing disagreements and threats.

In 2015 a large flow of migrants, about more than one million arrived in the Mediterranean region, and the majority of them were citizens of Syria, Afghanistan and Iraq. In search of freedom and saving their lives people, often choose the long and extremely dangerous journey. However, there are very few legal ways and no organized system for refugees and asylum seekers to enter the EU. And these people become victims of human traffickers and smugglers and travel to the safe for them country in inhumane conditions or land. When we talk about the Mediterranean region, they often travel on water way, if they reach the country they are lucky, as there are the facts that they sink in the sea or it may happen so that having reach the certain country they are not accepted. Those who are able to reach the country are often detained in refugee camps or immigration centers, and have to wait for many months to be granted asylum seeker status.

The refugee crisis, and particularly the arrival of more than one million asylum seekers in Europe in 2015, has aroused debates among many EU institutions and organizations. The EU and its leaders have so far failed to deal with this critical situation properly and effectively and cope with the high influx of refugees. In response to this, many European countries, for instance Hungary and Serbia closed their borders.

Within the closed-door policy, some European countries refused to accept refugees, and some were divided into two camps, for example, Germany, is expecting a coordinated European response, while Sweden is developing a more independent national policy. (Schmid, 2016).

Germany, like other European countries, faces a great deal of problems with migration policy. Despite the crisis, in 2015, Germany received more than 1 million asylum seekers. Although, since the beginning of 2016, Germany has changed its policy towards refugees and migrants, the number of new streams has dropped very slightly, yet thousands of people still arrived in the country every day. By 2016, Germany had already made the clear decision that it will not continue to receive the same number of refugees as before. Therefore, the country works at both European and international levels to improve Europe's external borders.

It is true that the German government is doing its best and trying in many ways to respond adequately to the refugee crisis, especially towards Syrians. Moreover, it has repeatedly stated that it is ready to take on the role of the chief refugee crisis solicitor and she was trying to put the issue of refugee crisis on the agenda of the EU countries. Angela Merkel's government constantly warns its partner countries that if the refugee crisis continues for a long time and has not been resolved in an adequate way, it will endanger the whole Europe. She also calls them not to give up such basic principles of the European Union, as freedom of movement and distribution of refugee flows.

However, Germany's approach has had a negative effect: opposition became more active both inside and outside the country. Germany continues its policy of supporting refugees, and the fact is that Germany is trying not to close its border with Balkans. This means that Germany is currently in a situation when its allies do not share and support its policy.

According to the above mentioned facts, it is clear that Germany has become Europe's restrained hegemony over refugees and other crises, and despite the fact that it endeavors to solve this issue, it does not have many supporters and followers. All these paint a certain picture of Germany and its policy, not only in terms of resolving the refugee crisis, but also in its policy of equality.

7. Multiculturalism in Modern Society

It is noteworthy in 2004 in France by the wearing of Islamic traditional headscarves and other religious. Assuredly, countries such as France and Italy are significantly affected by immigrant problems. The share of other races in these countries is so sizable that French and Italian populations would soon become representatives of ethnic minorities. Due to the current situation, many European countries have tightened border controls, but nonetheless illegally crossed borders and invaded the country illegally. Thus, unlike America, multiculturalism has brought to Europe many problems. The reason is that the US was multicultural from the beginning, and the state itself was formed by different cultures. However, in other countries, there was a problem between locals and settlers since ancient times. In turn, the arriving population also faced problems in being able to recognize and equip them with the local cultural elements found in the host countries.

Multiculturalism, as a political vision is the response to the challenges of cultural and religious diversity. It helps to reinforce existing differences and leaves little room for the emergence of common interests in the political community and the consolidation of society around them.

In the post-colonial period, waves of migrants from the former colonies and the countries of the former Soviet Union changed the world's demographic picture and create the mosaic of cultures.

Since the 1960s, multiculturalism has been a leading paradigm for the West. The current concept was influenced by politics - from international relations to immigration policy and demographic processes. It is noteworthy that, since the 1970s, multiculturalism has become the official policy of many Western countries, which have been pursuing different forms in one particular country and closely linked to identity politics. The policy of multiculturalism was to protect minorities and recognize their rights and to provide them with equal opportunities. It is mainly concentrated on ethnic and religious minorities, primarily immigrants.

Since the beginning of the 21st century, the politics of multiculturalism has faced serious challenges, and this has hardly affected local ethnic groups that are the minority in any country. Multiculturalism has been and remains the subject of discussion even nowadays. Europe is in a deadlock situation, and European intellectuals confuse that the existing public system cannot bring them out of existing reality. The Islamic world strongly disagrees with Western democracy, actively opposing its invasion.

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However, multiculturalism has its disadvantage as well: the rise of nationalism and ultra-nationalist slogans, organizations that are mainly directed to Muslims and Islamic customs. Thus, multiculturalism, which promotes the integration of minorities, generates new ideas and introduces cultures to one another, fosters tolerance and loyalty, but it can also be a trigger for extremist nationalism. It is noteworthy that Muslims in France protested prohibition of wearing traditional Islamic veil and other religious symbols in public schools and universities in 2004.

Pursuant to the given reality, multiculturalism may experience a fiasco in France. Since the different peripheral cultures are not eager to lose their cultural self-sufficiency and conform to the European system of values, which cause a certain misunderstanding among the European and Western societies.

8. Anti-Refugee Sentiment (ANTI)

Since Germany's reunification in 1990, East and West Germany have been united under a single constitution: The Basic Law for the Federal Republic of Germany. It was first approved in West Germany in Bonn, 1949 following World War II, and later has been amended to apply to the entirety of the reunified Germany. According to Section 2 (1) of the Basic Law, "The German people therefore acknowledge inviolable and inalienable human rights as the basis of every community, of peace and of justice in the world". Articles 2, (2) "Every person shall have the right to life and physical integrity. Freedom of the person shall be inviolable. These rights may be interfered with only pursuant to a law", and Article 4 (1) "Freedom of faith and of conscience and freedom to profess a religious or philosophical creed shall be inviolable. I. Basic Rights", Article 4 (2) "The undisturbed practice of religion shall be guaranteed". However, these laws apply only to German citizens, but human rights, including rights to life, integrity, and freedom of religion, are granted to all persons (Basic Law for the Federal Republic of Germany, 1949). This document is the basis of modern German democracy.

At the same time when Germany opened its borders to a large number of refugees and accepted these people, the right wing protested it and demanded from Germany to protect the country from Islmaisation. For example, Frauke Petry, one of the leaders of the party from 2015 to 2017, explained in a 2016 interview to German Newspaper der Spiegel that "The immigration of so many Muslims will change our culture," and insisted that such a significant cultural changes must be the product of a democratic decision supported by a broad majority. The AfD's 2016 program advocates for the maintenance of German core culture rather than multiculturalism. Other anti-immigrant and specifically anti-Muslim sentiment has arisen through other events in Germany as well. The citizen's initiative group PEGIDA (Patriotic Europeans Against the Islmaisation of the West) was formed in 2014 through local marches against immigrants in Dresden, and rose to its height of popularity in 2015, and during the European migrant crisis PEGIDA's belief that Muslims are suppressing and infiltrating German culture contributes to anti-immigrant sentiment. (Rommel, 2017) Despite the different political approach, AfD and PE-GIDA hold a joint protest against immigration in 2017. One of the leaders of AfD, Joerg Meuthen, has also expressed interest in lifting the current ban on cooperation between the two groups, indicating that their ideological platforms may be convergent, at least within the right wing of the AfD. Frauke Petry's attitude toward Muslim immigrants is indicative of this as well. As a result, in the country increased the number of attacks on migrant shelters and anti-migrant propaganda spread throughout the country. EU-MIDIS II shows that over one quarter (27 %) of Muslim respondents experienced harassment because of their ethnic or immigrant background in the 12 months preceding the survey, with another 2 % having been physically assaulted on this basis in that period. Some Muslim respondents (1 %) experienced physical assault by a police officer because of their ethnic or

immigrant background during the 12 months preceding the survey (2 % did so in the preceding five years). 13 Key findings and FRA opinions Generational differences can be observed. About one fifth (22 %) of first-generation respondents say they experienced harassment motivated by hatred, compared to more than one third (36 %) of second-generation Muslim respondents. (European Union Agency for Fundamental Rights, 2017) These incidents of intolerance and violence have demonstrated Germany's oppositions radicalization and anti-refugee sentiment. Afterwards, in order not to violate the situation, some politicians called for changes in refugee policy. So, in response to anti-immigrant movements such as PEGIDA and the AfD, Germany has begun to accept fewer asylum-seekers and deport more migrants. They have also expanded the list of countries considered 'safe,' making it more difficult for individuals seeking asylum to be considered refugees, and have begun to deport migrants who are married to German citizens and even children. However, the refusal of refugees and deportation of migrants from predominantly Muslim countries seems to depart from the rights laid out in Germany's Basic Law, which guarantees a right to freedom of religion, life and physical integrity. (Selipsky, 2019)

9. Demographic Threats of Europe

It must be emphasized that the demographic situation has become one of the hot topic for debates. For 200 years the birth rate in Europe has been slowly and steadily declining, and in the past 2 decades the region has stopped reproducing its population, moving to an active "demographic crisis" (Utkin, 2003). Demographers assess this process as a pronounced state's demographic crisis. According to UN statistics, 494 million people aged 15 to 65 lived in Europe in 2000, and by 2050 the number will be reduced to 365 million.

This crisis has a stable reason. The life span of 15 European countries at the beginning of the 21st century amounted to 14-15 children per 10 women, which is one third lower than the sufficiency threshold. All European countries belong to the group of countries with a low level fecundity, in which the average value of the coefficient total fecundity is 20% less than normal. The fertility of migrants moving here exceeds the fertility of Europeans by two to three times, so that their number in Europe will double in 20-30 years, which will exacerbate ethno-demographic problems. In addition to the number of Muslim migrants, the number of Europeans who convert to Islam is growing: there are already hundreds of thousands of them. In addition to all this, there are even extreme forecasts of Western analysts, and according in 50 years Europe can become the main center of the Islamic religion. Very characteristic in this regard is the situation in the UK. If in 1981 the number of Muslims (immigrants from Pakistan, India and Bangladesh) was estimated at 750 thousand, now there are about 3 million, and the number of births in the UK itself is at least 50% of this number. According to forecasts, by 2050 there will be no "ethnic majority" in Britain; it will be washed away by interethnic marriages and the import of foreign labor. (Chetverikova, 2005)

10. Conclusion

Based on the analysis of the empirical material studied in this paper, it is clear that despite various international documents, such as Convention on the Status of Refugees, Human Rights, International Refugee Law, etc., there is an increase in violence and xenophobia; refugees often suffer from harassment, racial and religious discrimination and intolerance in the European developed and democratic countries. European countries face regular and irregular migration and it affects their internal political situation, especially when there are unrecorded flows of migrants. It leads to certain chaotic situation, which results in crime, human trafficking, and any kind of violation.

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Due to the unprecedented flow of migrants from mainly the Muslim countries such as Syria, Afghanistan and Iraq, Europe faces cultural and religious differences, luck of mutual Muslim – Christian trust and understandings. European decision to accept about one million refugees was based on an identity context; it means that it was driven by its normative, national, moral, historical, and humanitarian standards. As a result of the open door policy, there arose a kind of diffusion among European countries and politicians. The politics of multiculturalism has faced serious challenges, and this has strongly influence on local ethnic groups.

Some European countries, especially Germany are doing their bests and trying in many ways to respond adequately to the refugee crisis, especially towards Syrians. However there is much to be desired and the situation calls for more efforts and new approaches. The results of European Statistics surveys and other documents show that the number of migrants is increasing significantly. The research reveals that the birth rate in Europe has been slowly and steadily declining; the fertility of migrants exceeds the fertility of Europeans, which will result ethno-demographic problems.

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3 Sectoral distribution of collective Agreements in a decentralized collective BARGAINING SYSTEM

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Abstract

Until the current economic crisis, the vast majority of the wage labour in Greece was covered by collective bargaining and collective agreements at sectoral/occupational level. During the crisis period the collective bargaining system has been radically transformed through a process of disorganized decentralization, as a result of the policy of "internal devaluation" imposed by the European Commission, the European Central Bank and the International Monetary Fund. The collective agreements at sectoral/occupational level have been undermined. Nevertheless, a restricted number of sectoral/occupational collective agreements has survived during this period. In this context, the present paper aspires to contribute to the analysis of the collective bargaining system transformation by focusing on the sectoral distribution of collective contracts that have survived.

Keywords: Industrial Relations, Collective Bargaining, Decentralization, Greece, Greek Economic Crisis

1. Introduction

During the current economic crisis, the collective bargaining systems of the European countries have been strongly pressured towards their decentralization (Marginson, 2015). This means that the multi-employer bargaining (at sectoral and/or occupational level) that ensured high coverage rates from the collective bargaining and collective agreements have been undermined, in favour of the single-employer bargaining at company level and/or individual contracts (Zisimopoulos, 2018; Zisimopoulos & Economakis, 2018; Economakis *et al.*, 2016). The centralized collective bargaining systems were challenged even in countries where multi-employer bargaining was dominant (see Leonardi & Pedersinim, 2018).

This change has in fact undermined the so-called "European Social Model of Labour Relations" (Visser, 2006; Visser & Kaminska, 2009; European Commission, 2009), which in the past decades was a declared commitment of the European Union for its social integration and emerged as a determinant of its social cohesion. The main pillar of the European Social Model has always been the collective bargaining at sectoral and/or occupational level and the corresponding collective agreements, as their outcomes.

During the current economic crisis, a dismantling of the Greek collective bargaining system took place through a process of "disorganized decentralization", i.e. the depreciation of multi-employer bargaining (at sectoral and occupational level). This process was guided by the policy of "internal devaluation", which was mainly supported by

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the fiscal adjustment programs (memoranda) of the period 2010-2014. Despite the drastic reduction of the collective bargaining and collective agreements at sectoral/occupational level, some collective agreements remained active or re-concluded. Moreover, since August 2018 the "favourability principle" and "extension" of the sectoral collective agreement have been restored and the question of the renegotiation of collective contracts in many federations and trade unions has been raised.

In this context, the purpose of this paper is to investigate: (a) the aspects of the Greek collective bargaining system transformation; (b) the sectors of the economy in which collective bargaining and collective agreements have been retained; (c) the prospects for the revival of the collective bargaining at sectoral/occupational level. For this purpose, the present paper is structured as follows: In section 2 the articulation of European collective bargaining systems as well as the trends towards decentralization are presented. Section 3 presents the special features of the Greek collective bargaining system before the crisis period. In section 4 we attempt to sum up the main aspects of the "disorganized decentralization" of the Greek collective bargaining system is investigated, while the question concerning the "few" collective agreements that have survived at the sectoral/occupational level during economic crisis is posed. In section 6 the methodology adopted for the empirical investigation of the sectoral distribution of collective agreements that have survived during the crisis period is presented. The seventh section is dedicated to the presentation of the results of the investigation, while in the eighth section there are some concluding remarks and discussion.

2. Collective Bargaining Systems: Importance, Articulation and Trends Towards Decentralization

Collective bargaining is the most important process that mediates the employment relationship. The levels at which the collective bargaining takes place in a country are the national, sectoral, occupational, enterprise levels and the level of the workplace (Leat, 2007). Industrial relations systems dominated by the collective bargaining at the enterprise level are considered as decentralized. In contrast, collective bargaining at sectoral or national level is associated with centralized systems of industrial relations (Kristal & Cohen, 2007).

The distinction between multi-employer (MEB) and single-employer bargaining (SEB) is relevant. The "fundamental difference" between multi- and single-employer bargaining systems is "whether or not sector-level negotiations take place" (European Commission, 2011, p. 97; see also Economakis *et al.*, 2016, p. 53). Moreover, following Traxler (2003), Glassner *et al.* (2011, p. 308) pointed out that "[u]nder multi-employer bargaining, the alternative of unilateral employer regulation is greatly reduced as compared with single-employer arrangements, where unilateral employer regulation is an ever present substitute for the joint regulation that collective bargaining entails". Additionally, "with multi-employer bargaining arrangements, the possibility exists of higher levels – sector and inter-sector– establishing frameworks which can facilitate and govern further negotiation at company level" (*ibid.*). "If single-employer bargaining is the prevalent form of collective bargaining in a country, then individual labour contracts offer an alternative to any form of collective bargaining" (Traxler, 2003, p. 7).

It should be noted that the efficiency of MEB is determined by the articulation of collective agreements at the different levels of bargaining. The state supported the articulation of the collective agreements at the different levels of bargaining through the legislation of the so-called "favourability principle" and the "extension" of collective agreements to those employees that were not covered by collective bargaining (Marginson, 2015; see also Visser, 2013; Economakis *et al.*, 2016; Zisimopoulos, 2018).

The existence of multi-employer bargaining, or single-employer bargaining influences the collective bargaining coverage in the European Union countries. The collective bargaining coverage is considerably higher in countries dominated by multi-employer bargaining than in countries dominated by single-employer bargaining (European Commission, 2011; see also Economakis *et al.*, 2016; Zisimopoulos, 2018).





Source: Economakis et al., 2016, p. 54; Zisimopoulos, 2018, p. 250. Note: The comparison is based on the averages of available data for the period 2000-2010.

During the 80's and 90's the process of decentralization was shaped into two directions among the EU countries: "organized decentralization" and "disorganized decentralization" (Traxler, 1994, p. 186; see also Economakis *et al.*, 2016, p. 53). In organized decentralization certain bargaining issues, such as the working time and wages, "are delegated to regulation at company and plant level within a binding framework set by the multi-employer settlement" (Traxler, 2003, p. 19). While under organized decentralization the "decentralization occurs within the framework of sector agreements", under disorganized decentralization "such agreements disintegrate to be displaced by company-level arrangements" (Marginson *et al.*, 2003, p. 165). Thus, disorganized decentralization, resulting "from a breakdown or dismantling of higher-level arrangements" (Traxler, 1994, p. 186), leads to the replacement of multi-employer bargaining.

The recent crisis accelerates decentralization (and disorganization) of collective bargaining (Glassner & Keune, 2010a, 2010b). As a consequence, agreements at sector-level have been further weakened or even abolished (Glassner *et al.*, 2011; Glassner & Keune, 2010b, pp. 16-17; see also Economakis *et al.*, 2016; Zisimopoulos, 2018).

3. The Greek Collective Bargaining System Before the Crisis Period

The Greek industrial relations were highly centralized and state controlled during the period after WWII until 1990. Collective bargaining took place at national and occupational level and was not encouraged at sector and enterprise level. Moreover, the state exercised compulsory arbitration for the resolution of disputes and maintained the right to modify or cancel the collective agreements that were not in accordance with the government

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policy (Zambarloukou, 2006; Kufidou and Michail, 1999). The State reserved the right to modify or to not approve collective agreements that were in contrast to the government policy (Law 3239/55, Article 20, paragraph 2). Collective bargaining at enterprise level was only a special case of negotiation in large companies or in the case of employees in certain public utilities (Ioannou, 1996).

The collective agreements at national level set the minimum wage and working conditions and it was not possible for collective agreements at occupational level to contain terms that were worse for the employees than those of the National General Collective Agreement (EGSSE).

The highly centralized character of the collective bargaining system during this period is necessary to be seen both in the context of the objective characteristics of the Greek economy (dominance of small enterprises) that did not allow the development –in a wide range– of forms of bargaining at enterprise level, and additionally in the light of the correlation of power between employers and employees (Zisimopoulos, 2018; Zisimopoulos & Economakis, 2018; Economakis *et al.*, 2016). In particular, the correlation of power in the period following the collapse of the dictatorship has been relatively favourable to wage labour as is reflected in the high levels of trade union density (35.84% in 1977 and 39.43% in 1983, see Visser, 2016; Zisimopoulos *et al.*, 2014). Given this correlation of power and also given the state's effort to incorporate the political radicalism, the state chose to maintain the centralized nature of collective bargaining and to provide favourable arrangements for wage-earners (e.g. Law 1262/1982 on the democratization of trade union movement).

In 1990, attempting to facilitate the wage restriction, which was a prerequisite for Greece in order to meet the criteria set by the Maastricht Treaty (Zambarloukou, 2006), the state was withdrawn from the role of compulsory arbitration, thus exerting pressure on employers' organizations and trade unions to negotiate and obtain consensus. This effort, which encouraged the decentralization of collective bargaining, was ratified by the adoption of Law 1876/90 on "Free Collective Bargaining" (see also Economakis *et al.*, 2016; Koukiadaki & Kokkinou, 2016; Zisimopoulos, 2018).

With this Law, bargaining at sectoral and enterprise level was first introduced. The existence of a trade union and of at least fifty employees in the enterprise was the prerequisite for collective bargaining at enterprise level. The EGSSE set minimum wages and working conditions. Collective contracts at sectoral or occupational level could not include worse terms than that of the EGSSE. As the "favourability principle" was in effect, collective agreements at enterprise level could not contain worse terms than those of sector level agreements, and sectoral collective agreements could not contain worse terms than those of occupational collective agreements.

Additionally, according to the same Law, the state-controlled compulsory arbitration was abolished and the Organization for Mediation and Arbitration (OMED) was constituted. The principal task of OMED was the settlement of disputes between employers and employees when collective bargaining reached a dead end and collective agreement signing was not feasible (at any level). At the mediation stage (Law 1876/90, Article 15), the OMED sought to find a mutually acceptable solution. If there was no agreement at this stage, the employers and trade unions could have recourse to the arbitration procedure either in common, or the trade unions could have recourse unilaterally if the employers' side rejected collective bargaining (Law1876/90, Article 16). The decisions of OMED were assimilated to collective agreements. This guaranteed the existence of collective contract for all employees and particularly for the majority of employees in micro and small enterprises, which were mainly covered by sectoral agreements. This also ensured high levels of bargaining coverage. The importance of OMED for the protection of multi-employer bargaining and collective agreements is revealed by the fact that during 1992-2010 approximately 50% of sectoral and occupational collective contracts concluded after the resort of sectoral/ occupational trade unions to the OMED services (OMED, 2018).

Consequently, although the legal recognition of collective bargaining and agreements at enterprise level, as well as the abolition of compulsory state arbitration were attempts towards the decentralization of the Greek industrial relations system, the existing class correlation of power did not permit the decentralization of collective bargaining system, which remained centralized with the role of the sectoral bargaining dominant.

4. Greek Collective Bargaining System During the Economic Crisis: In The Path of "Disorganized Decentralization"

During the current economic crisis, a dismantling of the collective bargaining system took place through a process of "disorganized decentralization", i.e. the depreciation of multi-employer bargaining (at sectoral and occupational level). This process was guided by the policy of "internal devaluation", which mainly was supported by the fiscal adjustment programs (memoranda) of 2010-2014 period, that were implemented by the Greek governments in line with the requirements of the International Monetary Fund (IMF), the European Commission (EC) and the European Central Bank (ECB). The "internal devaluation" consists of the reduction of labour costs through structural changes in labour market and austerity policy measures (Armingeon & Baccaro, 2012, p. 256), while it is a substitute to currency devaluation for the Eurozone countries (Wolf, 2011, pp. 3-4; see also Koukiadaki & Kretsos, 2012; Economakis, *et al.*, 2016). According to the IMF (2012, pp. 122-123), "internal devaluation" could be achieved through a) the context readjustment of collective bargaining and b) the acceleration of labour costs reduction in private and public sectors.

Thus, in the current economic crisis, the industrial relations systems have been pressured by two distinct effects of the "internal devaluation" that contribute to their reformation. The first effect related to the structural changes in the labour market, accelerating the process of decentralizing collective bargaining systems. The second concerns the austerity policies that burden wage labour (both in the public and private sectors) and aim at reducing labour costs.

Hence, through the memoranda, the recasting of labour law in favour of decentralization has been materialized, contributing to the imposition of "internal devaluation", in order to achieve the target of cost competitiveness improvement (see Ioannou, 2012). The main interventions in this line, concern the collective bargaining structure, the mediation and arbitration procedure and the individual labour contracts (Dedousopoulos *et al.*, 2013, p. 42; see also Zisimopoulos, 2018; Zisimopoulos & Economakis, 2018; Economakis *et al.*, 2016).

More precisely (see also Ioannou, 2012; Koukiadaki & Krestsos, 2012; Kornelakis & Voskeritsian, 2014; Yannakourou & Tsimpoukis, 2014; Schulten, 2015; Eurofound, 2015; Economakis*et al.*, 2016; Koukiadaki & Kokkinou, 2016; Zisimopoulos, 2018; Zisimopoulos & Economakis, 2018):

a) EGSSE was weakened through the introduction of the minimum wage set by the state and collective bargaining at national level was weakened too,

b) sectoral and occupational collective agreements were devaluated, through the abolishment of "favourability principle" (Law 3845/2010; Law 3899/2010; Law 4024/2011),

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c) the extension of sectoral collective agreements to all employees of a sector was also abolished (Law 4024/2011),

d) the principle of "collective agreement time extension" was also abolished (Law 4046/2012),

e) the role of the OMED was weakened (Laws 3899/2010 and 4046/2012),

f) the collective agreement at enterprise level was reinforced and extended; according to the Law 4024/2011, a collective agreement at enterprise level can be concluded either by a trade union, or by an association of persons if 3/5 of employees participate in negotiations (regardless of the total employment in an enterprise), i.e. also for enterprises which employ fewer than 21 employees and thus no trade unions exist.

5. Collective Agreements at Sectoral/Occupational Level in Crisis: The Weak Survival in "Decentralization" Conditions

The decentralization of the Greek collective bargaining system resulted in drastic reduction of collective agreements at sectoral and occupational level. Nevertheless, some collective agreements remained active or re-concluded. The collective agreements signed in the period 1992-2010 were on average 183 per year. The corresponding average during the period of Memorandum implementation was 31 collective agreements per year. While in the first period almost 50% of the collective agreements were concluded after recourse to the OMED services, in the period 2011-2017 the corresponding percentage was about 30% (OMED, 2018).

Along with the drastic reduction of sectoral and occupational collective agreements, the number of collective agreements at enterprise level was spectacularly increased (238 in 2010 and 959 in 2012), and especially those concluded by associations of persons. At the enterprise level, 27.4% of the collective agreements were concluded by a trade union and 72.6% by an association of persons (Ioannou & Papadimitriou, 2013).

The collective agreements at the enterprise level, and especially those concluded by associations of persons, have been the main vehicle for the worsening of wages. In about 68% of the collective agreements concluded in 2012, the wages were reduced (see Ioannou & Papadimitriou, 2013, p. 64). The interconnection of the two main pillars of internal devaluation is obvious here, i.e. the reformation of the collective bargaining context and the reduction of labour costs.

The main effect of the collective bargaining system decentralization, namely the drastic reduction of sectoral and occupational agreements (Koukiadaki *et al.*, 2014), also implies the reduction of the coverage rate by sectoral collective agreements and collective agreements in general (Ioannou, 2012; see also Yannakourou & Tsimpoukis, 2014). It is estimated that the coverage rate by collective bargaining, reduced from 83% of all private sector employees in 2009 to 42% in 2013 (Visser, 2016).

More specifically, according to Ioannou & Papadimitriou (2013), despite the fact that the collective agreements at the enterprise level have multiplied, they cover a significantly smaller portion of the labour market and of the economy as a whole, compared to the coverage by sectoral collective agreements in the past. This means that the gap created by the weakening of sectoral and occupational collective agreements is not covered by the collective agreements at the enterprise concluded either by trade unions or by associations of persons in micro-enterprises. It is estimated that the collective agreements concluded with the participation of associations of persons did not cover more than 14,000 private sector employees. This argument is supported by the fact that during

2012, 1,200,000 individual employment contracts were signed (Economic and Social Council of Greece, 2013, p. 23), as a result of the collapse of sectoral collective agreements. The widespread use of individual contracts confirms the dramatic reduction of coverage rate by collective bargaining-collective agreements. The consequence of the collective bargaining system restructuring was the reduction of wages in the private sector by 19.1% between 2010 and 2017 (ETUI, 2018, p. 56).

Nevertheless, during the period of validity of the legal framework (2012 onwards) leading to the dismantling of the collective bargaining system, certain collective agreements remained active or re-concluded at sectoral and occupational level. In particular, despite the drastic reduction in the collective agreements at sectoral and occupational level, almost 19 collective agreements were concluded on average per year during the period 2012-2017, i.e. during the period in which the changes on the institutional framework for collective bargaining have been implemented in the labour market. Thus, in order to investigate the determinants of survival of these sectoral/occupational collective agreements, an initial investigation is needed: in which sectors collective contracts have survived?

6. Methodology

In order to investigate the distribution of sectoral/occupation collective agreements across the sectors of the economy, the quantitative content analysis method has been adopted (see Weber, 1990; Gray, 2004; Krippendorff, 2004).

By following content analysis, the research question, the data sources, the sampling units, the units of analysis and the coding categories have to be identified.

The research question is the determination of the sector in which sectoral/occupational agreements have been concentrated. Regarding data sources, our analysis has been based on data derived from the database of the OMED, and especially on the analysis of 701 collective agreements at the sectoral/occupational level that have been signed during the period 2008-2019. The sampling unit is the collective agreement and the unit of analysis is the whole text of the collective agreement. The coding categories are the period (before, during and after the collapse of the institutional framework for the collective agreements at the sectoral/occupational level), the year of agreement, the sector of the economy (primary, secondary and tertiary sector) and the sector of the economic activity (in accordance with NACE Rev2.).

Given that the collective agreements at sectoral/occupational level cover employees and employers from different sub-sectors of an economic activity, this classification is made on a level of abstraction. Thus, we classify collective agreements by using NACE Rev.2., and by taking into consideration the sector of the economic activity of the employers who are covered by the employers' organization that signs the contract.

It must be noted that in the analysis of previous sections, the notion of "sector" is identical to "sector of economic activity". Moreover, we use the term "sectoral/occupational level collective agreements" because in most cases collective agreements at sector level do not cover all the employees of a sector but the employees of certain occupations within a sector. This is a restriction of our research that does not permit us to classify distinctly sectoral and occupational collective agreements and investigate potential differentiations among them.

7. Results

The analysis of collective agreements at sectoral/occupational level shows that during the period of implementation of the fiscal adjustment programs (memoranda), a drastic reduction of all collective agreements in all sectors of the economy has taken place (see Table 1).

Year	Sector of the Economy					
	Primary	Secondary	Tertiary	Total		
2008	9	96	131	236		
2009	1	44	66	111		
2010	3	42	64	109		
2011	5	21	36	62		
2012	0	5	27	32		
2013	1	5	17	23		
2014	1	4	13	18		
2015	1	5	16	22		
2016	0	2	18	20		
2017	1	6	14	21		
2018	1	7	25	33		
2019*	0	4	10	14		

 Table 1. Collective Agreements at Sectoral/Occupational Level by Sector of the Economy, 2008-2019

Source: *OMED*, 2019, *Authors' calculations.* **Until June 2019.*

The collective agreements in the primary sector of the economy as a percentage of all sectoral/occupational collective agreements, remain relatively stable (with slightly decreasing trends) from 2011 and onwards (see Table 2). As regards the collective agreements in the secondary sector, Table 2 depicts that after the transformation of the institutional framework, their share in sectoral/occupational collective agreements has almost halved. On the contrary, the collective agreements in the tertiary sector have increased as a percentage of all sectoral/occupational collective agreements. This finding indicates that most collective agreements that survived during the economic crisis (almost 75%) were signed in the tertiary sector.

 Table 2. Collective Agreements at Sectoral/Occupational Level by Sector of the Economy As % Of All Sectoral/Occupational

 Agreements, 2008-2019

Sector of the Economy	2008-2011	2012-2017	2018-2019
Primary	3.5%	2.9%	2.13%
Secondary	39.2%	19.9%	23.40%
Tertiary	57.3%	77.2%	74.47%
Total	100.0%	100.0%	100.00%

Source: OMED, 2019, Authors' calculations.

According to Table 3, the reduction of the percentage of collective agreements in the secondary sector is mainly due to the drastic reduction of the percentage of collective agreements in the manufacturing sector. Moreover, Table 3 shows that the increase of collective agreements in the tertiary sector is the result of the increase of the percentage of collective agreements in the economic activities "Transportation and storage", "Accommodation and food service activities", and "Administrative and support service activities". This finding suggests that collective bargaining and collective agreements in these sectors have survived in conditions of collective bargaining system dismantling. These sectors are related to the so-called "tourism industries".

Sector of the Economy	Sect	or of Economic Activity (NACE rev. 2)	2008-2011	2012-2017	2018-2019
Primary	А	Agriculture, forestry and fishing	3.47%	2.94%	2.13%
	В	Mining and quarrying	2.12%	0.00%	2.13%
	С	Manufacturing		17.65%	17.02%
Secondary	D	D Electricity, gas, steam and air conditioning supply		0.00%	2.13%
Secondary	E	Water supply, sewerage, waste management and remediation activities	0.58%	2.21%	2.13%
	F	Construction	0.00%	0.00%	0.00%
	G	Wholesale and retail trade; repair of motor vehicles and motorcycles	4.83%	5.88%	2.13%
	Н	Transportation and storage	6.37%	8.82%	8.51%
	Ι	Accommodation and food service activities	4.44%	14.71%	23.40%
	J	J Information and communication		6.62%	6.38%
	Κ	K Financial and insurance activities		1.47%	4.26%
	L	L Real estate activities		0.74%	0.00%
	М	Professional, scientific and technical activities	1.35%	0.00%	0.00%
	Ν	Administrative and support service activities	5.60%	16.91%	19.15%
Tertiary	0	Public administration and defence; compulsory social security	11.20%	5.15%	8.51%
	Р	Education	4.83%	2.21%	0.00%
	Q	Human health and social work activities	5.02%	5.15%	0.00%
	R	R Arts, entertainment and recreation		5.88%	0.00%
	S	Other service activities	1.16%	3.68%	2.13%
	T Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use		0.00%	0.00%	0.00%
	U	U Activities of extraterritorial organisations and bodies		0.00%	0.00%
Total			100.00%	100.00%	100.00%

 Table 3. Collective Agreements at Sectoral/Occupational Level by Sector of Economic Activity As % Of All Sectoral/

 Occupational Agreements, 2008-2019

Source: OMED, 2019, Authors' calculations.

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Based on the previous finding, we have focused the analysis of the results in the "tourism industries". For the classification of collective agreements that correspond to economic activities related to the "tourism industries", we have followed the United Nations definitions for "tourism industries" (see Table 5) which refer to ISIC Rev.4 and NACE Rev.2 classifications for the economic activities (United Nations, 2010a, pp. 24-25, 2010b, p. 111; Eurostat, 2008, pp. 61-90; see also Giannopoulos & Diakomichalis, 2012, pp. 213-218). Based on this classification, Table 4 shows that during the period of the economic crisis and the collapse of the institutional framework for collective bargaining at the sectoral/occupational level, the share of collective agreements signed in sectors of economic activity belonging to the "tourism industries" almost tripled. In addition, the collective agreements in "tourism industries" represent almost 45% of all collective agreements and 57% of collective agreements in tertiary sector, which were signed during the crisis period.

 Table 4. Sectoral/Occupational Collective Agreements in the "Tourism Industries" As % of All Sectoral/Occupational

 Agreements and Collective Agreements in Tertiary Sector, 2008-2019

	2008-2011	2012-2017	2018-2019
% of total sectoral/occupational collective agreements	16.22%	44.12%	48.94%
% of sectoral/occupational collective contracts in tertiary sector	28.28%	57.14%	65.71%

Source: OMED, 2019, Authors' calculations.

Further analysis of the data shows that the most dynamic "tourism industries", in terms of survival of collective bargaining, are the industries "Accommodation for visitors" and "Travel agencies and other reservation services activities" (Table 5).

Tourism Industries	2008-2011	2012-2017	2018-2019	
Accommodation for visitors	23.81%	31.67%	30.43%	
Food- and beverage-serving activities	3.57%	1.67%	17.39%	
Railway passenger transport	0.00%	0.00%	0.00%	
Road passenger transport	23.81%	13.33%	17.39%	
Water passenger transport	0.00%	0.00%	0.00%	
Air passenger transport	2.38%	5.00%	0.00%	
Transport equipment rental	0.00%	0.00%	0.00%	
Travel agencies and other reservation services activities	26.19%	35.00%	34.78%	
Cultural activities	20.24%	13.33%	0.00%	
Sports and recreational activities	0.00%	0.00%	0.00%	
Retail trade of country-specific tourism characteristic goods	0.00%	0.00%	0.00%	
Other country-specific tourism characteristic activities	0.00%	0.00%	0.00%	
Total	100.00%	100.00%	100.00%	

Table 5. Distribution of Collective Agreements at Sectoral/Occupational Level by "Tourism Industries", 2008-2019

Source: OMED, 2019, Authors' calculations.

8. Discussion

From the above analysis the decentralization of the Greek collective bargaining system during the current economic crisis is revealed, as a result of the implementation of "internal devaluation" policy, imposed by the ECB-EC-IMF and the Greek governments. The disorganized decentralization of the collective bargaining system has been reflected in the drastic reduction –in absolute terms– of collective agreements at sectoral/occupational level in all economic sectors.

Nevertheless, some of the sectoral/occupational collective agreements have survived. The largest portion of them has been signed in the tertiary sector. Moreover, the ratio between the collective agreements in the secondary and tertiary sectors of the economy has changed in favour of the latter. It must be noted that in the secondary sector, a dynamic part of the Greek trade union movement (especially in the construction and metal sectors) traditionally existed.

Among the collective agreements at the sectoral/occupational level that have survived, the proportion of those concluded in "tourism industries" has increased, despite the fact that in absolute terms have also decreased. This finding suggests the necessity for a further investigation concerning the special reasons of their durability in these industries. Potential explanations of their durability –and simultaneously topics for further research– could be: a) the importance of the "tourism industries" for the national economy given their internationally competitive position which was reinforced during the current economic crisis (INSETE, 2019), b) the competitive characteristics of the market structures of the "tourism industries" (at local, regional or national level), c) the strength of trade unions in these sectors, d) the willingness (or unwillingness) of employers' organizations to collide with the respective trade unions, under their need to recruit and retain specialized staff which is not retained at low wage costs. Such an investigation could contribute to the (re)shaping of the bargaining strategy of the trade unions in sectors that collective agreements have collapsed, by providing the experience from the sectors in which collective agreements have survived.

It is necessary to be mentioned that we do not consider the collective agreements in "tourism industries" as the "land of promise" for the employees. It must be pointed out that in the "tourism industries" the flexible/precarious jobs are predominant, given the seasonal nature of the employment in these industries. During the current economic crisis the flexible precarious/jobs are expanded (Papanikolopoulos, 2018, pp. 75-76). Moreover, there are accusations by the trade unions about the deterioration of the terms and working conditions during the current crisis. Thus, the change of the content (terms) of collective agreements in "tourism industries", consists an additional issue for future research.

During the short period of the partial restoration of institutional framework for the sectoral/occupational collective agreements (from August 2018 to date), it does not seem that either an active revival of the collective agreements, or an overturn of the ratio of collective agreements among sectors occur. The partial restoration of the institutional framework for collective bargaining and agreements at sectoral/occupational level is not enough for the revival of collective agreements. A potential explanation of this fact could be the weakening of the trade unions at sector/occupational level as a result of the abolition of their institutional role in the bargaining process, in conditions of huge increase in unemployment during the crisis period. Ioannis Zisimopoulos, Kostas Fagogenis, George Economakis

After the national elections of July 2019 the neoliberal party of "Nea Dimokratia" (New Democracy) came into power. Its intention is to reform again the collective labour law, in order to a) restrict the collective action of trade unions and b) undermine again the collective bargaining system in favour of single-employer bargaining. In these new circumstances, the trade unions –and especially those in sectoral/occupational level– should give a political struggle against these reforms. This is a crucial precondition in order to avoid a further deterioration of their position in the correlation of class forces and to regain their negotiating role that lost during the memoranda period.

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4 Home-based working women as cheap labor in the context of neoliberal globalization: results of a field study in Aksaray province¹

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Abstract

The primary mandate of the transformation brought about by the wave of neoliberal globalization which appeared in 1980s is to keep the competitive power of the firms maximized at all times, with a view to ensuring continuity in capital accumulation. The first move to achieve sustainable competitiveness, in turn, has been to minimize labor costs, which are deemed the primary cost element. In line with the demands of the capital, labor markets were restructured, effectively rendering them unregulated environments. In this new structure, women stand out among the most important groups of workers, responding to the capital's demand for cheap labor. Especially, home-based work was embraced by the firms, as a most attractive model, given its low-cost and unorganized nature. The present study aims to present the problems home-based work poses for women, and to understand the perspective women have towards home-based work, in the context of gender-biased division of labor. The study employed the qualitative method, and entails in-depth interviews with women who engage in home-based work in Aksaray province. The study reached to the conclusions that home-based working women were employed with low wages and in grey market without any social security registration; they did not get regular income; they suffered from health problems; they had problems with their husbands, arising from their work at home; their home-based work was a necessity brought about gender-biased division of labor and unemployment, rather than a result of their preferences; they enjoyed certain benefits as they generate some income and are nominally employed; and that such benefits hid the negative aspects of home-based work.

Keywords: Home-Based Work, Neoliberalism, Globalization, Gender, Women

1. Introduction

The crisis of the 1970s was followed by a radical transformation bringing about flexibility in modes of production, with a view to increasing and sustaining profits. The change in the modes of production was accompanied by an ideological transformation which saw the state and the regulations protecting labor as the fundamental obstacles hindering the operation of the markets, in line with the neoliberal narrative. The primary mandate of neolibera-lism is to keep the firms' competitive power maximized at all times, with a view to ensuring continuity in capital accumulation. With the purpose of ensuring sustainable competitiveness, a number of changes were introduced

¹ This study is based on the findings of the field study carried out for Hatice Dilara TEKBAŞ's the master's thesis titled "The Concept of Gender and Home-Based Work: A Field Study in Aksaray Province", which was accepted as Sivas Cumhuriyet University, Graduate School of Social Sciences.

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HOME-BASED WORKING WOMEN AS CHEAP LABOR IN THE CONTEXT OF NEOLIBERAL GLOBALIZATION: RESULTS OF A FIELD STUDY IN AKSARAY PROVINCE

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to curb labor costs, which are deemed the basic cost items in economic activity, In line with the demands of the capital, labor markets were restructured, effectively rendering them unregulated environments: Flexible employment contracts lacking any security were made the norm, job security was scaled back, unregistered informal work was overlooked as much as possible, and the labor unions' powers were limited.

In this new structure, women came to function as a group of workers to meet the cheap labor demand of the capital, given their already low expectations of income in the light of gender-biased division of labor. Especially, home-based work was embraced by the firms, as a most attractive model, given its low-wage, informal, unorganized nature and the flexible hours of work. On the other hand, women's employment at home allowed them to continue performing the housework assigned to them in the gender-biased division of labor, hiding some of the problems posed by this mode of employment, rendering it a relatively attractive proposition for women.

The present study aims to present the problems home-based work poses for women, and to understand the perspective women have towards home-based work, in the context of gender-biased division of labor. The study is based on the findings reached through in-depth interviews carried out in the context of the qualitative field study in Aksaray province⁴. In this framework, first of all, the transformation neoliberalism brought about in labor markets, as well as home-based work phenomenon will be discussed, followed by the presentation and discussion of the basic findings of the field study.

2. Neoliberal Globalization and Women Engaged In Home-Based Work

The 1980s, marked by the rise of neoliberalism were also the scene of a new wave of globalization. One cannot discuss globalization as a pro se concept, independent of neoliberalism. The neoliberal philosophy presented globalization as a "recipe of measures entailing political / economic measures entailing a revision of social life" (Yeldan, 2007, p. 342). The need to immediately eliminate any obstacles to the free reign of the market, as one of the fundamental tenets of globalization, coupled with the claim that such an attitude would be beneficial for all societies, is actually part of the neoliberal ideology's teaching. In this context, the view of globalization "as more than a technical process of compliance with contemporary technology, rather as a concrete expression of will involved in the project to expand the international capital's reach worldwide" (Yeldan, 2007, p. 343) is important in terms of better understanding the transformation experienced after 1980.

In the neoliberal age, "flexibility" became the defining feature of labor markets. Flexibility refers to the elimination of regulations aiming to protect labor, to the extent possible, and rendering labor adjustable in line with the needs of the capital. The fundamental problem flexibility poses for labor, on the other hand, is the elimination of rules and regulations. In line with the capital's demands, labor markets were restructured and unregulated, job security was eroded, labor unions' power was curbed, flexible agreements weakening job security were introduced, and the wages were rendered flexible and adjustable, compared to the previous era (Viebrock & Clasen, 2009, p. 307). In this new structure, it is possible to note women among the most important groups of employees to meet the cheap labor demand of the capital. Especially, technology facilitating the production process and the increasing division of labor and specialization was found to contribute to integrating women into production processes at an increasing rate by making it easier to utilize their labor.

⁴ For detailed information on the study, see Tekbaş (2019).

Disconnecting capital and labor, the workplace and the home, and commodity production and housework led to a transformation in gender-based division of labor. As the man came to be viewed as the primary income earner, woman was noted as the secondary element of the family, providing child care and performing house chores. On the other hand, women were also required to work outside the home, to support the family's income levels. This picture allowed capitalism, which took production outside the home environment, to integrate women into so-cial production, as a cheap and plentiful source of labor (Atbaşı, Dönmez & Kurtulmuş, 2012, p. 257). The definition of women as housewives, rather than workers, made them willing to engage in revenue-generating activities, if any, at home. Perhaps more crucially, the women's work at home effectively concealed their contributions to capital accumulation. At this junction, pushing women out of the primary labor force, and labeling them instead as "small entrepreneurs" of the informal sector and as housewives paved the way for their further exploitation (Mies, 2011, p. 10). One should note that a relative increase in such exploitation was registered in the neo-liberal era in which women became an indispensable source of cheap labor for capital.

In the neoliberal era, home-based work is among the modes of employment most widely used by the capital, in a bid to increase competitiveness through cost advantages inherent in women's labor. Actually, home-based production activities have been observed before the industrial revolution as well On the other hand, home-based work as a concept, truly materialized only with the economic and social transformation that took place in the aftermath of the industrial revolution. Put simply, home-based work refers to the act of performing a revenue generating activity at home, rather than outside. According to the literature, this mode of work covers a wide range of activities including carpet and fabric weaving, knitting and needlework, wedding chest goods production, washing, ironing, babysitting, embroidery of evening dresses, magnet and toy production, and even online work performed using information technologies (Kocabaş, Besler & Özgüler, 2017, p. 180; see also Özgüler, 2012).

Through the "Home Work Convention" dated 1996, no. 177, and "Home Work Recommendation" no. 184, the International Labour Organization (ILO, 1996) provides the following definition of home-based work: "Work carried out by a person in his or her home or in other premises of his or her choice, other than the workplace of the employer, which results in a product or service as specified by the employer, irrespective of who provides the equipment, materials or other inputs used."

It is possible to discuss home-based work in three rough categories. The first is *work on one's own account*. This mode of work is defined as the process whereby women design and produce the products of their own choosing, using the materials they choose, and then set the price and engage in sales on their own terms (Kocabaş et al., 2017, p. 181). Work on one's own account entails the design, production and marketing of products such as food, clothing, knitting, embroidery, lacework, or ornaments. The second category covers *work on order*. In this context, the customer specifies the model and the type of work, and provides the materials to be used, or the resources for the procurement of the materials. Handmade foods such as stuffed vine leaves, baklava and pastries are often produced under such arrangements. The expertise level of the woman to carry out the work is the defining element in setting the price. The third category is *contracted work*. In contracted work relationships, there is an employer involved, from whom the woman receives pay per piece. In the case of contracted work, the workers engage in production at the time and in accordance with the terms specified by the employer. Engraving patterns on an existing product, removing hairs from the product, embroidery or bead works are often carried out in this category (Tekbaş, 2019, p. 38).

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The most defining feature of home-based work is the fact that it renders the work as well as the workers hidden for all practical purposes. Women engaged in home-based work mostly work in informal economy arrangements, and are not covered by the social security system. As they are not employed in a registered work, they are not entitled to the rights provided under the labor regulations. Home-based workers work on low wages, get paid on a piecework basis, and at times cover all production costs with the wage they receive. The work home-based workers engage in is determined only in the light of the capital's needs, and thus, are not lasting more often than not. Such a mode of work naturally does not bring in regular income.

Yet, in spite of all these issues, women often prefer work at home, for this mode of work allows them to handle revenue generating activities alongside their rather traditional obligations such as housework, child care, and care for the old and the infirm. The weak standing of women in the labor markets also make work at home an attractive option, whereby women lacking adequate education agree to work at home on low-paying unskilled labor tasks. The rising levels of unemployment and poverty renders the income earned by the man inadequate, and forces women to start working or focus even more on working at home (Tekbaş, 2019, pp. 38-44).

3. Working Conditions, Reasons and Perspectives for Home-Based Work

Women engaged in home-based work meet the demand for cheap and flexible labor, as they work in the informal sector as cheap providers which do not enjoy any security, and which can be utilized on demand as per the requirements, all the while facing serious problems caused by this state of affairs. In order to provide a more detailed analysis of the issues presented, and the reasons forcing women to accept this mode of work, in-depth interviews –a qualitative data collection technique– was employed in the field study. Within the framework of the study, 10 women engaged in work on their own account, on order, or on contract basis, at their homes in central district of Aksaray province were interviewed in person, based on the semi-structured interview form comprised of open-ended questions.⁵ The interviewees were found through the snowball method. The breakdown of the interviewees with reference to the category of work is as follows: 4 working on their own account, 2 working on a contract production basis, and 4 working on order.⁶ Demographic data for female interviewees are listed in Table 1.

⁵ For detailed information on field study, see Tekbaş (2019).

⁶ Women working on their own account are identified with codes KH1, KH2, KH3, KH4; while those working on order are coded SU1, SU2, SU3, SU4; and finally those working on contract-production basis are coded F1, F2.

Code	Age	Marital Status	Education Level	Duration of Married (in Years)	Number of Children	Occupation of Husband
SU1	27	Married	Bachelor	3	None	Government Employee
KH1	46	Married	Elementary	28	4	Seasonal Worker
SU2	35	Married	High School	20	2	Headwaiter
KH2	30	Married	Bachelor	8	1	Government Employee
SU3	30	Married	Elementary	12	2	Driver
KH3	57	Married	Elementary	40	3	Retiree
SU4	24	Married	High School	5	None	Worker
KH4	47	Married	Elementary	35	5	Driver
F1	28	Married	Elementary	8	1	Seasonal Worker
F2	23	Married	High School	4	1	Worker

 Table 1: Demographic Data for Female Interviewees

The women interviewed share the characteristic of belonging to the low income group. The interviews were carried out between the 3rd and 31st of March, 2019, with appointments. The women interviewed are from different age groups (ranging from 23 to 57), have different levels of education (primary school to university), and have been married and have been housewives for significant periods. During the interviews, the participants were notified about the intent to use a sound recorder to prevent any oversight in taking note of the data, and to maintain the flow of the interview. Each interview took at least one hour.

Aksaray is a province dominated by patriarchal structures, with women working outside the home being shunned. Usually women choose to work at home, or to be "housewives". Even though the city has been developing, with an ever growing population, the society has yet to embrace a positive perspective on work by women. In this sense, Aksaray is a province where the gender-biased division of labor is clear and prevalent. From this perspective, it stands out as a province that is favorable to the conduct of a study on home-based work.

3.1. Reasons for Home-Based Work

One of the most important reasons leading women to home-based work is the permission withheld by the elders of the family or their husbands, with respect to taking up a job outside the home. Most interviewees pointed out this fact, with one making the following statement:

When I was single, I did not work. I lived in a village. My dad did not let me go to school, let alone work. I am just a primary school graduate. And my husband is also against the idea of me working. ... Later on, my husband went abroad, and the kids and I lived with the family of my husband. ... I felt extreme trouble financial-wise in those days; yet the family of my husband raised objections to me taking up work. In those days, my son was also very young, and someone had to babysit him. My daughters were attending high school in those days. My daughters then took up work, and started bringing income to the household, at a very early age. But the family of my husband did not object to my daughters' work. To the contrary, they said 'let them work, let them earn money' (KH1).

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The women's preference for the ability to set aside some time for housework and for their children is yet another reason leading them to home-based work:

When I work at home, I can easily set aside time for my children. Previously I had worked at a factory. But there, you cannot be as comfortable as at home. In those days, housework often slipped by. At times, when I had to work overtime, I was even unable to cook for my children. In this arrangement, I am much better. I feel like I have more time at home. I am able to work at my own pace, and I can handle the housework, as well as my market shopping (SU2).

The lack of education and qualifications are also mentioned among the reasons for home-based work. In the interviews, most women uttered the phrase "If I had received an education...". They stated that they did not even try to find a job in the employment market, as they are aware of their lack of education and qualifications:

Actually, I would like to take cleaning work; I mean to work as a cleaner. But, if I had received an education, of course I would prefer to be a civil servant (SU3).

My dad did not allow me to get an education. He would say 'girls should not go to school'. So I was not trained for a profession. After I was married, neither my husband nor his family wanted me to work outside home. As I cannot take a job outside home, I am producing and selling out of my home. But had I received an education, I would be able to earn my own living and would be free to spend, rather than being dependent on my husband's income (KH1).

Contributing to the household budget is another motivation leading to this mode of work. The interviewed women usually noted their ability to cover the costs of their children and to pay for the weekly market purchases, spending their own earnings for small household expenses, as well as the happiness they felt in freely purchasing what they want. All the women interviewed voiced their love for the work they carry out. They underlined the satisfaction they derive from producing things, and their view that such an occupation would be more useful than sitting idle, once the housework, food preparation and child care tasks were completed.

3.2. Perspective on Home-Based Work

The interviewed women internalized gender-biased division of labor. They view work as a means to support their family, and have completely embraced the role of a devoted and self-sacrificing woman in this division of labor. They voice their joy derived from meeting the requirements of their social role, and getting the strong woman label:

Working with beads is good for me. I can lend an ear to my own thoughts while doing so. I feel like it calms me. As I work, it is as if everything stops, and I can just focus on my work. And at that moment, I feel happiness of producing something. I support the household with the money I earn (SU2).

I am producing bouquets and hair accessories for brides. I love what I do. It is very satisfying to be able to imagine something in my mind, and to put it into design. Economic activity can bring in money, or can make you bankrupt. At least, I am doing what I love. I am the boss of my own work. Just holding the bridal bouquets I produce can make me happy (SU1).

These remarks suggest how accurate the observation "from the perspective of women, all activities at home are considered extensions of the obligations of a mother or wife; in patriarchies, the labor of woman is not considered labor per se, but as an element of womanhood" (Topçuoğlu, 2010, p. 85) is.

Most women engaged in home-based work, albeit with some exceptions, consider themselves as paid workers participating in labor markets:

I believe I am a worker. In the end, I am producing things at home. I am making efforts for this purpose, I am thinking about it and working physically, and spending time for it. Sure, I am not a blue-collar or white-collar worker employed outside, but still, I am producing things at home. I am a worker at home (SU1).

Even though I am not employed outside, I am still a worker at home. Preparing food, cooking dinner every day, cleaning the house, taking care of the kids, covering the household needs is no easy task. And then, we are engaged in knitting work, to earn some petty cash in our spare time (KH1).

In essence, this mode of work is an invisible one, just like housework. However, it still makes the women feel like "working women", if only at home. The fact that women experience this feeling without leaving the house, and feel a certain kind of happiness about it may be considered a factor rendering home-based work attractive to them.

The most important advantage of home-based work is the fact that they stay at home, even though they have been working. Doing so allows the women to generate some income without slacking off their responsibilities arising from the gender-biased division of labor. Women are keen on working at home, as in this mode of employment they are able to perform housework and to provide care for the family, or as they are not allowed to work outside the home anyway. To be honest, one cannot forcefully argue that work at home is the woman's first choice. The abovementioned responsibilities and the pressure preventing them from taking a job outside the home force them to such a choice. All women interviewed paraphrased this argument in various ways.

Another advantage noted by the interviewed women is their ability to generate earnings even though they stay at home all the time. They mention the happiness stemming from work:

I do what I love. This is an economic activity: you can get bankrupt, or you can earn good money. My advantage here is that I do what I love. As I said, I am the boss of my own work. Just holding the products I produce make me very happy. Sure, in the beginnings, I had some concerns. I thought 'what if I fail?' Then, when I completed the first batch, I realized that I am doing fine. I'm doing pretty good actually. This feeling makes me happy on each occasion. I believe people should engage in work they love (SU1).

Many women noted or implied that work at home contributed to their confidence levels. Some women interviewed mentioned that they have a larger say in the decision-making processes at home, in contrast to their previous standing. In the context of gender-biased division of labor, it is the man's duty to earn the living for the family. Joining in, or at least contributing to that function, arguably made the men lend an ear to what the women has to say, and increased the confidence levels of the women while doing so. One of the women said the following on this point:

I mean, earlier I had a say in the decisions, sure. But that was not as obvious as one would expect. At times, I would flinch from saying what I thought. So, there were occasions where I kept my mouth shut. But as I began

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to earn some money through this work, as I began to freely spend my earnings, I realized that there was nothing to worry about. Then again, economic freedom is something else (SU3).

Women find home-based working a satisfactory activity. Most women are aware of their sacrifices involved in this line of work. Yet, they note the will to maintain the existing pattern of work even if they are not financially required to. To boot, almost all the women interviewed noted that they would be continuing home-based work alongside their regular jobs, even if they had the chance to choose otherwise:

I am glad with what I do, and I am not willing to drop it. Had I been an educated woman, perhaps I would have my alternatives, but I am not so sure about it. I think I would have continued with what I do. It lets me set aside time for every chore. I recommend this to anyone who gets bored at home. I think every woman should engage in such work. It is better than sitting idle (SU3).

I graduated from a university, but I was unable to get a job at the public sector. And my husband is not very open to the idea of me working in private sector. And I do what I love, in any case. If I had the chance to choose, I would like to open up a boutique shop that would allow me to carry out this work. I would love to have a boutique to display and sell the products of my work. So, I would again like to have a job where I would still engage in my own work (SU1).

Indeed, there is an option allowing women to enjoy the benefits they noted. Working at a formal job outside the house can bring in a most of the benefits mentioned by women. However, the lack of the option to work outside the home, due to conventional gender roles or due to the inability to get a job otherwise renders work at home as the sole option available to them in securing such benefits. In other words, there are simply no alternative means to those benefits. Therefore, the women have no choice but to try and be satisfied with the jobs they have. The inability to achieve such satisfaction through other means lead them to endure the hardships imposed by home-based work, and to accept low pay figures.

3.3. Working Conditions: Work Performed, Work Hours and Pay

More often than not, women engaged in home-based work were involved in point lace, ornament design, hair accessories, bridal bouquet, painting, lacework on kerchiefs and towels, baby clothing, baby blankets, embroidery, basket and bridal chest contents, and glove cutting. Often the amount of production expected is uncertain. They engage in daily or weekly production, based on the orders they receive. As there is no guarantee for further work, one cannot talk about regular income. Most women procure the production materials on their own. During their infrequent excursions out, they spend their time on trying to find cheap and high-quality production materials. In some occasions, the production materials are delivered to them by the persons who will be purchasing the products, or by the agents of the employers.

The work hours of women engaged in home-based work is uncertain and flexible. Usually, women work for varying time frames, ranging from one hour per day to half-a-day. However, when they are required to meet a deadline, they may be required to work without any time restriction, focusing on the order rather than sleeping, spending time with the family, or performing certain housework. Yet, women rise to this challenge, engaging in self-sacrifice without a second thought every now and then. They even note that, had they been employed in full-time work, they would be engaged in such sacrifice every day, and thus their current mode of work is more suitable for them. Some women consider this kind of work as an activity to capitalize on their spare time, earning some money in the meantime. There are even some women who think that "they are the boss in this line of work", compared to being just an employee in any employment outside the home:

I can work however I like at home. I work whenever I feel like it, and I perform housework when I want. You see, I have free reign in terms of setting hours or days. That is what you get when you are your own boss (SU1).

For a significant number of women, the pay they get is crucial in terms of sustaining their life. In other words, they engage in this line of work due to economic hardship. A smaller number of women, on the other hand, consider this line of work as a hobby, and do not attach much significance to the amounts they earn. Yet, all the women interviewed stated the intent to earn their own income, to cover their needs, and "not to live off their husbands' earnings" as they put it.

The basic problem shared by almost all the women interviewed is the inability to get fair pay in consideration of their labor. They complain about the low wages, and the lack of respect for their labor. One interviewee had the following to say on this point:

What I do is no easy task. At times, I spend my whole day on painting. They ask me about the price. And I tell them what it is worth. I am not asking for too much. But upon hearing the price, they tell me 'is this painting worth that amount? Isn't it very expensive? As it that's a Picasso' and so on. And that is not good for one's dignity. I am putting my labor in this, and asking for its worth is only natural. I mean, they are ignorant about the price of the paint and the canvas. They all ask about the price of the end product. The tourists value art more than our own people. Our people do not really attach much value to art. ... They are ignorant about art, and they also come and belittle the work (KH2).

Actually, their average earnings fall below the minimum wage applicable in Turkey in year 2019. Most of the interviewees state that, in some months their earnings reach to minimum wage levels, but in others they remain well below the minimum wage. Moreover, they also note problems regarding the timely and bulk payment of their pay, at a scale affecting their livelihood at times. The women are paid on a piecework basis. This arrangement leads them to work very hard in certain periods, especially if their need for income is emphasized, involving even their children and relatives in the production processes at such times.

Exacerbating the problem of meager earnings is the irregularity of the pay they are supposed to receive. For, their production is adjusted to the demand by the employers or customers, without any promise of continued demand. In particular, those who sell their products to private persons experience significant problems as they are unable to promote their products and find markets. This makes it even harder to secure regular income. The irregularity of pay means that most women simply lack any guaranteed income.

Save for some courses they attend infrequently, women spend almost all their times at home. Their vision of social life is spending some time with family members at home, or visiting some relatives or friends:

On some days of the week, I have the public education course I attend. In the mornings, there are also the Quran courses here. When the kids go to school, I leave the house to go to the course. Then, upon my return home, I engage in cleaning and cooking, followed by helping kids with homework upon their return from school. That
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is how the day comes to an end. On the weekends, we either go and do some shopping with the kids, or visit my relatives, taking some fresh air. Of course we cannot do that every weekend (SU3).

The social- and house-life of the interviewed women are interwoven. To boot, almost all the participants in the study noted a commercial intent often present in their visits to relatives and friends. In other words, even on occasions of socialization, the women have earning some money in mind.

3.4. Other Problems

Engaging in work considered mere extensions of their "natural duties" in the light of gender-biased division of labor, women are not deemed to engage in formal work. On the one hand, the women work to earn their living, on the other, continue to perform housework and to provide care for the family. All this labor at home, be it paid or unpaid, assumes an invisible nature. As they juggle all these responsibilities, they sacrifice the time they should be sparing for sleep, rest, their families, and themselves. And one cannot argue that the pay is worth such sacrifice. They work in the informal economy, at low wage levels, and with busy schedules at times.

Just like any worker, women engaged in home-based work also complain about various health issues. Some women noted eye, neck, waist and wrist problems associated with the work they perform. They mentioned the inability to get enough rest and sleep, leading to serious health problems.

Finally, the interviewed women were understood to have some problems with their husbands, due to their work at home. The husbands often complain about the order of the household suffering as a result, and about the mess and clutter around. This observation suggests that, even though the women note the ability to keep performing housework along with the paid work they engage in, they nonetheless slack off the obligations imposed on them through the gender-biased division of labor; particularly at times they work hard. Their inability to dedicate enough time for the chores is perceived by their husbands' as the failure to meet their basic responsibilities, leading to problems among the spouses.

4. Conclusion

In the neoliberal era, home-based work is among the modes of employment most widely used by the capital, in a bid to increase competitiveness through cost advantages inherent in women's labor. Given its flexibility in the face of fluctuations in demand, not to mention the low-cost and informal nature of the employment, as well as the lack of any labor union involvement, home-based work meets neoliberal paradigm's demand for cheap and flexible workforce. At the same time, home-based work is deemed a mode of employment that is compatible with the requirements of gender-biased division of labor in societies where such a division of labor prevails. For, in this mode of work, women are still at home even though she is working at the moment. Thus she can engage in an income generating work all the while keeping up with housework and care for the family. Moreover, in cases where the woman is barred by her husband from working outside the home setting, this activity is considered an indispensable means to generate income. In this light, home-based work evolved into a widespread mode of work responding to a wide range of expectations.

On the other hand, women engaged in home-based work are known to suffer from major problems. The field study reached a number of results regarding the nature of this mode of work, and the problems suffered in this

context, mostly in line with previous work in the literature, along with some unique ones. First of all, most women engaged in this mode of work are virtually obliged to do so, as they have no alternatives. A woman whose husband does not allow her to take a job outside the home, who is unable to get a job in the formal employment market, or who is required to perform housework and care for the family deemed her primary obligations, see home-based work as the only means available to them for generating income. In this context, one should note that home-based work actually reinforces the gender-biased division of labor, and thus the woman's standing at home, all the while reproducing the said division of labor.

Home-based work is a mode of work where the pay is low, the income is irregular, the employment is informal, the work hours are flexible, the labor unions are irrelevant, and the needs of capital and the individuals involved are the sole determinants. All the interviewed women noted complaints about the wage they expected in return for their labor, the lack of any guaranteed income, and problems regarding the payment of their already low wages, at times. It is difficult to provide a clear weekly or monthly earning figure. A significant number of women took up home-based work due to economic difficulties, while a smaller number embraced it as an alternative in the face of their inability to get a job in the formal employment markets. In addition to a number of basic issues, the women voiced complaints about the adverse health effects of work from home, and the problems they had with their husbands, even though they stay at home.

However, the perceived advantages of home-based work in the eyes of the women suppress and conceal the problems this mode of work poses, or leads women into accepting and internalizing these problems. The facts that the women are at home during their work activities, that they can set aside time for their other responsibilities given the flexibility of work hours, that they get a stronger say in the decision-making processes at home, that they enjoy the satisfaction of work and earning income leads them to a rather positive stance towards home-based work, and makes them disregard the problems involved, even if the women are aware of their presence. Some women even stated that they loved what they do, and would continue to do it even if they found some other job.

A significant number of women perceive social life as an umbrella term covering the tasks of cleaning and cooking, hosting guests, and spending time with their children and spouses. Outside the home, the activities noted involve visits to relatives and friends, and attendance in a number of courses such as public education courses. Most activities the women have outside the home settings were also related with the work they perform at home, such as shopping for materials. They attend public education courses with a view to learning new skills and expanding the variety of their offerings in the work they perform. The visits to relatives and friends, in this context, are essentially promotional activities concerning their products. The ability to carry out the work at any environment, by taking the means of production with them wherever they go, allows them to continue production without getting out of their self-described social settings.

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5 TRACING ENVIRONMENTAL POLICIES IN PUBLIC BUDGET: THE CASE OF TURKEY (2006-2019)

Hilal Görkem¹

Abstract

Aiming to analyse environmental policies in Turkey in the context of their reflections on the public budget, this study examines the central government budget for the period 2006-2019. Data on budget appropriations for environmental protection services and environmental tax revenues was used. While environmental protection services constituted 0.07% of the central government budget appropriations at the beginning of the period, this ratio decreased to 0.05% in 2019. In 2006, the share of environmental tax revenues from total tax revenues in the central government budget was 20.1%. The share of environmental tax revenues, which was 18% or more during the period, decreased to 13.8% in 2018. In addition, main policy documents used in the budget preparation process were examined. It was observed that environmental regulations in Turkey were reflected in the policy documents and the targets and strategies in environmental policies were emphasized.

Keywords: Environmental Policy, Environmental Protection Services, Environmental Taxes, Central Government Budget, Turkey

1. Introduction

Public budgets, despite their emphasis on public revenue and expenditure estimates, should not be considered as mere financial documents of numbers and figures. The policies adopted by governments have a direct impact on public budgets. Since serving as tools that governments use to direct economic and social policies, public budgets far exceed being a document depicting balance of revenues and expenditures. By examining a country's budgets, it is therefore possible to understand how public policies pursued in a given country have developed. Having this in mind, the current study aims to analyze how environmental policies implemented in Turkey have impacted² the central government budget between 2006 and 2019. To this end, firstly, a brief historical development of environmental regulations in Turkey is addressed. Subsequently, the evolution of environmental expenditure estimates and environmental tax revenue in central government budgets are analyzed. Finally, the aims, objectives and strategies related to environmental issues, which were put forth in the main policy documents used in the central government budget process, are examined.

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² For other studies on the effects of environmental policies on the public budget in Turkey, see: Altınöz, B. (2015). Sürdürülebilir Kalkınma Sürecinde Kamu Bütçesinin Önemi. *Dokuz Eylül Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, Cilt:30, Sayı:1, pp. 223-256, Toprak, D. (2017). Türkiye'nin Çevre Politikasında Yerel Yönetimlerin Rolü: Yerel Yönetim Bütçesinin İncelenmesi, *Maliye Araştırmaları Dergisi*, Cilt 3, Sayı 2, pp.173-193.

Appropriations allotted to the function of *environmental protection services* (listed in Chart (A) of the budget) are considered as environmental expenditures. The environmental taxes examined in this study are taken from Chart (B) of the central government budget, and consist of three different taxes (i.e., motor vehicles tax, special consumption tax on petroleum and natural gas products, and special consumption tax on motor vehicles). The main policy documents examined in this study are: (i) the Medium-Term Program, (ii) the Medium-Term Fiscal Plan, (iii) the Budget Call and its addendum the Budget Preparation Guide, and (iv) the Investment Circular and its addendum the Investment Program Preparation Guide. Each of these documents covers a 3-year period and in accordance with the Public Financial Management and Control Law No. 5018, public institutions use them in their budget preparation process. This study intends to reveal to what extent environmental legislation and government policies influence these documents and to what extent environmental pollution and protection are included in fiscal policy.

2. Environmental Regulations in Turkey

While the Ministry of Environment was established in 1991 (Şengün 2015, p.114), the 1970s witnessed the first examples of environmentally related organizational structuring with the creation of the Environmental Issues Coordination Council in 1973 and the subsequent Prime Ministry Environment Organization in 1978 (Ministry of Environment and Urban Planning, n.d.). While environmental regulations existed in several laws³ prior to 1982, constitutional regulations pertaining to environmental rights and environmental protection were legally instituted with the ratification of the 1982 Constitution. Stating that *"everyone has the right to live in a healthy, balanced environment*," Article 56 makes both the government and citizens jointly responsible for protecting the environment. Exhibiting characteristics of a framework law for the environment, Environment Law No. 2872, was subsequently ratified in 1983. Article 3 of this law emphasizes that the responsibility of protecting the environment falls on *"everyone including notably the administration, trade associations, unions, and non-governmental organiza-tions.*"The same law mentions standards, market-based mechanisms, and the use of economic tools regarding the resolution of environmental problems.

Following the adoption of the Environment Law, regulations for air, water, and noise pollution were made in the 1980s. The Solid Wastes Control Regulation and the Environmental Impact Assessment Regulation were issued in 1991 and 1993, respectively (Gürseler, 1999, p.827). In the 2000s, a number of legal regulations pertaining to environmental problems (e.g., waste water, solid waste, packing waste, noise pollution, and air pollution) were made in line with the EU acquis (Ministry of Environment and Forestry, 2007), peaking in 2008 and 2010. Table 1 showcases the main legal environmental regulations implemented after 2000. As seen in the table, the first significant development is the adoption of Law No. 5346 on the use of renewable energy resources in 2005. By expanding the use of renewable energy resources (i.e., solar, wind, biomass, wave, and stream energy) through this law, policymakers sought to increase the variety of available resources, reduce greenhouse gas emissions, and protect the environment. As a means of encouragement, a support mechanism was developed (Renewable Energy Resources Support Mechanism/YEKDEM) guaranteeing producers of renewable energy resources a specific sales price for their services. Seeking to *"increase efficiency in using energy resources and energy in order to*

³ Take the following laws for example: Village Law (1924), Law on Ports (1925), Petroleum Law (1926), Law Concerning Water (1926), Municipality Law (1930), General Public Health Law (1930), Land Hunting Law (1937), Forest Law (1956), Agricultural Pest Control and Agricultural Quarantine Law (1957), Groundwater Law (1960), Squatter Housing Law (1966), Fisheries Law (1971) (Gürseler, 1999:819).

use energy effectively, avoid waste, ease the burden of energy costs on the economy and protect environment," Energy Efficiency Law No. 5627 was enacted in 2007. This law introduced financial support for energy efficiency projects.

Ratifying the United Nations Framework Convention on Climate Change in 2004, Turkey has accepted strategy documents and action plans regarding climate change, energy efficiency, and recycling since 2010 (see Table 1). The Energy Efficiency Strategy Paper accepted in 2012 seeks to "reduce the amount of energy consumed in Turkey per unit of GDP by at least 20% by 2023 using 2011 as the base year." An investigation of Table 1 reveals that energy efficiency regulations have intensified in the 2000s. The last legal regulation worthy of note is the Regulation on Environmental Labeling (2018), which seeks to encourage the production and use of environmentally friendly products in order to curb the negative effects that manufactured products have on the environment. Currently, the environmental labeling system has been implemented on textiles, ceramics, and sanitary paper products (Ministry of Environment and Urban Planning, 2019).

 Table 1. Main Environmental Regulations in post-2000s
 Participation

2005	Law on the Utilization of Renewable Energy Resources for the Purpose of Generating Electrical Energy (No. 5346)				
2007	Energy Efficiency Law (No. 5627)				
2008	Regulation on Energy Performance in Buildings				
2008	Regulation on Principles and Procedures Pertinent to Increasing Energy Efficiency in Transport				
2010	Republic of Turkey Climate Change Strategy (2010-2023)				
2012	Energy Efficiency Strategy Paper (2012-2023)				
2014	National Recycling Strategy Document and Action Plan (2014-2017)				
2017	National Energy Efficiency Action Plan (2017-2023)				
2018	Energy Efficiency Control Regulation				
2018	Regulation on Environmental Labeling				

3. Central Government Budget Appropriations for Environment and Revenue Collected from Environmental Taxes

According to functional classification (a type of analytical budget classification), public services are divided into 10 principle functions (Edizdoğan&Çetinkaya, 2016, p.231). It is possible to track environmentally related budget expenditures by following appropriations allotted to *environmental protection services*. The programs and codes included in the second level of *environmental protection services* are as follows (Ministry of Treasury and Finance, 2018, pp.114-116):

- 05.1 Waste Management Services
- 05.2 Waste Water Management Services
- 05.3 Pollution Abatement Services
- 05.4 Natural Environment and Biodiversity Protection

05.8 Research and Development Services Pertaining to Environmental Protection

05.9 Miscellaneous Environmental Protection Services

Table 2 shows the distribution of budget funds by functional classification between 2006 and 2019. In 2006, 43.96% of budget funds were appropriated to general public services. Services for social security and social aid and education services were allotted 13.61% and 11.80% of the funds, respectively. As of 2019, defence services received 34.91% of the funds, followed by services for social security and social aid with 21.48% and education services with 14.42%. While general public services were appropriated the greatest share of funds during the whole period, environmental protection services were allotted the least share except for the year of 2007. In 2007, public order and security services received the lowest share with 0.06%. While defense services had the second lowest share (0.09%) in budget appropriations, environmental protection services had the third lowest share with 0.11%. Environmental protection services received a mere 0.07% of funds from the central government budget in 2006 and 0.05% in 2019. Between 2006 and 2019, the average share of environmental protection services in the budget appropriations was 0.09%. It is seen that the share of environmental protection services in budget funds has entered a decreasing trend since 2014.

Charts (A) annexed to central government budget laws between 2006 and 2019 were analyzed to shed light on both the historical development and current situation of funds appropriated to environmental protection services. While funds are not appropriated to the budgets of regulatory and supervisory agencies, certain public institutions included in Chart (I) and Chart (II) of the Law No. 5018 are appropriated funds for environmental protection services. Table 3 and Table 4 show the general and special budget administrations receiving funds for environmental protection services between 2006 and 2019. In 2006, a total of 124,649,721 TL were appropriated from the central government budget to environmental protection services. Of this total, 104,586,000 TL were allotted to general budget administrations and 20,063,721 TL to special budget administrations. In 2019, however, 525,515,000 TL and 21,374,000 TL of the total 546,889,000 TL appropriated to environmental protection services were allotted to general and special budget administrations, respectively. From 2006 to 2019, an average of 92% of the funds appropriated to environmental protection services belonged to general budget administrations. As for the year 2019, 70.7% of appropriations for environmental protection services in the central government budget to the Ministry of Environment and Urban Planning, 25.4% to the Ministry of Agriculture and Forestry, and 3.9% to the General Directorate of State Hydraulic Works.

Two general budget administrations received funds for environmental protection services until 2012: (i) the Ministry of Agriculture and Rural Affairs and (ii) the Ministry of Environment and Forestry. From 2012 to 2018, however, the three institutions appropriated funds for environmental protection services were: (i) the Ministry of Environment and Urban Planning, (ii) The Ministry of Food, Agriculture, and Livestock, and (iii) the Ministry of Forestry and Water Affairs. While the Ministry of Environment and Forestry appropriated the greatest amount of funds between 2006 and 2011, the Ministry of Environment and Urban Planning received the most funds from 2012 onward. While only one special budget administration (i.e., the General Directorate of State Hydraulic Works) received funds for environment protection services after 2012, prior to this year the Environmental Protection Agency for Special Areas appropriated funds for these services, and Kocaeli University was another special budget administration receiving funds for environmental protection services (see Table 4).

	General public services	Defence services	Public order and security services	Economic acts and services	Environmental protection services	Services for housing and prosperity of people	Health services	Services for recreation, culture and religion	Education services	Services for social security and social aid
2006	43.96%	6.55%	5.59%	11.04%	0.07%	1.51%	4.45%	1.42%	11.80%	13.61%
2007	51.36%	0.09%	0.06%	12.55%	0.11%	0.23%	12.28%	0.23%	13.33%	9.86%
2008	42.24%	5.71%	5.72%	9.55%	0.10%	1.05%	5.04%	1.53%	12.28%	16.78%
2009	39.95%	5.30%	5.71%	10.52%	0.09%	1.22%	4.98%	1.53%	12.66%	18.04%
2010	37.19%	5.02%	5.69%	11.02%	0.10%	1.42%	4.96%	1.52%	12.60%	20.49%
2011	35.08%	5.07%	6.26%	11.02%	0.12%	1.42%	5.51%	1.63%	13.62%	20.27%
2012	36.78%	4.73%	6.11%	11.66%	0.09%	1.28%	4.03%	1.70%	13.76%	19.83%
2013	36.05%	4.60%	6.47%	11.79%	0.12%	1.41%	4.06%	1.76%	14.30%	19.44%
2014	35.92%	4.57%	6.66%	11.24%	0.11%	0.95%	4.17%	1.86%	15.28%	19.24%
2015	36.07%	4.48%	6.60%	11.32%	0.10%	0.90%	4.23%	1.87%	15.70%	18.74%
2016	34.76%	4.28%	6.70%	11.32%	0.09%	0.83%	4.35%	1.76%	16.07%	19.84%
2017	34.05%	4.15%	6.74%	11.96%	0.08%	0.94%	4.82%	1.66%	15.75%	19.84%
2018	34.69%	4.96%	6.93%	11.92%	0.07%	0.84%	4.81%	1.55%	14.72%	19.51%
2019	34.91%	4.75%	7.20%	9.79%	0.05%	0.76%	4.92%	1.72%	14.42%	21.48%
Source:	: Altınöz, B. (2015	5), p.247, Minist	ry of Treasury and	Finance (2019b	Source: Almöz, B. (2015), p.247, Ministry of Treasury and Finance (2019b). Central Government Budget Law and Addendums (2006-2019), https://www.hmb.gov.tr/bumko-merke-	nt Budget Law ar	nd Addendums (2	006-2019), https	://www.hmb.gov.	r:/bumko-merke-

 Table 2. Distribution of Funds by Functional Classification (%)

2 ŝ 5 5 zi-yonetim-butce-kanunu-ve-ekle

	Ministry of Agriculture and Rural Affairs	Ministry of Environment and Forestry	Ministry of Environment and Urban Planning	Ministry of Food, Agriculture, and Livestock	Ministry of Forestry and Water Affairs	Ministry of Agriculture and Forestry	Total
2006	1,760	102,826	-	-	-	-	104,586
2007	1,985	221,401	-	-	-	-	223,386
2008	490	211,157	-	-	-	-	211,647
2009	2,447	231,793	-	-	-	-	234,240
2010	3,800	267,187	-	-	-	-	270,987
2011	720	360,356	-	-	-	-	361,076
2012	-	-	288,817	1,740	72,790	-	363,347
2013	-	-	331,302	1,850	139,006	-	472,158
2014	-	-	284,155,	3,250	204,568	-	491,974
2015	-	-	304,561	4,000	164,668	-	473,229
2016	-	-	364,749,	3,720	177,774	-	546,243
2017	-	-	360,296	4,000	202,341	-	566,637
2018	-	-	362,779	4,000	208,385	-	575,164
2019	-	-	386,380	-	-	139,135	525,515

Table 3. Funds Appropriated for Environmental Protection Services: General Budget Administrations (2006-2019)

Source: Altmöz, B. (2015), pp.245-246, Ministry of Treasury and Finance (2019b). Central Government Budget Law and Addendums (2006-2019), https://www.hmb.gov.tr/bumko-merkezi-yonetim-butce-kanunu-ve-ekleri

Table 4. Funds for Environmental Protection Services: Special Budget Administrations (2006-2019)

	Kocaeli University	Environmental Protection Agency for Special Areas	General Directorate of State Hydraulic Works	Total
2006	82,400	19,981,321	-	20,063,721
2007	0	21,237,800	-	21,237,800
2008	1,900	24,365,500	-	24,367,400
2009	0	24,029,300	-	24,029,300
2010	0	26,377,800	-	26,377,800
2011	0	34,169,200	-	34,169,200
2012	-	-	0	0
2013	-	-	60,281,417	60,281,417
2014	-	-	50,033,000	50,033,000
2015	-	-	40,378,000	40,378,000
2016	-	-	45,406,000	45,406,000
2017	-	-	25,932,000	25,932,000
2018	-	-	31,129,000	31,129,000
2019	-	-	21,374,000	21,374,000

Source: Altınöz, B. (2015), pp.245-246, Ministry of Treasury and Finance (2019b). Central Government Budget Law and Addendums (2006-2019), https://www.hmb.gov.tr/bumko-merkezi-yonetim-butce-kanunu-ve-ekleri

Taxes that may be considered environmental in nature included in Chart (B) of the central government budget are: (i) motor vehicles tax, (ii) Special Consumption Tax (SCT) on petroleum and natural gas products included in List 1 of the Special Consumption Tax Law, and (iii) Special Consumption Tax (SCT) on motor vehicles included in List 2 of the same law. Although these taxes were not specifically designed as environmental taxes, they have been included in the analysis because they have the potential to indirectly impact the environment by reducing consumption. Realization figures for environmental taxes laid out in statistics published by the Ministry of Treasury and Finance in its Budget Size and Budget Realizations were taken as the basis in the analysis. Figure 1 illustrates changes in revenue collected from environmental taxes between 2006 and 2018. Of these three sources of revenue, 55,593,469,000 TL were collected from SCT on petroleum and natural gas products, 17,327,830,000 TL from SCT on motor vehicles, and 12.844,323,000 TL from motor vehicles tax in 2018, making a grand total of 85,765,622,000 TL collected from environmental taxes. In the central government budget of 2019, it is predicted that in 2019, a total of 16,089,488,000 TL will be collected from motor vehicles tax, 68,743,839,000 TL from SCT on petroleum and natural gas products, and 24,036,032,000 TL from SCT on motor vehicles. Except for in 2009, revenue from motor vehicles tax constituted the smallest share of revenue throughout the entire period analyzed. While 65% of the revenue from environmental taxes stemmed from petroleum and natural gas products in 2018, 20% stemmed from SCT on motor vehicles, and 15% from motor vehicle tax for the same year.



Figure 1. Environmental Tax Revenue (2006-2018), (Thousands of TL)

Source: Ministry of Treasury and Finance (2019a). Budget Size and Budget Realizations. https://www.hmb.gov.tr/bumko-butce-buyuklukleri-ve-butce-gerceklesmeleri

Figure 2 depicts the share of revenue collected from environmental taxes in the central government budget from 2006 to 2018. The share of revenue collected from motor vehicles tax remained almost stable over the course of this period, starting at 1.7% in 2006 and peaking at 2.1% in 2009 before returning to 1.7% in 2018. Revenue from petroleum and natural gas products was 11.8% of the total revenue collected from environmental taxes in 2006, and remained above 10% until 2018, at which point it fell to 7.3%. Composing 2.4% of total budget revenue in 2006, the share of SCT revenue from motor vehicles fell below 2% in 2008. The share of SCT revenue from motor vehicles shows generally on an upward trend since 2012. In 2018, however, it experienced a 34% decrease to 2.3% of total budget revenue for 2006 stemmed from environmental taxes, this figure fell to 11.3% in 2019. Additionally, the share of environmental taxes revenue in total budget revenue had remained above 15% until the year 2018.

Of the total tax revenue collected in the 2006 central government budget, environmental taxes revenue composed 20.1%. Despite being at 18% or higher throughout the period analyzed, this share decreased to 13.8% in 2018 (see Figure 3). Compared to 2017, the share of environmental taxes revenues fell by 23.3%. This decrease stems by and large from the decline in revenue from special consumption taxes as a result of special consumption tax reduction on motor vehicles and of the sliding-scale system (the échelle mobile system) introduced to petroleum and natural gas products. Making up 11.9% of the total tax revenue in 2017, the share of SCT revenue from petroleum and natural gas products fell to 8.9% in 2018, a decrease of roughly 25%. While the share of revenue from SCT on motor vehicles was 4.1% in 2017, this figure experienced a 32% fall in 2018, decreasing to 2.8%. While the share of revenue collected from SCT on petroleum and natural gas products was 14.9% in 2006, 3% was collected from SCT on motor vehicles and 2.2% from motor vehicles tax during the same year. The share of revenue collected from motor vehicles tax remained, on average, 2.3% throughout this entire period.



Figure 2. Revenue Collected from Environmental Taxes (Percentage of Total Budget Revenue), 2006-2018, (%)

Source: Ministry of Treasury and Finance (2019a). Budget Size and Budget Realizations. https://www.hmb.gov.tr/bumko-butce-buyuklukleri-ve-butce-gerceklesmeleri



Figure 3. Revenue Collected from Environmental Taxes (Percentage of Total Tax Revenue), 2006-2018 (%)

Source: Ministry of Treasury and Finance (2019a). Budget Size and Budget Realizations. https://www.hmb.gov.tr/bumko-butce-buyuklukle-ri-ve-butce-gerceklesmeleri

4. Environmental Policy in Main Policy Documents

In this section, the main policy documents from 2006-2019 guiding the budget preparation process were analyzed. These documents consist of (i) Medium-Term Programs, (ii) Medium-Term Fiscal Plans, (iii) the Budget Call and its addendum the Budget Preparation Guide, and (iv) the Investment Circular and its addendum Investment Program Preparation Guide. Generally speaking, Medium-Term Programs address environmental problems and policies more frequently and more intensely than do other documents. No regulations pertaining to environmental policies are found in Budget Preparation Guides. However, only in explanations concerning analytical budget classification is information found as to which public services are included under environmental protection services.

Medium-Term Programs

Medium-Term Programs serve as the reference point on which the other documents are used during the budgeting process. In other words, subsequent policy documents are devised in-line with the policy priorities determined in Medium-Term Programs. Environmental policies and regulations were delineated in the *Environment and Urban Infrastructure* section in the first two Medium-Term Programs (i.e., 2006-2008 and 2007-2009). These documents furthermore state that an environmentally sensitive approach is to be adopted in a variety of sectors, like agriculture, transportation, and tourism, and that issues related to energy efficiency shall be prioritized. The 2008-2010 Medium-Term Program addresses environmental regulations within the scope of *Protecting the Environment and Urban Infrastructure Development* in policies, seeking to increase competitiveness. Since 2014, regulations pertaining to environmental policies are included in macroeconomic policies like growth, public revenue policy, and the balance of payments. The first six Medium-Term Programs (i.e., those spanning from 2006-2008 to 2011-2013) address alignment with EU acquis. It was stated that some arrangements should be made in order to ensure the harmonization of environmental legislation with the EU acquis and it was further highlighted that the administration, supervision, and implementation capacity need to be improved upon. While prioritizing policies seeking to increase energy efficiency in all of the Medium-Term Programs adopted during this period, the first regulations pertaining to the use of renewable energy resources were included in the 2009-2011 Medium-Term Program.

The environment was addressed in public revenue policies (one aspect of macroeconomic policies) for the first time in the 2012-2014 Medium-Term Program. Accordingly, "priorities pertaining to combating climate change and promoting energy saving will be given precedence in the definition and implementation of tax policies." (Medium-Term Program (2012-2014) p.12). The expression "combating pollution" was added to priorities demarcated in the 2015-2017 Medium-Term Program (p.15). In the 2016-2018 Middle-Term Program, however, energy efficiency was the sole environmental component emphasized in tax policy, and is clearly highlighted in the following clause of the document: "Concerning the creation and implementation of tax policies, priorities seeking to promote energy saving will be pursued and tax regulations encouraging energy saving will be made." (p.14). 2017-2019 Middle-Term Program states that tax policies are to be actively used as a tool to increase energy efficiency (p.12). As such, energy efficiency became the main point of focus in 2016 and has remained such ever since.

Recycling was addressed for the first time in the 2012-2014 Medium-Term Program under policies and strategies pertaining to the industrial sector. Accordingly, investments geared towards promoting recycling in sectors with high external dependence are given special importance and it was determined that a National Recycling Strategy would be created (Medium-Term Program (2012-2014), p.22). The notion of "supporting sustainable development" was emphasized as a public revenue policy aim for the first time in the 2013-2015 Medium-Term Program (Medium-Term Program (2013-2015), p.11).

Energy efficiency, the efficient use of natural resources, and recycling of wastes were mentioned in macroeconomic policies pertaining to growth in the 2014-2016 Medium-Term Program. This same document was the first to address the concept of "green growth" within the context of macroeconomic policies. Furthermore, renewable energy resources were heavily emphasized in policies promoting the balance of payments in this document. Policies geared towards decreasing external dependency were accepted in the 2015-2017 and 2016-2018 Medium-Term Programs. An example of one such policy adopted seeking to achieve just this has been to increase the overall percentage of renewable energy resources. Another policy adopted in the 2016-2018 Medium-Term Program aiming to decrease the trade deficit is to seek ways for wastes to be recovered for the economy.

In addition to supporting green growth in macroeconomic growth policies and seeking ways for wastes to be recovered for the economy, "accelerating the transformation towards environmentally conscious production in industry" is given precedence in the 2017-2019 Medium-Term Program (p.8). Moreover, the use of renewable energy resources is also addressed from a security of energy supply standpoint in this same document (p.10).

Aiming to maintain macroeconomic stability, the 2018-2020 Medium-Term Program seeks to reduce dependence on energy imports in order to decrease the current deficit. Among the policies accepted to achieve this were to increase the overall percentage of renewable energy resources and to initiate a program seeking to promote the more efficient use of energy in the transportation, industrial, and residential sectors (Medium-Term Program (2018-2020), p.42).

"Increasing the overall percentage of electricity production through solar, wind, biomass energy" is one of the policies aiming to reduce the current deficit found in the 2019-2021 Medium-Term Program (p.15). Furthermore, energy input costs are sought to be reduced as part of the National Energy Efficiency Action Plan (p.15). Moreover, the Zero Waste Project and the National Environment Labeling System are two of the environment and urban planning programs and projects given precedence during this period (p.24).

Medium-Term Fiscal Plans

Prepared in-line with the Medium-Term Programs, Medium-Term Fiscal Plans did not address the environment until 2014. In addition to this, the *Revenue Policy and Implementations* segment of the 2012 Budget Justification, in which the 2012-2014 Medium-Term Fiscal Plan is published, addresses *"priorities seeking to combat climate change and to promote energy saving in the definition and implementation of tax policies"* (Ministry of Finance, 2011, p.100), and this is the same clause used in the public revenue policy of the 2012-2014 Medium-Term Program. Environmental issues in tax policy laid out in the 2012-2014 and 2013-2015 Medium-Term Programs are only found in the Revenue Policy and Implementations of the Budget Realizations until 2014 and are not reflected in Medium-Term Fiscal Plans. Environmentally conscious tax policies addressed in the main policies section of budget revenue in Medium-Term Fiscal Plans have emphasized energy saving since 2014.

Tax incentive mechanisms regarding energy saving, expenditures promoting energy efficiency, and investments in renewable energy sources are emphasized in the 2014-2016 and 2015-2017 Medium-Term Fiscal Plans. "Continuing to implement environmentally conscious tax policies encouraging energy saving" is one of the main budget revenue policies included in the 2016-2018 Medium-Term Fiscal Plan (p.3). In fact, the intent to "continue to develop tax policies that seek to promote energy saving and to combat climate change and pollution" is highlighted in the three Medium-Term Fiscal Plans of 2017-2019 (p.4), 2018-2020 (p.5), and 2019-2021 (p.4). The amendment made to the Environment Law in November 29, 2018 instituting that a recycling share be taken from plastic bags is one example of tax policy being used to fight pollution in-line with the policy objectives of Medium-Term Fiscal Plans.

Investment Program Preparation Guides

The Investment Program Preparation Guide is a policy document containing points needing to be taken into consideration while preparing public institutions' investment offers. In addition to listing the main priorities set for public investment policies, this document also gives space to regional and sectorial priorities. Environmental regulations are found in the section *sector/sub-sector priorities*, in which priorities for municipal services, environment, energy, and higher education are delineated.

Among the priorities falling under municipal services in the Investment Program Preparation Guide since 2006 are solid waste and geothermal central heating infrastructure projects directed by Turkey's Provincial Bank (İlbank) as well as urban and environmental infrastructure projects in city centers. In the 2018-2020 and 2019-2021 Investment Program Preparation Guides (p.7), projects included as part of the Solid Waste Program directed by the Ministry of Environment and Urban Planning were taken into the scope of prioritized projects included under municipal services.

The 2007-2009 Investment Program Preparation Guide emphasizes that projects pertaining to the efficient use of natural resources in the environmental sector will be given priority (p.7). Environmental protection projects were

added to these priorities in the 2010-2012 Investment Program Preparation Guide. As stated in the 2011-2013 and 2012-2014 Investment Program Preparation Guides (p.6), "environmental projects in line with the aims set out in National Climate Change Strategies" were taken into the scope of prioritized projects in the environmental sector. This regulation is a reflection of the 2010-2023 Turkey Climate Change Strategy passed in 2010. Later, this clause was restated as "environmental projects in line with the aims and goals set out in national strategies" in the 2013-2015 Investment Program Preparation Guide (pp.6-7). With the passing of this regulation, other environmental strategies outside of those delineated in the Climate Change Strategy were also given precedence.

In the 2014-2016 Investment Program Preparation Guide (p.3) and subsequent guides, it is stated that "projects seeking to integrate renewable resources in the system shall be given priority" in the energy sector. It was furthermore accepted that all new building projects in the higher education sector would include energy efficiency principles in their design plans (p.5).

5. Conclusion

This study has investigated the extent to which environmental policies implemented in Turkey impact the central government budget between 2006 and 2019. While environmental protection services composed 0.07% of all appropriation in the 2006 central government budget, this ratio fell to 0.05% in 2019. Using functional classification to examine the distribution of appropriations reveals that environmental protection services were appropriated the least amount of funds except for 2007. In 2007, the share of environmental protection services within the central government budget increased from 0.07% to %0.11. This increase can be considered as a reflection of the environmental policies in the early 2000s. Legal regulations dealing with environmental problems and ways to combat them have witnessed an increase especially since the 2000s. Yet, despite environmental policies being given such precedence, environmental protection services still remain to receive sufficient funding from the budget. The share of environmental protection services in budget funds has decreased since 2014. Overall revenue from environmental taxes witnessed an annual increase until 2018, when it experienced an 11.1% decrease compared to 2017. This decrease was due mainly to special consumption tax reduction on motor vehicles and to the sliding-scale system (the échelle mobile system) introduced to petroleum and natural gas products, both implemented in 2018.

Generally speaking, environmental regulations in Turkey are observed to impact main policy documents and goals and strategies of environmental policies are found to be emphasized in these documents. The Tenth Development Plan (2014-2018), for example, emphasizes that environmentally-friendly approaches and new job sectors promoting environmentally conscious economic growth will be supported, and *green growth* macroeconomic policies are addressed for the first time in the subsequent 2014-2016 Medium-Term Program. In addition to this, environmental policies have sometimes only reflected on documents in the budget preparation process after some time has passed. For example, despite the ratification of Law No. 5346 on the Utilization of Renewable Energy Sources for the Purpose of Generating Electrical Energy in 2005, renewable energy sources were first addressed in the 2009-2011 Medium-Term Program. Moreover, the first Medium-Term Fiscal Plan in which policies pertaining to renewable energy resources were addressed was the 2014-2016 Medium-Term Fiscal Plan. The 2014-2016 Investment Program Preparation Guide was the first of such guides to include renewable energy resources in prioritized projects within the energy sector. Environmental problems and policies are observed more frequently and more intensely in Medium-Term Programs compared to all other documents analyzed. In both Medium-Term Programs and Medium-Term Plans, environmental protection is included in public revenue policies rather than in public spending policies. Beginning with the 2012-2014 Medium-Term Program, energy saving and struggle with climate change have been emphasized in tax policy design. That said, the main point of focus of Medium-Term Programs beginning in 2016 has been energy saving and energy efficiency. In addition to this, energy saving and efficiency have been given precedence specifically in those policies explicitly seeking to maintain the balance of payments. Moreover, increasing the overall proportion of renewable energy resources in the energy sector by lessening dependence on external energy has become a policy tool in efforts to decrease the current deficit.

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6 Adverse effects of sin taxes: illicit drug use and unrecorded alcohol consumption in turkey

Cihan Kızıl^ı

Abstract

In the last years, prices of alcoholic beverages have risen dramatically in Turkey due to tax hikes. The total number of mass alcohol-poisoning incidents and number of deaths originating from drug use have also increased in the same period. This situation shows that store-bought alcohol becomes unaffordable for many, and consumers start to seek for alternatives, as economic theory suggests. Taxes on alcohol are an important financial source for the governments, and the authorities justify so-called sin taxes by the need to reduce consumption of alcohol. However, this study indicates that excessive taxes on alcohol may do more harm than good to economy and so-ciety. High taxes may not break an alcohol habit, but rather replace it with a more deleterious addiction or push drinkers to unrecorded alcohol.

Keywords: Drug Use Disorder, Counterfeit Alcohol, Sin Tax, Substitution Effect, Special Consumption Tax

1. Introduction

In economic theory, quantity demanded of a product is inversely related to its price, and this relation measured by price elasticity. When demand is very inelastic, price changes cause proportionately smaller moves in demand. On the other hand, some goods are very elastic, and consumers respond substantially to the price changes of those goods. The majority of academic studies attempting to estimate the price elasticity of demand for alcohol find that demand is relatively inelastic in relation to price (Such as Gallet, 2007; Wagenaar et al., 2009; Sousa, 2014). In other words, when we increase alcohol prices, this causes a fall in alcohol consumption, but this decline is smaller than the rise in prices.

Other important elements related to the relationship between price and demand are the substitution and income effects. Based on consumer choice theory, the substitution effect is the component of a change in demand for a good as a result of a price change that can be attributed to substitution between different goods. As prices rise, consumers replace more expensive items with less costly alternatives. Income also plays an important role in consumers' preferences; this role is characterized as the income effect. The income effect shows the change in consumption patterns based on income.

Governments adopt a wide variety of public policies with the intent of reducing alcohol consumption and the related harmful effects. Since price is an important factor influencing consumption, these policies mostly attempt to affect the price of alcohol. The main argument for these policies is based on the idea that "drinking is bad",

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and taxation is the most common price intervention used by governments. The tax levied on goods such as alcohol and tobacco is termed as "sin tax", and it is mostly justified to reduce the consequences of these commodities deemed harmful to society and individuals (Lorenz, 2004: 60). However, tax revenue generated from alcohol and cigarette sales is the most prominent motivator for levying high taxes in many countries (Babor et al. 2010: 110). This situation is also linked to the price elasticity of demand because tax revenue is larger when the demand is inelastic. The Ramsey rule suggests that governments can impose higher than average tax rates on inelastic goods for the purposes of taxation revenue (Cnossen, 2010: 3-4).

Inelastic goods are considered as necessities and have few substitutes. However, this does not mean that commercially produced alcoholic beverages are irreplaceable in the long run, especially if users are exposed to significant price changes. In the short run, it may not be easy to make substantial changes in alcohol consumption. In the long run, however, users become more aware of alternatives. High prices may encourage them to seek alternative substances or they may attempt to produce their own drinks at home.

In Turkey, alcohol prices have risen dramatically in the last years, and home brewing has become prevalent, especially among young people. The general decrease in purchasing power and stricter legislation on alcohol² also play important roles in this situation. In addition to home brewing, Turkish media reports claim that consumers turn to illegally produced alcohol as well due to steep taxes. However, some other possible substitutes such as illicit drugs are not considered adequately in written and visual media. This study wants to draw attention to the increase in drug use and counterfeit alcohol consumption in Turkey. Heavy taxes reduce recorded alcohol use, and Turkish governments benefit from increasing tax revenues. However, excessive taxes on alcohol may lead to problems that are more serious than alcohol addiction and do more harm than good to economy and society.

2. Alcohol Consumption and Taxation of Beverage Alcohol in Turkey

The detrimental effects of alcohol consumption on human health are well documented in the scientific literature, and it is a fact that alcohol use is not only harmful to health but also a cause of lost productivity and income. Furthermore, alcohol addiction does not only affect the individuals choosing to drink, it emits negative externalities like accidents, which bring injury to others and damage to their property. Since alcohol abuse imposes both internal and external costs, governments take policy measures to reduce alcohol consumption and related costs. Increasing excise taxes or otherwise raising prices or decreasing availability are among these policies (Greenfield et al., 2009: 3206).

² For instance, shops are not allowed to sell alcohol between 10 p.m. and 6 a.m.



Figure 1: Change of Alcohol Prices

Source: TurkStat (TÜİK)

Figure 1 shows how alcohol prices have changed over time in Turkey, and the rise in prices of alcoholic beverages is clearly noticeable. Considering that we justify high taxes to reduce the harmful effects of alcohol, we should look at the alcohol consumption numbers. Table 1 shows ten selected countries with different cultural patterns and compares their pure alcohol consumption statistics. The realized consumption numbers are for the years 2010 and 2016; also, projections of the World Health Organization (WHO) for the years 2020 and 2025 can be seen in this table. If we consider the average consumption of other countries, it can be said that alcohol consumption in Turkey is already low and not a case that requires immediate action. It decreases from 2.2lt to 2.0lt between 2010 and 2016, likely as a result of climbing prices. Moreover, alcohol consumption per capita in Turkey will be less than the one in Qatar soon, according to the projections of the WHO.

Recorded alcohol consumption tends to decrease, and in a way, it shows that Turkish people cannot afford store-bought alcohol. We can support this claim with a simple calculation. After the latest tax hike in July 2019, raki (70 cl) price went up to 152.50 Turkish liras (TL), and only 13.25 bottles of raki can be purchased with the minimum wage (2,020TL). In July 2009, this rate was 19.52 since the minimum wage was 546.48TL and a bottle of raki cost 28TL.

	2010	2016	2020	2025
Turkey	2.2	2	1.9	1.9
Bosnia and Herzegovina	7.3	6.4	7	7.8
Greece	10.4	10.4	10.7	10.8
Lebanon	2	1.5	1.4	1.2
Lithuania	15.1	15	14.4	13.9
Russia	15.8	11.7	12.3	12.4
Qatar	1.7	2	2.1	2.2
Germany	13	13.4	12.8	12.6
UK	12.3	11.5	11.5	11.8
Italy	7	7.5	7	6.1

Table 1: Alcohol Consumption Per Person (Lt.)

Source: World Health Organization (WHO)

When we mention high alcohol prices, we actually mean high taxes, because when we buy an alcoholic beverage in Turkey, we just pay a little for the drink itself, but we mostly pay taxes. According to author's calculation, special consumption tax (ÖTV) is 82.30TL and value added tax (KDV) is 23.26TL on a bottle of raki as of July 2019. This means that almost 70 percent of a bottle is tax and total tax rate is 224.88% regarding the untaxed product price. Tax rates for other spirits are similar and even high for softer drinks like beer (tax rate for beer is around 150%). These rates are too high, and it is meaningless to discuss whether producers pass the tax burden onto customers. Figure 2 shows how ÖTV on raki had increased between 2009 and 2018, and it shows parallelism with the rise of prices. In this period, ÖTV on raki had increased by 5.38 times.





Source: Revenue Administration (GİB)

In Turkey, the imposition of excise tax on alcohol is the main instrument to reduce alcohol consumption, and 'sin taxes' on alcohol have increased steadily since the Justice and Development Party (AKP) came to power in 2002. ÖTV for alcoholic beverages increases every six months since the Turkish Government enacted legislation to amend the Special Consumption Tax Law (no. 4760) in 2012. Besides reducing alcohol consumption, raising taxes on alcohol and tobacco has been considered as a preferred way to finance budget deficit due to the revenue generating potential of these taxes. However, policymakers should consider unintended consequences because repeated tax increases may not be beneficial all the time. Climbing alcohol prices become unbearable for alcohol addicts as well as occasional drinkers, and this situation prompts consumers to review their options.

3. The Consequences of Excessive Taxation

The relationship between price and demand is not that as clear for alcoholic beverages as the law of demand states. They have many variations by price, quality and type. When the government increases taxes on a specific beverage to influence its price, consumers' first response is to decrease their consumption and then to find a close substitute which is not affected by the tax rise. For instance, if you raise taxes on raki, raki drinkers may shift to a less expensive alcoholic beverage. In Turkey, usually all alcohol taxes increase together, yet wine and beer can be counted as relatively affordable since there are heavier taxes on spirits. Table 2 shows alcohol supply numbers in Turkey between the years 2013 and 2017. As seen in this table, supply of strong drinks like raki and vodka declines while beer and wine supply increases. This might be one of the reasons why pure alcohol consumption rates decrease, since alcohol content of beer and wine is relatively low.

	2013	2014	2015	2016	2017
Beer	878.91	943.32	908.20	900.34	915.10
Wine	62.24	63.74	63.63	51.29	66.43
Vodka	14.91	16.08	14.13	11.24	13.28
Raki	42.34	40.57	39.20	35.45	37.32

Table 2: Alcohol Supply (Production + İmport) (Billion Lt.)

Source: Tobacco and Alcohol Market Regulatory Authority (TAPDK)

Elder et al. (2010) reviews studies in literature in order to assess the effectiveness of tax policy interventions and suggests that raising alcohol prices by raising alcohol excise taxes is an effective strategy for reducing excessive drinking and its adverse consequences. However, the effectiveness of this policy can be reduced by increases in smuggling and illicit alcohol production (Babor and Caetano, 2005: 329; Anderson, Chisholm and Fuhr, 2009: 2242). Once alcohol prices are detached from economic reality, legal trade of alcohol shifts to where it becomes invisible to the state (black market), and the state can neither regulate nor receive tax revenues from the transactions (Carruthers, 2016: 2568). A Canadian case set a good example on how a sin tax can open a door to black market. Following a tobacco tax hike in 1987, the share of illegal tobacco trade in the Canadian market jumped from 1% to 31% in 6 years (Minardi and Pouliot, 2014: 3).

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Do alcohol addicts really abandon their harmful habit and consume less alcohol due to high taxes? Is it realistic to assume that the law of demand will work perfectly? The answer is no because overcoming an addiction is more complicated than many economists assert. Rather than consuming less alcohol, an addict prefers decreasing household expenditures to slake their addictions or seeking for cheaper alternatives. Moreover, the ones in search of other alternatives might turn to unrecorded alcohol. Informally produced, illicitly produced and/or traded alcoholic beverages, and surrogate alcohol (perfumes, eau-de-colognes and mouthwash) are unrecorded (Anderson, Chisholm and Fuhr, 2009: 2240); hence, they do not appear in consumption statistics. Sin taxes may cause no fall in total alcohol consumption but rather substitution between recorded and unrecorded alcohol. As consumers turn to unrecorded alcohol, state tax revenues fall short of expectations. In addition, legitimate producers and sellers suffer from loss of sales, which affects their revenues as well as employment capacities.





Source: Institute for Health Metrics and Evaluation (IHME)



Figure 4: Death Rates from Drug Use Disorders

Source: Institute for Health Metrics and Evaluation (IHME)

The shift from recorded to unrecorded alcohol is a serious issue because unrecorded alcohol may contain methanol, which is poisonous to humans. In Turkey, there have been numerous methanol poisoning outbreaks in recent years. Between 2002 and 2010, 398 death cases were identified and were reportedly linked to ingestion of methanol poisoning (Kurtas et al., 2017: 3681). Five Russian tourists were poisoned by bootlegged alcohol and lost their lives in 2011 (Turkish Daily News, 2011). In 2015, 44 people died in Izmir and Istanbul (T24, 2015), and in only one month (July 2019), counterfeit alcohol killed 23 people across the nation (Yavuz and Kumanovali, 2019). These sad incidents reveal that alcohol addicts risk their lives because sin taxes make store-bought alcohol unaffordable for them.

Despite deaths from alcohol poisoning, death rates from alcohol use disorders declined in Turkey, as shown in Figure 3. However, Figure 4 tells another story. While alcohol related deaths decreased, death rates from drug use disorders increased dramatically in the last years. This situation brings to mind the possibility of substitution between alcohol and illicit drugs. Crost and Guerrero (2012) give an answer to this question and empirically demonstrate that marijuana and alcohol are substitutes, so that a rise in the price of alcohol leads to an increase in marijuana use (Crost and Guerrero, 2012: 121). This substitution may not be limited to marijuana but also cheaper drugs with higher lethal effects. While alcohol prices rise sharply to dissuade people from drinking alcohol and to generate tax revenues for the government, consumers still want to satisfy their 'needs' and get the 'same bang' for their buck. Alcohol is already considered as a pathway of entry into illicit drug use (Kandel and Yamaguchi, 1993), and unaffordable alcohol prices might ease the transition from alcohol to illicit drugs. In a way, Figure 4 shows how terrifying this transition may become.



Figure 5: Age Distribution of Drug-İnduced Deaths

Source: The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA)

Occasional and moderate drinkers are not tempted easily to use illicit drugs; however, heavy drinkers and adolescents with alcohol use problems may not resist this temptation, considering that they do not have a lot of room in their budget to keep their 'satisfaction' unchanged. As with most indirect taxes, sin taxes are regressive and take a higher proportion of income from low-income groups, which usually consume more alcohol and tobacco (Snowdon, 2012: 51-54).

Figure 5 shows age distribution of drug-induced deaths in 2017 for both Turkey and the EU. It is easy to notice that distribution patterns are quite different from each other, and the figure presents that drug use is more prevalent among youth and young adults in Turkey. It should be asked why especially very young people die due to illicit drugs in Turkey. Is it related to the excessive alcohol prices preventing young people to go out and have drinks with their friends, considering that there are cheaper illegal drugs in the 'shadow market' than alcohol in stores and bars?

4. Conclusion

Taxation of alcoholic beverages and tobacco products is frequently used to generate revenue for governments, and the authorities justify so-called sin taxes by the need to reduce consumption of 'sinful' commodities. Sin taxes would be reasonable to some extent if the revenues from these taxes were earmarked for health expenditures and addiction treatment programs. In the real world, however, the tax revenues generated from alcohol and tobacco sales finance general spending of the governments. Policymakers should still consider imposing excise taxes on alcohol if they intend to lower alcohol consumption. However, it should be acknowledged that this kind of policy is ineffective unless the unrecorded consumption of alcohol is brought under control and the government implements long-term policies that prevent drinking initiation.

In Turkey, tax rates on alcohol reached very high levels, and these taxes make legal alcoholic products unaffordable for many people. Policymakers and economists claim that drinkers will reduce their consumption due to price rises; however, the evidence indicates that this is an over-optimistic expectation. After a point, constantly increasing taxes prompt occasional drinkers as well as heavy drinkers to seek less costly alternatives. Since unrecorded alcohol is untaxed, consumers turn to home production or illegally produced beverage alcohol. The shift from recorded to unrecorded alcohol is an important issue because Turkey has experienced numerous mass alcohol-poisoning incidents.

Death rates from drug use disorders tend to increase in the last years, and this increase brings the question of whether excessive alcohol prices drive demand for illegal drugs in Turkey. As alcohol prices rise significantly in the same period, it does not seem coincidental. Contrary to the situation in the EU, prevalence in younger people who have less purchasing power indicates the possibility that they replace expensive alcohol with illegal drugs.

In the Turkish case, it seems that sin taxes started to do more harm than good. Even though they are justified to reduce health problems resulting from excessive alcohol consumption, unintended consequences of sin taxes create new problems. Since Turkey has a strong shadow economy, sin taxes do not decrease alcohol consumption as expected and consumers just substitute one sinful good for another. Considering public health hazards, Turkey decreased alcohol prices before (in 1947), and we believe that the current situation calls for a similar action. Otherwise, we have to be prepared for more fatalities originating from counterfeit alcohol and drug use.

This study aims to address the issue of increasing drug use and counterfeit alcohol consumption in parallel with alcohol prices. Due to lack of official data, it is difficult to anticipate the actual impact of alcohol taxes on Turkish consumers. Further studies are needed to assess this relationship by collecting data from questionnaires and interviews. Once the data is collected, further quantitative analysis can be performed. ADVERSE EFFECTS OF SIN TAXES: ILLICIT DRUG USE AND UNRECORDED ALCOHOL CONSUMPTION IN TURKEY *Cihan Kızıl*

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7 TROUBLED PROSPERITY: THE ECONOMIC DIVIDE

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Abstract

Rising inequalities in income or wealth have been recently most salient issue for both developed and developing countries. These inequalities in today's world economy have become a common topic among economists, researchers and policy makers. Polarization of income distribution has many hazards which have undermined social harmony. So, increasing inequalities appear to be a social anxiety that affect all segments of societies for our epoch. In this study, by referring to today's troubled welfare which accompanied by inequalities, we evaluate inequalities from labor, inequalities from capital and overall inequalities. To understand importance of two different type of inequalities, we mentioned the technical change and marginal productivity concept. As a result of this chapter, it can be said that labor income inequalities have always been more moderate than inequalities from capital. Inequalities from capital, which contain larger inequalities than labor income inequalities, are transferred between generations and stratifying social inequalities even further.

Key words: Inequality, Inequality from Labor, Inequality from Capital, Wealth

1. Introduction

We can say that the world is wealthier than any time in history in this era, but we have to say that the world saw more peaceful times. So, what is the source of this troubled prosperity in this era of rising wealth and affluence? Undoubtedly, the answer of this question is inequality and deprivation. Troubled prosperity was used by Paul Krugman to characterize the sixties and it had reflected the situation of those years, but the wisdom of this concept has gone beyond the explaining the United States of those times and has become representative of the nature of today's societies. The world economy has made significant progress over the last 30 years. Many countries in the world have succeeded to increase their national income. But we are living in an age of prosperity with our deprivations and wealthiness, where many people still cannot meet many needs - the majority of which are basic needs. Declining living standards despite rising national incomes, inequalities in education and health, show that created affluence flows towards a small minority and uncontrolled growth in the upper income segment. It is clear that, created material prosperity cannot be a complete recipe for poverty and inequality.

All periods in which actualized radical economic developments in history certainly left a legacy of inequality behind. John M'Farlane (1782) stated that "the poor people are in the most productive and civilized countries, not in the poorest countries"; Adam Smith declared that, as in Polanyi's famous book, "it is not in the richest countries

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that the wages of labor are highest". In the process of industrial revolution, Manchester was mentioned as "there is no other city on the world where the gap between the rich and the poor is so big and the obstacle to close the gap is so hard". From the 1830s to the 1850s, it is known that (at least) ten percent of England's population was panhandling. History has always witnessed that unprecedented wealth is a uterus that carries unprecedented poverty (Hobsbawm, 2008 [1969], pp. 84-86; Polanyi, 2011 [1944], p. 156). Deaton (2013), in his book The Great Escape, in which he describes the interaction between progress and inequality, stated that everyone cannot be rich at the same time. He emphasized that wealth or material prosperity increases at the expense of a certain amount of poverty in society and that inequality is a natural consequence of progress. The process of industrialization in a capitalist economy takes place by directing national income from consumption to investment. In this process, it is known that the poor become relatively more impoverished by the flow of income from non-investor classes to the investor class who is to the owners of capital. And consequently, by the transferred income from the poor to the rich for the industrialization process, poor remain relatively poorer (Hobsbawm, 2008 [1969], pp. 84-85).

The Kuznets hypothesis predicts that inequality increases as incomes rise, that is, as the economy develops, and eventually inequalities will decrease again in high income levels. To the Kuznets approach, in the process of transition from agriculture to industrial society, inequality will increase as the average income increases and then decrease as more workers enter the highly productive sectors and after all, the inequality will act as inverted U shape. (Milanovic, 2018, p. 50; Piketty & Saez, 2003, p. 1). As in the hypothesis of the Kuznets, the inequalities in the period leading up to the Industrial Revolution, especially before the First World War, have decreased until 1980. However, as of the 1980s, the descending part of the Kuznets hypothesis (the part where inequality is expected to decrease as income increases in rich countries) began to increase instead of decrease. It is criticized that the Kuznets approach cannot explain the increasing inequality after 1980 (Milanovic, 2018, pp. 50-52). According to Piketty, the capitalist economic order of our time is experiencing a period of increasing inequality, just as before the First World War, and since the 1970s, a version of the previous inverted U curve has been taken place. This period is accepted as the beginning of the second Kuznets Curve for post-industrial societies. A new industrial revolution has taken place, which has led to an increase in inequality, but inequality will begin to decline at some point as more and more workers benefit from innovation (Milanovic, 2018, pp. 50-59; Piketty & Saez, 2003; p. 1).

The neoliberal theory stress that overall inequality let people have more incentives for effort and risk-taking, and thereby it raises efficiency so we should not be concerned about inequalities. As Margaret Thatcher put it, "*It is our job to glory in inequality and see that talents and abilities are given vent and expression for the benefit of us all.*" (as cited in Wade, 2003, p. 582). This is only one innocent side of inequality. According to this view, the idea that the relatively less deprived individual is encouraged to be creative in order to improve his condition and to overcome his disadvantage is dominant. From this point of view, which highlights efficiency, inequality can be seen innocent. On the other side of the coin, if there are the facts that, created economic prosperity mostly concentrated on the richest side, at the same time the rise of poverty in spite of the rich and the share of middle income from national income has decreased, inequality becomes a threat to economic and social order rather than a starting point for efficiency. Most of the increase in inequality can be traced to gains of the top decile (Lansing & Markiewicz, 2016, p. 1). Specifically, if we consider the total growth of the US economy in the thirty years (1977 to 2007), we see that the richest 10 percent appropriated 75 percent of the growth; moreover, just the richest 1 percent appropriated nearly 60 percent of the total increase of US national income in this period. The trouble is that the rate of income growth for the bottom 90 percent was less than 0.5 percent per year (Piketty, 2014, p. 297).

Since the 1970s income concentration has been increasing all over the world. The underlying factors behind the rising income inequality are hotly debated issues. The concentration in income is a result of economic growth, liberalization, globalization, changing in household structure, declining union strength, changes in the distributive effects of taxes and transfers, distribution of innate abilities, distribution of human and physical capital and rapid technological change processes. All in all, potential cause of the today's rising inequality is indeed that the world is no longer the same as before. In this chapter by paying particular attention to the role of the wealth inequalities, we review rising inequalities in today's world. Our main argument in this chapter is to highlight that capital income inequalities, which both affect labor income inequalities and are transmitted between generations, stratify social inequalities even further. We begin by emphasizing that inequalities of capital are always higher than inequalities of labor income or labor income inequalities have always been more moderate than inequalities from capital. Following this section, we evaluate most substantial cause of inequalities namely technical change. We state that with the widespread use of technology in many stages of production, the explanations for the increase in income inequality from labor are mostly centered on the wage polarizations in the new employment structure caused by technological change. We then focus on "marginal productivity theory". In this section we highlight the role of wealth inequalities in shaping inequality of opportunity. Transferring wealth to the next generation, the opportunities for all field of life can be shaped according to the interests of the rich, thus inequality of opportunity would arise, and this shadows the notion that marginal productivity theory is fair. In the last section we summarize the all information and offer a number of policy suggestions.

2. Inequality of Income from Labor and Inequality of Income from Capital

Inequalities in general are unequal conditions, which include deprivations such as education, health, unemployment, illness or social exclusion, and which undermine social cohesion. Income inequality is a manifestation of the stagnation of incomes in the lower and middle parts of the income distribution and the rise of incomes in the upper parts of the income distribution (Morelli & Atkinson, 2015, p. 32). Income inequality is combination of prominent increase in the share of income accruing to a small group and the same time stagnating average incomes at the bottom. Income inequality is insufficient to explain inequality as a whole, due to the ability to determine the course of current unequal conditions it has importance in terms of protection of living standards and social inequalities and can affect the social, economic or political processes of countries. The increase in material welfare, which has a lion's share of a small minority and which cannot be turned into the earnings of everyone, stratifies social inequalities

Piketty defined inequality in his famous book called "Capital in the Twenty-First Century". Income inequality in his definition is a result of adding up these two components; "inequality of income from labor and inequality of income from capital". And the more unequally distributed each of these two components, the greater the total inequality (Piketty, 2014, pp. 242-254). And when calculating income inequality, capital inequality, and therefore inequality of wealth is always higher than labor income inequality. Especially the point that should be underlined is the tendency of inequality of capital income and inequality of labor income in the majority of the countries discussed. Because almost in all periods capital income inequality is extreme compared to labor income. The poorest part of the population in point of wealth has almost nothing (less than 5% of total wealth), while the top 10% of the wealth hierarchy has the majority (more than 60%; 90% in some countries). Within the dominant income and wealth structure of 19th century France, at the peak point of wealth accumulation acquired by inheritance is much higher than the living standards obtained at the peak point of labor income accumulations. And

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a similar social reality exists in England of the 18th and 19th centuries, or in the southern states of the United States of the same period (Piketty, 2014, pp. 253-263).

Piketty (2014) had used an indicator that shows the share of "top 1% and top 10% which helps us to comprehend the economic divide caused by inequality in society. The top 1%, a small minority, referred to as the dominant class, represents the one with the power to restructure social life, political and economic order. Piketty (2014) had classified the society according to income distribution segments as follows;





Source: Piketty, Thomas, Capital in the Twenty-First Century, The Belknap Press of Harvard University Press, 2014, p. 177-180.

Table 1 and Table 2 show the trends of capital and income inequality of various countries over the years. Table 1 shows the labor income inequality of Scandinavian countries, Europe and the United States. First of all, when we look at shares of labor income of the richest 10%, we see that they are about 25% in Europe and 35% in the USA in 2010. In the same period, we see that the share taken from capital ownership by the same segment is 60% in Europe and 70% in the USA. The richest 1% taken the share of 7% of labor income in Europe and 12% in the USA, in 2010. The share of the same segment in capital ownership is 25% in Europe, respectively, while it is 35% in the USA. Even in Scandinavian countries which have lower level of inequality, inequalities from capital are higher than inequalities from labor.

	Lower Level of Inequality (Scandinavian Countries 1970s and 1980s)	Moderate Level of Inequality (Europe 2010)	High Level Inequality (US 2010)
The Top 10%	20	25	35
The Top 1%	5	7	12
The Next 9%	15	18	23
The Middle 40%	45	45	40
The Bottom 50%	35	30	25
Gini index	0,19	0,26	0,36

Table	1.	Inequality	of Labor	Income
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Source: Piketty, Thomas, Capital in the Twenty-First Century, The Belknap Press of Harvard University Press, 2014, p. 177.

What we should read in general from both tables is that, as Piketty states, inequality of capital is higher than inequality of labor income in all countries concerned. In addition, it should be stated that although capital inequality is higher than labor income in many countries, but the US is a polar case of these inequalities.

	Lower Level of Inequality (Scandinavian Countries 1970s and 1980s)	Moderate Level of Inequality (Europe 2010)	High Level Inequality (US 2010)
The Top 10%	50	60	70
The Top 1%	20	25	35
The Next 9%	30	35	35
The Middle 40%	40	35	25
The Bottom 50%	10	5	5
Gini index	0,58	0,67	0,73

Table 2. Inequality from Capital Ownership

Source: Piketty, Thomas, Capital in the Twenty-First Century, The Belknap Press of Harvard University Press, 2014, p. 177.

Labor income inequalities have always been more moderate than inequalities from capital. But it doesn't mean that they are moderate enough to ignore them. Between 1970 and 1980, in the more equitable Scandinavian countries in terms of inequality tendencies, the 10% segment with the highest wage gets 20% of the labor income and the 50% with the lowest wage gets 35%. In the European countries with moderate inequality tendencies, in 2010, the %10 segment with the highest wage earns 25% -30% of labor income and, the %50 segment with the lowest wage earns 30%. In the USA, which is one of the countries with extreme inequality levels, the %10 segment with the highest wage earns 35% of labor income and, the %50 segment with the lowest wage earns 25%, in 2010. In the inequality of wealth, in the most egalitarian countries, Scandinavian countries, the richest 10% segment alone has 50% of the national wealth between 1970 and 1980. In the European countries, for example, in France, Germany, England and Italy, 10% segment has 60% of national wealth. The most dramatic fact is that in all societies the poor half of the population has nothing. The poorest segment has 10% or even less than 5% of national wealth. For example, in France the richest 10% has 62% of the total wealth while the poorest 50% has 4% of the national wealth.

3. Inequality and Technical Change

The explanations for the increase in income inequality from labor are mostly centered on the wage polarizations in the new employment structure caused by technological change and education. With the widespread use of technology in the production of goods and services, divergence in terms of wages have increased between those who can keep up with technological change and other ordinary workers. At the present time, demand for low-skilled labor seems to have decreased associated with the technological change. Erik Brynjolfsson describes these times as (https://hbr.org/2015/06/the-great-decoupling);

"There's never been a better time to be a worker with special technological skills or education. Those people can create and capture value. However, it's not a great time to have only ordinary skills. Computers and robots are learning many basic skills at an extraordinary pace."
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By means of skill-based technological change, jobs previously performed by unskilled worker have shifted towards skilled worker, and this has increased the demand for skill. Technological change that favored skilled worker has led to an increase in the disparity in wages by keeping the more educated worker in the forefront and it has created the skill premium which causes wage inequality (Acemoğlu, 2002, pp. 7-10). Acemoğlu (2003) tried to explain the mechanism that creates wage inequality by addressing two types of workers, skilled and unskilled⁴. In his study, he considered the concept of wage premium as a measure of inequality and revealed the change in wage premium within the frame of supply and demand. The theoretical framework of the analysis showed that unskilled worker wage would increase with the increase of skilled labor force in the labor market, and unskilled worker wage would decrease with the decrease in skilled labor ratio and so the skill premium, wage inequality, would increase⁵ (Acemoğlu, 2003, pp. 129-130).

Skill-based technological change has led to a relatively greater increase in demand for skill than supply, thereby it has created wage inequality. Inequality differences between countries are often explained by the arguments of supply and demand. For example, the fact that inequalities in Europe do not increase as fast as in the USA, is explained by the quicker increase of skill supply in Europe (Acemoglu, 2003, p. 121). At this point, equal opportunities become a current issue again. Using technology for business requires skill, effort and well education. For this reason, it is assumed that the education level of skilled worker is high and those who have better education use technology better. The wage of skilled workers increases with the rapid increase in demand for skill and if this leads to the gap between the two type of workers wage. Then we can state that, inequality will begin to decrease through making the education system flexible enough to provide the supply of skills. Therefore, by the availability of education more accessible to all, the supply of skills can be increased, and the share of wage inequality may become negligible if more people can contribute more. The aim is to create equal opportunities.

Much research on the cause of increased inequality has focused on an explanation for the increase in skill premium and in the college/high school education premium. But there are also alternative approaches to explain inequality. Alternative approaches argue that wage-setting institutions are considered to be effective at reducing wage inequality. In this view, decline in union power has led to increased wage inequality in many countries (Mosher, 2007, pp.225-227). Most widely accepted explanation for increased inequality is skill-biased technological change. But, Mosher (2007) suggests that the impact of skill-biased technological change was closer to constant in the second half of the twentieth century. So, there was an unexplained wage inequality change by technical change. Mosher (2007) presents an evidence that decline in union power provide a good explanation for an unexplained wage inequality change during this period. After all the weakening of labour market institutions is one other cause of income inequality. The "structural reform" has undermined the ability of labor market institutions to moderate market inequality since1980s. A recent work by the IMF confirms that the decline in unionization is strongly associated with the rise of top income shares and this explains about half of the 5 percentage point rise in the top 10 percent income share. Concordantly, about half of the increase in the Gini index is driven by de-unionization (TUAC, 2015, pp. 9-10; Jaumotte & Osorio, 2015, p. 30) Koeniger, Leonardi & Nunziata (2004), investigate the role of labor market institutions across countries. Their estimation results for 11 OECD countries imply that labor market institutions can account for a large part of the change of wage inequality across countries.

⁴ For more information, Acemoğlu, Daron, Cross-Country Inequality Trends, The Economic Journal, 113 (February), F121-F149.

⁵ The effect of skills on wage inequality fist studied by Jan Tinbergen (1975).

4. Inequality and Marginal Productivity Theory

In economics tradition, the 'marginal productivity theory', which states that everyone's share should be commensurate with its contribution, is dominant. According to this view, which emphasizes fairness, income equality is said to be unfair if wealth is redistributed from the rich to the poor (Deaton, 2013, p. 26). Thus, the door opens to inequality. If inequality only occurred due to differences in labor incomes, perhaps it would be pointless to worry about the distribution problem, but inequality from wealth i.e. capital makes the situation difficult to work out.

Stiglitz (2016), pointed out that with the transferring wealth to the next generation, the opportunities for all field of life can be shaped according to the interests of the rich, thus inequality of opportunity would arise. This shadows the notion that marginal productivity theory is fair. Because there would no equal opportunity to contribute more for all in a game managed by the rich. Does everyone have similar opportunities to have education from the best teachers in the most elite schools at every stage of the education system since childhood and therefore to have a better job? If not, can it be said that everyone has an equal opportunity to contribute more? Can "marginal productivity theory" provide justice in such an order? Or is the wealth and income of the richest segment, realized in accordance with their contributions? It is not easy to find satisfactory answers to these questions, but we cannot ignore the role of "wealth" here. This is not an objection to the fact that more contributors earn more, in a society where equality of opportunity can be achieved. In particular, it is to point out that the opportunity cards at the starting point of income inequality from wealth are distributed in favor of the owner and his generation. So, the implicit thesis is: "Income inequality from wealth turns into social inequality of our time". Because inequality, in particular from wealth, creates new social strata by stratifying existing social inequalities, moreover we have not emphasized inequality of income from labor yet.

An overview of the US economy will help us to have more information about it. In the United States, the young generation is less likely to earn more than their parents. A child born in 1940 had a 92% chance of winning more than his parents, but in 1980 it had fallen to 50%. The interesting fact is that since 1973 labor productivity has increased by 77%. Where the economic gains go is hidden in "intergenerational wealth". The effect of the parental income on the income of their children will attain in adulthood can measure with the correlation between the incomes of children and those of parents or grandparents. The non-taxation of the wealth obtained through inheritance in the USA, leads wealthy families to transfer their wealth between generations without contributing to society (Anzilotti, 2018; Chetty et al. 2016; Becker, 1993, pp. 209).

5. Conclusion

Wealth i.e. capital is usually distributed more unequally than income and very high incomes eventually turn into great wealth and this ultimately creates a hereditary rich class. Piketty describes this situation as "patrimonial capitalism⁶" (Deaton, 2014). Inequality of wealth reflects not only the difference between the gains of the current generation, but also those inherited from parents (Acemoğlu & Robinson, 2009, p. 678). Probably, determine not only the current opportunities but also the opportunities that the next generation might face. We can say that there is a possible interaction between wealth inequality and labor income inequality. Wealth inequality causes inequality of opportunity at the starting point and this points out the origin of the differences between labor incomes.

^{6 &}quot;capital" and "patrimonial" = wealth in Piketty's book, a new term coined by Piketty, the inheritance-based capitalism (Milanovic, 2014: 527)

Assuming that the difference between labor incomes is "skill-biased" and that skill is acquired by education based on family income, we reach the role of wealth inequality. In this context, it can be stated that "income inequality from wealth has turned into social inequality of our time". Because inequalities, in particular from wealth, create new social strata by stratifying existing social inequalities.

Thinking that inequalities can be eliminated entirely, both socially and economically, cannot go beyond optimism. The presence of more talented, entrepreneurial, or risk-taking, hard-working people in the society is inevitable, and the more effort they show may justify their ability to earn more than other individuals in the society. And in fact, preventing this may create injustice while eliminating the inequalities. But high levels of inequality are not only an obstacle to achieving individual welfare, but also a factor that, as Stiglitz (2016) states, can make the economy as a whole less effective and less productive.

The dominant doctrine of economics since Adam Smith speaks of the marvels of leaving markets in its own devices. But, if free markets had created prosperity -as promised- in its own devices, some sins would have ignored in order to raise living standards in favor of the majority. However, at this point, "unwanted side effects" related to the free markets have started to emerge. Environmental pollution, unemployment, inequality, weakened democracy, loss of confidence in justice and most important of all, moral degeneration where everything is all permissible and no one is held responsible are ordinary images of the free market economy of our time (Stiglitz, 2016, p. 32-34).

We do not seem to be able to entrust our prosperity to markets that operate on their own. It is necessary to rely on welfare state programs and to allow the correction of high levels of inequality with progressive taxes. Progressive taxes are an ideal solution to avoid an infinite spiral of inequality and to control the dynamics of accumulation (Piketty, 2014, p. 507). The improvements in the inequality of wealth by progressive taxes and especially through public welfare programs in education can open the door to equality of opportunity and this can alleviate the gap in labor income. That is to say, as Krugman (2009) states, "comforting the afflicted but somewhat afflict the comfortable", may reduce inequality.

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8 The universal basic income: an alternative to public social welfare expenditures

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1. Introduction

When the literature on Universal Basic Income (UBI) is examined, it is seen that the last 30 years have been emphasized and taken seriously. One of the first to propose UBI is Thomas More, the author of the famous work "Utopia". Referring to his work, this idea isn't utopia today. On the contrary, UBI can replace mixed and conditional public social welfare expenditures in almost every country.

Many public social assistance and services (public social welfare expenditures) such as child benefits, health and education expenditures, unemployment insurance, elderly and disability benefits are important in terms of combating poverty and equality. In addition, such expenditures of the public sector should be the responsibility of the social welfare states. A significant portion of these expenditures are financed from the budgets of local and central public institutions as well as various local or central foundations, charities and non-governmental organizations. These foundations and charities have resources such as donations. However, expenditures of local and central public institutions are financed by taxes of public budgets. UBI, which can replace all these expenditures, can eliminate the complexity of aid. However, it is possible for financing to be reflected in other segments of society as tax increases.

2. Social Welfare State From The Perspective of Public Finance

As long as life continues, our environment gets surrounded by many various social risks. Such social risks as disease, unemployment, motherhood and death play a role that both increases individuals' expenses and decreases their incomes. At our present day, the capitalist economic system includes various social welfare expenditures in order to decrease these social risks at a significant amount.

As well as a social welfare state meets all of the vital needs of individuals, it is responsible for providing the conditions of having various rights. The social welfare state should expand individuals' rights from political rights to economic and social ones.

The social welfare state has a wide task area. These areas are the services of social security, health, education, social welfare and redistribution of income. The regulation of economic activities for the purpose of providing welfare expenditures and the individuals' having the rights to have their fundamental needs met are the principles that the social welfare state should have. These principles also reveal the reasons for the public sector's social welfare expenditures.

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If we look at the reasons of the social welfare state from the perspective of public finance, we should take into consideration the conditions when the market economy does not provide justice in income distribution and effective resource allocation. These are such areas as externalities, incomplete competition, public goods, incomplete market and asymmetric information.

The services like social security, social assistance and services, education and health, which are pointed at social welfare, have important externalities. As benefiting from social welfare expenditures will allow individuals to get away from their concerns about the social risks that they can meet in the future and to be equipped with various advantages, productivity increases in the economy, and the positive externality occurs in this way. In addition, if this kind of services cannot be accessed, a social welfare increase cannot be achieved, and the negative externality occurs (Yılmaz, 2014: 9-10).

For this reason, the statement of "everyone who lacks enough resources has the right to social and health benefit" is given place in Article 13 of the European Social Charter. The social wealth expenditures have a very important role in the provision of income distribution and combating against poverty in society. It is because the income distribution which occurs as a result of the functioning of the market economy is the primary income distribution. Not having any production factor and the existence of various social risks cause inequality in the primary income distribution. Therefore, it is necessary for the social welfare state to intervene in the functioning of the market economy and correct the primary income distribution due to both social and ethical reasons. The state establishes the secondary income distribution by employing public expenditures and taxes as two efficient tools under its possession. The expenditures which the state makes in the field of social welfare or the share which it divides from its budget for these fields are an important indicator of a social welfare state.

3. Scope and Funding of Public Social Welfare Expenditures

Being among the social welfare expenditures, social assistances has the purpose of securing the lives of the individuals or social groups who are in poverty and facing the danger of being alienated from society. In order to be nefit from social assistances, the individuals must be in a dependent situation, and the amount and type of the provided assistances must also change according to the individuals' dependence situations. Social services like health and education which are provided with the assumption that individuals cannot meet some of their basic needs alone and will be subjected to social risk because of the services that the market economy provides based on the purchasing power (Arın, 2002: 72-73).

What is expected from the social welfare state is to make these social welfare expenditures and serve them to the good of the public in order to secure justice, combat with poverty and ensure the continuity of economic activities.

As social assistances are provided from the state budget and public funding, the monetary contribution of those concerned is not a matter. However, no matter how much it is known that the concerned individuals do not have any contribution, the contribution indirectly occurs through the taxes that these taxpayers pay. Social services are also provided from the state budget, and non-governmental organizations also participate in funding. In addition, the public is the most important service provider in the presentation of education and health services. However, the market economy cannot be prevented from participating in this field. For those who cannot benefit from such services as health and education, which have important positive externality, due to poverty to access these services, it makes subsidy payments to the companies which are included in the market economy.

The state has the opportunity to ensure the redistribution of income by the means of taxes, which are taken based on financial solvency, in order to struggle with poverty. In addition, as the result of expending the obtained tax incomes for the low-income group in accordance with the social policy objective, the purpose of redistribution is achieved by the means of public expenditure. Therefore, the states perform their functions through social welfare expenditures and taxes in the field of social welfare.

As it is seen, a social welfare state is responsible for providing an opportunity for job and working for everyone before everything and a minimum living standard for those who are incapable of working. This requires the use of the instruments of redistribution from high-income groups to low-income groups at a large extent. Income support programs are included among the fundamental political instruments to be used in this matter (Kargi & Özuğurlu, 2017: 319). It is already stated by an increasing number of people that Universal Basic Income (UBI), which is one of the income support programs, can function as an element of a new kind of wealth regime.

UBI is a concept which is evaluated within the frame of social assistances and combating against poverty which have become a major problem of the countries all around the world and firstly the developing countries (Kargı & Özuğurlu, 2017: 326).

4. From Public Social Welfare Expenditures to Universal Basi-tc Income

UBI is a political instrument which is to be used in the social welfare function of the state and is the guarantee given by the state that no one's wealth will drop under the level necessary for meeting the most fundamental needs due to any reason. Thanks to UBI, the purposes of a social welfare state are reinterpreted. Meanwhile, the necessary environment is provided to be able to maintain the market economy in a healthy manner.

According to the clearest definition of UBI, this income is a public transfer paid in cash and unconditionally. The reason why it is unconditional is that it is primarily based on the individual not the household or its individualism, in other words. UBI covers everyone independently from the income or the subjective situation of the family, in which the individual is included. Secondly, it is considered to be universal as it is not dependent on an income test which determines the actual need level. Finally, the final outlook of UBI's unconditionality is the independence of the individual's employment status (Van Parijs & Vanderborght, 2017: 8).

By some groups, what is meant by universality is the payment of UBI by the nation-state. The UBI experiments which have been made until today were made on the regional level as a part of a nation-state beyond being national (i.e. The USA's UBI experiment in the state of Alaska). However, as a result of globalization, digitalization and global trade network, the residents of the developing countries who lost their jobs and were deprived of sources will emerge as well as the residents of the countries which obtain an income, and it can be necessary to provide a support at a global level (Harari, 2018: 52). At this time, "universality" can be properly reached in case of carrying the aspect of funding from the national level to the global level.

4.1. Universal Basic Income: From Utopia to Future

Utopias primarily make a criticism of the current system, and they develop detailed suggestions of solution about the content of the alternative models and how they will be implemented at the following stages. The architect of

UBI's first prototype is Thomas More, the writer of "Utopia" (1516). In Utopia, the reasons of basic income are the necessity that the state should provide people's happiness.

Juan Luis Vives (1526) developed a comprehensive thought for the minimum wage for the first time in his work, titled "On Assistance to the Poor". In his work, Vives brought forward the guaranteed minimum wage. He discussed the necessity of the provision of everyone's basic living standards in a region. According to him, World is a common property of everyone as it was not created without being surrounded with customs or walls, and those who have private property should help those who are in need. Otherwise, private property will not have any difference from thievery.

Thomas Paine (1796) explains that those who use property must pay compensation to the public in his work, titled "Agrarian Justice". Besides, he advocates that these payments must be distributed equally with no regard to the difference between the rich and the poor. Since Thomas Paine developed the idea that this income must be an "unconditional payment" for everyone, not a donation, he is accepted to be the first advocate of UBI (Van Parijs & Vanderborght, 2017: 70-71).

Since the 19th century, UBI was formulated, tested and even implemented with such names as Minimum Wage, Negative Income Tax, Social Dividend or Conditional Social Rights. Charles Fourier, John Stuart Mill, Martin Luther King Jr., Bertrand Russell, Friedrich Hayek and Milton Friedman are also included among the advocates of UBI. However, the most detailed definition of the concept was given by Philippe Van Parijs (1997) in his work, titled "Real Freedom for All". Van Parijs advocates that UBI fits into the principles of social justice more than other justice models. Therefore, the regulation serves to the "real" freedom which supports individuals to shape their lives according to their own demands and skills (Pel & Backhaus, 2017: 4).

In 1962, Milton Friedman drew all attention on himself with the suggestion of the Negative Income Tax that he offered as an alternative to the Social Assistance Programs in his book, named "Capitalism and Freedom". If the society is determinant in terms of helping those with low-income through convenient means, the best way is to make a payment in addition to their incomes under the name of the negative tax (Friedman, 1962: 193). Friedman was of the opinion that the problem of poverty will disappear in case that the Negative Tax Income replaces the old-school social wealth programs; the management of the assistance programs will decrease to minimum costs; the negativities that the existing assistance programs create on individuals will be dispersed.

Nevertheless, the suggestions of the Negative Income Tax, taking the minimum wage under guarantee, must provide information about what the minimum wage might be. This subject also needs to draw the borders of poverty and regular life standards, naturally. For this reason, the existence of information about the poverty line and negative tax rate in the Negative Income Tax plans has importance in terms of bringing out its economic effects (Kargi & Özuğurlu, 2017: 321).

One of the most important steps taken toward the implementation of UBI was the foundation of "Basic Income European Network (BIEN)" in the year 1986 in Belgium by many academics and UBI activists. With the foundation of BIEN, having become a platform in order to exchange information about the subject of providing a basic income to individuals, all definition and thoughts which design providing a specific income to individuals were brought together under the name of "Basic Income" (Yapıcı & Karabulut, 2018: 355-356).

4.2. Universal Basic Income Experiments

UBI experiments were made at various regions of the world from the USA's Alaska state to Brazil, Iran and Namibia. The first experiment was commenced in the region of Manitoba of Canada in the 1970s. Therefore, UBI entered into social and economic life. From the beginning of the experiment until the end of 8-9 years, the life standard increased in the region, children's education terms extended, and above all, a decrease occurred in the number of working people.

Brazil is the first country which put basic income into its constitution in 2004. Accordingly, everyone was taken under the state guarantee to provide their basic needs like sheltering, food and health for five years independent from whether they are employed or have wealth. It was stated that this specific law covered everyone step by step. Until today, only "Bolsa Familia" (Family Grant), which covers only the poorest, could be implemented. Although the implementation of Bolsa Familia reached 25% of people, a large part of the poor is still in deprivation (Servantie, 2017: 9).

Since the year 1982, an experiment, likening to UBI, has continued under the name of "Permanent Fund" in the state of Alaska of the USA. Annually 2072 \$ is given to every adult person. In Alaska, the income of the owned natural resources (petrol income) is benefited from in the funding of the basic income (Davutoğlu, 2011: 213).

The UBI experiment in Finland was started by the local university and think tanks in December 2016 and concluded in December 2018. Monthly 560 Euros was paid to 2000 people, and nothing was paid to those in the control group. Even if the participants found a job, it was continued to the payment of UBI. What is intended with UBI is to provide an incentive to take employment under guarantee (KELA, 2018).

In the study, some differences occurred between the two groups. Those inside the control group took less social assistance and fewer sick leaves. Those who took UBI did not change their working hours, and a considerable decrease did not occur in unemployment, but they worked with less stress and anxiety.

In 2011, a program which guarantees 29% of per capita median income began to be implemented in response to the deductions in the petrol subsidies in Iran. According to the report released in 2017, evidence could not be found in respect that UBI causes working less. For example, it was determined in the service sector that people worked more, expanded their works or followed a more satisfactory strand of business. The researchers found that particularly the young people around their 20s worked less and probably registered to schools by dividing the money for their educations (Ihaza, 2017).

A comprehensive review was conducted to identify and synthesize evidence that could inform the planning phase of potential major income pilots in Scotland. The database was searched for articles written in English from April 2017 to November 2017. Randomized controlled trials were included after semi-experiments, qualitative studies, and controls prior to studies reporting results of unconditional payments for low-income people or the general population. Studies conducted in low-income countries were excluded. Initial searches indicated that there were important studies of other interventions, so relevant search terms were incorporated in further iterative searches. Results were screened by one reviewer and a second reviewer checked a 10% sample. From 1591 papers identified, included 28 studies of ten interventions implemented in a range of contexts that used various evaluation methods. Studies measured effects on employment, health, education, crime, and other social outcomes. Evidence on health impacts was mixed, with some studies finding strong positive impacts on outcomes such as

birthweight and mental health, whereas others reported no effect. There was some evidence that effects were stronger in more at-risk groups. Most studies reported little impact on labour market participation. Fears of a large decrease in labour market participation due to basic income seem to be unfounded, but inference was often hampered by small samples or multiple intervention arms (Gibson et all., 2018).

UBI was included in the party programs as one of the election promises in England and France. Additionally, there the countries which refused a UBI experiment. For instance, the demand for the monthly income of 2500 Swedish Frank was rejected as the result of the referendum held in 2016 with 67% rejection against 23% acceptance (BIEN, http://basicincome.org).

4.3. Reasons for Universal Basic Income

At first, humanist² ideas' development pioneered the occurrence of UBI, which is a part of the purpose of developing new economic and social models in order to deal with the technological and economic breakthroughs that the 21st century brought. The evaluation of the issue of meeting people's basic needs and income distribution only from the perspective of the economy and its rejection of humanism draw attention to the implementation of UBI. It is intended to disperse income inequality and decrease poverty with UBI. Within this frame, the number of people who need to work only to survive; they will be allowed to earn additional income; especially the income inequalities between women and men will be eliminated.

There are reasons from the perspective of business life that justify the existence of UBI. In case that human wealth and even survivability are based on employment in return of a wage, the necessity of being a part of the capitalist economic system becomes the only condition of existence (Arın, 1997). Today, capitalism prioritizes creating employment as a solution for social problems, mainly poverty, with the understanding of profit maximization regardless of anything.

However, it must be seen that what allows everyone to participate in the society, in which they live, with equal rights is the whole of civil, political and social rights beyond employment opportunities. One of the most important features of social rights taken under protection by the constitution according to the principle of the social welfare state is also the prevention of the commodification of labor entirely; and thus, the individual is taken under protection by being free from the market powers.

UBI is an important tool for reinforcing the individual's position in the labor market and reversing the commodification process of labor. UBI is a suggestion that can change the relationship of mutual dependence between work and income. In summary, UBI has the potential to transform the working society by providing the freedom of accepting or rejecting the work to the individual who will work.

Human is always an element of the capitalist economic order as a consumer. Human will always be needed in the capitalist system. However, after the development of technology and robotization, the need for human as a consumer decreases. Thus, an army of the unemployed can occur in front of the inevitability of technology and digitalization. With UBI, it is intended to prevent the army of the unemployed. If there is a possibility for the increase

² The real father of the idea of a guaranteed minimum wage was Spanish humanist philosopher Juan Luis Vives, who was a close friend of Thomas More and Erasmus. According to him, the entire responsibility of the poor belongs to the state, and every citizen must be provided with the unconditional minimum wage that they deserve for being a member of the society only.

of unemployed masses, UBI will decrease the danger of social explosion of the unemployed. Furthermore, it will create a demand effect on the economy.

At this point, as the result that there will be occupations which will disappear with the development of technology and robotization, UBI reminds that occupations are temporary. UBI will not protect the occupations but workers. It is because what is important is to protect people's basic needs and ensure that they pursue an honorable life. As it is in the Scandinavian countries, the state support and assistance must continue until finding a new job starting from the necessity that the unemployed, created due to the occupations disappearing with digitalization, must be protected (Harari, 2018: 50).

Thanks to UBI, the hegemony of employers will be broken, and employers' exploiting the existential concerns of workers will be prevented. Freer working life will be achieved. The freedom of choosing voluntary jobs will occur, and career breaks will be given a chance.

Workers will have a stronger bargaining power to refuse the works with unhealthy and unsafe working conditions because they will have a regular income to save them from poverty. Especially women can benefit from UBI. It is because it is possible for them to find health, education and job opportunities at better conditions at almost every field of daily life (IMF, 2017).

UBI has the potential to decrease people's life anxieties even if it is a little bit. The individuals who are not concerned about meeting their basic needs can obtain important externalities which will be more beneficial for themselves and the world.

As it is understood, UBI defines a freedom area for laborers. In other words, UBI has the potential of a tool that provides negative and positive freedoms together.

Negative freedom is the decrease of the superintendence and control level on individuals by the means of institutional and economic relations like capital, state, etc., and positive freedom means the individual's achieving his own self-control, determining the conditions of existence in a society (i.e. workplace, etc.), and it is a guarantee for the sense of autonomy (Standing, 2007: 19).

Guy Standing (2017) defined some of the freedoms that UBI will provide as follows: the freedom to refuse exhausting and underpaid works, the freedom of individuals' doing the work they love, the freedom to be an entrepreneur, the freedom to work at a volunteering job, the freedom to do creative works, the freedom to gain new skills or specialties, the freedom to cease the relations that continue due to financial insecurity, the freedom to escape from bureaucratic intervention, oppression and surveillance, the freedom to be lazy and the freedom to make children (Standing, 2017: 60-61).

However, according to the suggestion made by S. Bowles (1998), choices are the causes of certain behaviors which are learned under certain conditions. These causes can also be tastes and an ethic understanding. UBI will change individuals' initial equipment. As UBI will be universally distributed at equal amounts to everyone, it can be manipulated by individual behaviors. It may not be realistic to assume that UBI will change human behaviors and choices. For instance, working or leisure time tendencies can be affected by UBI (Bowles, 1998: 87-89).

There are reasons that will justify the existence of UBI from the administrative perspective. As social assistance and support programs will stop with UBI, institutionalization will get improved. It is aimed at moving onto a single item of income instead of the social welfare expenditures, every single one of which is different and conditional. Bureaucracy will decrease, and simplicity will be achieved from a financial perspective.

4.4. Universal Basic Income: Is It a Trap? Is It an Opportunity?

In the capitalist economic system, there is a very close relation between working and income. That UBI distributes equal income to everyone independent from the employment status is the sign of a search which will solve this mutual and dependent relationship.

In terms of these searches, the working paradigm of the 20th century places its place to the discussions about that working is not the only absolute truth and on "alternative" society models. One of these alternative models - in other words, utopias - is UBI.

One of the most criticized points of UBI is the potential traps from the point of those who receive the income. These traps are gathered at the point that those who receive UBI will stop working; they will expend UBI immediately and return their poor lives; the number of lazy, aimless and loosely-motivated people will increase in society (Widerquist et al., 2013: 80).

Even if the certain life conditions of the people improves thanks to UBI, it is possible that an increase occurs in inequality. It is because the gap between the group that has to maintain their lives with small support and the rich group who benefit from its all benefits can be widened.

There are also potential traps that can be potentially set by employers for the employees due to UBI. The employers' tendency to decrease wages can occur as the balances can change in wage negotiations (Clark et al., 1996: 402).

While the point that globalization has reached, digitalization and the developments in robotization cause some professions to disappear, they will cause to unemployed masses. UBI can be a payment, which the capitalist system eases its conscience with and which can be a sign of compassion for those who are left without any income. The implementation of Finland was suggested against the technological unemployment which occurred due to automation in the 1980s (Harari, 2018: 51-52).

By some groups, UBI is accepted as an element which will cause the state to withdraw from the fields that are intended for social welfare, mainly health and education. In the fields which the market occupied and which were rapidly commodified as the result of neoliberal policy's rapidly getting accepted after 1980, it will be possible for citizens to purchase all of their needs from the market economy with a basic income payment. As a result, the social welfare state will complete its transformation.

One of the most important opportunities of UBI is being able to provide a wider and larger security network for all citizens, to eliminate extreme poverty in a rapid and effective manner, and it is believed that it can improve the redistribution of income and decrease inequalities (MPFD, 2018: 1).

Claiming that UBI can be an opportunity, IMF (2017) stated that UBI can increase the Gini coefficient for five points on average in all countries before its funding. Furthermore, as the benefits will decrease when UBI is obtained, a potential poverty trap cannot be faced. For this reason, the individuals will still have an incentive to work for.

4.5. Funding for Universal Basic Income

How UBI will be financed is important. It is because UBI's funding management has a direct connection with the effects on economic activities and redistribution. Aiming at reestablishing justice in redistribution and achieve full employment, UBI's funding should not disturb redistribution.

After all, it should not be forgotten that UBI's sustainability is determined by the social norms that are applicable in society. Therefore, a sustainable UBI requires the social norms that provide an incentive for the behaviors which are necessary for funding such a comprehensive welfare measurement (Van Parijs, 1995: 38).

While UBI is considered for meeting the basic needs of individuals, the amount of fund which will be used in the satisfaction of the needs is strictly dependent on the features of the accepted social welfare function from one country to another.

Depending on the level where the income is adjusted, UBI includes considerable costs. In a country, in case that UBI is adjusted to 25% of the per capita median income, it is estimated that the cost will be 6-7% of the GDP in developed economies and 3-4% of the developing markets and countries (IMF, 2017).

If UBI will constitute an alternative in the public social welfare expenditures, it is important to know the amount that the developed or developing countries will divide from their national incomes. According to 2018 data of OECD's Social Expenditure Database (SOCX), the OECD average of the rate of social expenditures in national incomes is 20.1% in the year 2018. In Canada, the rate of social expenditures in national incomes is 17%. While it is 28.7% in Finland, it has reached 31.2% in France. It was realized as 18.7% in the US, 11% in Korea, 9% in Belgium, 16% in Sweden in the year 2018 (OECD-SOCX: 2018). In most countries where the expenditures for social welfare have a small share in national incomes, it is very likely that important infrastructure expenditures or debt interest expenditures are high. In these countries, while the current public expenditures for social welfare expenditures are high. In these quivalent in the place of the budget's social welfare expenditures.

For the funding instruments of UBI, Huft (2015) said the following:

- Expenditures which are made by the current social welfare programs,
- Consumption taxes,
- Taxes taken over financial transactions,
- Carbon taxes,
- Royalty payments,
- Taxes taken over income and capital,
- Budget surplus which occurs by state's reducing public expenditures.

If UBI is funded with a general tax income, it should be enough to fund the redistribution of basic income, which has a universal characteristic, to everyone. The biggest difficulty about UBI's sustainability is that the openly taxable economic activities are at a level that can really fund such a program.

As Van Parijs (1995) stated, the sustainability of UBI assistance on the existence of sufficiently taxable economic activities (Van Parijs, 1995: 38). In the funding of UBI, it is important whether the economy creates enough taxable economic output. Although the transfer is unconditional by the means of UBI, its funding depends on the tax income at a sufficient level. If Van Parijs' suggestion of "Real Freedom for All" brings a production decrease and shrinking in tax basis, a funding problem of the system occurs. When those who receive UBI prefer free time instead of the labor force, the tax incomes can drop below the amount necessary to fund UBI.

The studies in the OECD countries show that an impartial UBI in the aspect of the budget will be below an individual's poverty line without additional taxes, so it is not enough to eliminate poverty.

Given limited fiscal resources, many countries may choose a budget-neutral way, i.e. allocate the current spending on social protection to finance UBI. In this case, the distributive effect will depend on the coverage and progressivity of the existing transfer system. Since the existing expenditure on social protection is not financially sufficient to cover UBI, to spread the expenditure out equally may not be distributionally neutral. Lower-income households could be worse off if they are receiving transfers under the current system (MPFD, 2018: 2).

There are also studies which claim that UBI will be decently paid by a supranational political unit (Genet & Van Parijs, 1992).

By collecting the taxes that are gathered from all countries into a pool, all public expenditures are distributed. As UBI can be funded from one income pool, gathered from various sources, as well as all of the other public expenditures, there are also those who claim that it is impossible to be funded with a specific single tax income.

Those who predict a land tax or a tax payment over natural resources are Paine (1796), Crotty (1987), Davidson (1995) and Robertson (1999) (Van Parijs, 2000: 4).

An income tax, in which the elements of incomes in the funding of UBI were planned very widely, was suggested by Pelzer (1998, 1999). The value-added tax, whose scope was kept very wide, is preferred by Duchatelet (1992, 1998). Bresson (1999) finds "Tobin Taxes" on the speculative income activities convenient for the funding of UBI. On the other hand, Soete & Kamp (1996) emphasized the potential of new taxation instruments like "Bitcoin Taxes" on information transformation (Van Parijs, 2000: 4).

5. Conclusion

It is the necessity of the social welfare state that the state directly intervenes in the income distribution in the market by reaching those who do not have enough income before social risks. By directly intervening in an income distribution which occurs in the market in this way, the state reinforces the quality of the social welfare state with the services which it provides form those who do not have enough income to sustain their lives due to the reasons like unemployment, senility, disability and disease.

The social assistance, education and health expenditures of the social welfare state of our present-day leaves its place to UBI with the impact of globalization, digitalization and economic developments. Thanks to UBI, the

purposes of a social welfare state are reinterpreted. UBI becomes on the agenda again within the frame of employment, unemployment and social rights-justice discussions. Meanwhile, the necessary environment is provided to be able to maintain the market economy in a healthy manner.

UBI predicts the provision of a regular income to all citizens or residents in a country, unconditionally. Even though UBI refers to a type of social security payment, it has its own differences from public social welfare expenditures. The first difference originates from the existence of the guarantee, which is not found in the social assistance implementations, in UBI. While it is not certain whether support will be received in the current social assistance implementations, this guarantee is provided for individuals in UBI. Another difference originates from the existence of comprehensiveness, which is not found in the implementations of social assistance, in UBI. When it is understood that those who benefit from the social assistance expenditures are the individuals who are in need in society, stigmatization can occur. However, UBI does not impose social stigmatization on anyone.

Another significant difference between UBI and public social welfare expenditures meets us in the aspect of funding. As it assumes the function of being an alternative to public social welfare expenditures, UBI needs a stable funding plan. Variability of UBI depends on its most important prerequisite, namely sustainability. To become a real political option, UBI needs to fund itself in the long term. If UBI is funded with a general tax income, it should be enough to fund the redistribution of basic income, which has a universal characteristic, to everyone.

When the UBI model is examined in details, it is understood that it is not a net expenditure for states. This means that the solvency which is gained with UBI returns to the state by the means of taxes. In fact, states create people who spend more and pays more taxes, thanks to UBI. As UBI will already return to the market economy in the creation of a source of demand, there will not be any need for a fundamental concern about its funding.

However, the sustainability of UBI depends on the number of completed works, despite the unconditionality of the transfer. Meanwhile, since the reason of "freedom for everyone" which Van Parijs put forth did not bring about any obligation of a productive behavior economically, difficulties can be faced in the real implementation of the normative reasoning made by Van Parijs (1995).

UBI's funding will also be affected by the developments in the country's economy and decisions taken in the economic policies. The states focus on the realization of economic stability, economic development and the provision of justice in income distribution, which are the highest objectives of economic policy, by utilizing public expenditures and taxes. However, it is difficult to provide both economic stability and justice in income distribution together. When a global crisis or a decrease in the profit tendency of the capital is experienced, difficulties will be had in the funding of public social welfare expenditure, while the infrastructure expenditures and tax concessions, which will grant an acceleration to the economy again, are prioritized.

On the other hand, among the public expenditure which focuses on the goal of economic development, the expenses which will provide a resource for the private sector will increase, whereas the share divided for the public social welfare expenditure. In the existence of instability and crises, the issue of the income distribution will be left in the background. Due to the potential effects that the economic balance will be disturbed due to the increase of public expenditures in the times of crises and the taxes will also increase for the funding of public expenditures, the discussion about UBI still continues.

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9 The social consequences of Australia's market economy

Peter Willans¹

Abstract

Australia has one of the largest and most effective market economies in the world with a Gross Domestic Product of AUD\$1.69 trillion. In terms of global wealth and society, Australia is ranked second, after Switzerland. Australia had a total wealth value of AUD\$8.9t., mid-2018, and maintains continuing strong growth within the fortune and favour of challenging world markets. Australia has the distinction of having the longest consecutive Gross Domestic Product growth of any country in the developed world, recording 110 quarters of economic growth multipliers over 27 years. Despite the encouraging growth overview, many issues have surfaced which detract, in social and economic terms, from the contemporary state of the nation. Foremost, inequality is becoming a challenging national issue. This paper contends that financialisaton and speculative financial markets have a growing detrimental effect on the Australian economy. Concentrated wealth is resulting in rising levels of inequality. Restoration of the notion of fairness, egalitarianism and inclusion are both government and societal approaches that are achievable, despite growing socio-economic pressures.

Key Words: Market Economies, Financialisaton, Global and Australian Economies, Contemporary Financial Markets, Recession, International Financial Architecture.

1. Introduction

This paper attempts to describe the influence of financialisaton on the contemporary Australian economy. Australia has been favoured by its position as a prosperous exporter of minerals and materials, favoured in its proximity to rapidly developing economies in South East Asia. Australia has a concentrated economy that is both assisted and challenged by the global regime of financialisaton. Outcomes are less certain as Australia's market economy is changed by high levels of consumer debt and rising socio-economic constraints against the concentration of personal and corporate wealth. The thesis developed in this paper emphasises Australian societal and community challenges within a current low-growth, low-interest rate global economy that has lost economic traction. This paper outlines an Australian economy that faces serious consequences when interest rates rise from the current historic lower bound.

2. Financial and Trade Theories

Financialisation has enabled and accompanied economic growth in democracies that have grown prosperous through war, peace and financial expansion. In the past four decades, economies have expanded, giving rise to a new era of market liberalisation. Regimes based on neoliberalism have been both strengthened and, concomitantly,

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made more vulnerable by the international nature of borderless finance, encompassing the regime of financialisaton. There are growing indications that finance is becoming fragile. Nation states are vulnerable, and economies are in transition.

Robert J. Gordon suggests in his 2016 book titled *The Rise and Fall of American Growth* that "The economic revolution of 1870 to 1970 was unique in human history, unrepeatable because so much of its achievements could only happen once" (Gordon 2016).

Further, Gordon claims: "Electricity, motor vehicles, public transit, and public sanitation infrastructure changed American life, particularly in the cities, virtually overnight between 1890 and 1929. The telephone and the phonograph were part of this epochal set of changes. Telephone lines linked at least half of total households and most of those in urban areas, adding further connections to the "networked" house already hooked up to the outside world with electric, gas, water and sewer lines." The last 150 years have seen a cavalcade of progress unlike any in human history, but most of the big gains in living standards have already happened.

Against the enormous scientific advances in the period 1870 to 1970, the growth rate of the present (nearly) fifty years, 1970 to 2018, has been less than half of that enjoyed between 1920 and 1970. Gordon argues that: "some inventions are more important than others, and that the fast growth century after the American Civil War was made possible by a unique clustering of these 'Great Innovations', most of them having a strong effect after 1920".

The immediately passed era (1970 to 2018) has become the most unstable – economically, politically and socially – of any previous era. Following tangible growth, demonstrated in Gordons' thesis, in trade and development, opportunities in global society and enhancement in education, a new deepening challenge has emerged through the agency of unfettered growth as financial markets have interacted with the real economies of nation states, including Australia.

Global financial markets, so prominent in the lead up to the Global Financial Crisis, continue to build risk, and the capacity to destabilise nation-states and systemic markets, inter-related to real economies. In the United States, between 1975 and 2017 real US GDP (the size of the economy adjusted for inflation) almost tripled from US\$5.49 trillion to US\$17.29 trillion whilst productivity grew by 60 per cent, demonstrating a grossly disproportionate quantum rise in speculative financial markets (Mazzucato 2018).

In contrast, from 1979 onwards, wages across most Western economies, including Australia, have stagnated or fallen. Concomitantly, inequalities have risen. In the 2018 Poverty in Australia report, 3.05 million people in Australia (13.2% of the population) were living below the poverty level, after taking account of their housing costs (Australian Council of Social Services / University of New South Wales, 2018).

3. A Political System misjudging its electorate.

In Australia, trust in the Australian Parliament and Federal and State political systems has fallen dramatically in recent times. Ten years after the Great Recession, Australia has maintained overall growth but faces continual social and economic challenges in a rapidly changing political and economic environment. Business investment and productivity are trending downwards. An Australian national public access poll suggested that following a series of publicly unpalatable political events, 75% of the population has lost faith in political systems and government processes. This degree of public dissatisfaction is amongst the largest decline of support in the modern world and is indicative of the global political deconsolidation of democratic systems worldwide.

Friedrich Nietzsche once spoke of a political system representing that which we have inherited today. Nietzsche foresaw "the privatisation of the state, where private companies would assume the business of the state including the activities that are the most resistant reminders of what was formerly the work of government. How democracies gave birth to aristocracies and could become hostages to herd morality" (Nietzsche, 2016).

On a global basis, fluctuations in the democratic processes have been wide-spread as citizens demonstrate their dis-ease toward political processes, cronyism, elitist posturing and a scourge of political blundering. Consolidated by ineptness amongst the political classes, populism is rising. Global pressures reflect immediately on the Australian economy through exports and productivity.

Global economies have been at the middle of a highly visible financial market credit contagion and consequential indebtedness of nation states. Quantitative Easing has been a double-edged sword, of unprecedented long-flow low-bound global interest rates, concomitantly stimulating debt-fuelled economies. Political leaders have been loath to rescind the debt-driven consumer and business demand that artificially stimulates growth. Quantitative Easing of recent times has, as one, rescued economies, and locked those economies into constricting global debt conditions. Quantitative Easing appropriations are directly responsible for the considerable wealth accumulation that has occurred in the top end of global financial markets and the high-level debt left for the rest of the world.

The global economy is more deeply indebted than before the Global Financial Crisis. Indebted nation states must take immediate action to improve their finances before the next downturn, the International Monetary Fund (IMF) has warned. The IMF has suggested a prolonged period of low interest rates had stimulated a build-up of debt amounting to 225% of Global GDP, in 2018, fully 12 points above the previous (record) level reached in 2009. The IMF suggested China was responsible for much of the increase but noted that developed, emerging markets and low-income countries all look vulnerable, to financial shocks. Given the inter-related nature of markets, nation state shocks can only be forestalled by artificial lowering of interest rates. (IMF Global Financial Stability Report, 2019).

The IMF used its half-yearly fiscal monitor to single out the United States for criticism, saying that Donald Trump's fiscal stimulus – a package of tax cuts and spending increases – was leading to a bigger budget deficit at a time when it should be on the way down. All indicators lead to another financial crisis and Australia's ability to "ride this one out" is questionable. Swift and effective economic stimulus programs at the start of the Global Financial Crisis saved Australia from the downturns that were suffered in other nation states. Australia may not be so fortunate this time.

4. Australia's Market Economy currently stimulated by debt

Australian households have the rare distinction of having amongst the highest levels of personal indebtedness of any developed country. Australians rank fourth highest in the world next to Denmark, the Netherlands and Norway. In 2018, Australia's combined personal debt levels grossed at approximately AU\$2 trillion and the average

Australian household owes AU\$250,000. The Australian Bureau of Statistics (ABS) data, analysed in a recent report, showed that mortgages for owner-occupier housing makes up 56.3% of all personal debt in Australia. Debt associated with investments including investment in home ownership and rental properties, or shares, makes up 36.5% of its household debt. (Australian Bureau of Statistics, 2018).





After a decade of increasingly high debt accumulation during the post Global Financial Crisis period, these debt levels have followed aggressive home loan marketing programs of the mainstream Australian banks. Housing markets have responded with sales and prices reaching record levels. Australian homeowners have been sold home purchase contracts that represent these high housing prices. Over three hundred thousand Australians now find they are unable to clear, or honour, their debts.

Australian banks have engaged in this bonanza of debt, whilst thousands of Australian families are caught in an unprecedented debt cycle which will have devastating consequences when interest rates rise from current unprecedented lows. The Bank for International Settlements provides evidence of the comparisons with consumer debt levels in Australia, against other nation states.



Figure 2. Australian Household Debt Service Comparison to Canada, Ireland, New Zealand, United Kingdom and United States.

In tandem with loose debt allocation across the wider community, there have been wholesale changes in industrial relations and workplace arrangements. Workplace arrangements that were once the bedrock for an industrial relations system for working Australians significantly weakened, were reduced or abolished. These are the shift loadings, holiday entitlements, sick leave, carers leave arrangements, and, in a broader sense, the workplace guarantees that fostered security amongst workers and families in Australia.

New models, now retrospectively placed in the industrial workplace, release employers from previous industrial relations agreements, and commitment to fairness and equality in labour arrangements. Industrial relations reforms have recently changed from one of the most admired and hard-fought workplace traditions to one of the most precarious. It is estimated that half of the Australian workforce are affected by recent changes. These developments are present in Political Economy terms, at a period in Australia's history where Government and personal debt and social service issues are at crisis point.

5. Once: A "Lucky Country". The New Reality.

The new Australian socio-economic reality is housing and social systems that are unable to cope with the numbers of Australian citizens who no longer live in affordable accommodation, and who are squeezed out to rental properties in outlying suburbs and away from schools. On any given night in Australia 300,000 people are sleeping rough and/or homeless. One hundred thousand are women, and women with children. The Guardian Australia estimates that there are currently three million Australians with debt and poverty overlaying their daily lives, in this once affluent and inclusive community. In a little over a decade from the Global Financial Crisis Australia has a new crisis of debt and sustainability amongst a rapidly growing social underclass. Australia in a time of global financialisaton is facing a crisis of confidence (The Guardian Australia, 2018).

Once described as the "Lucky Country", Australia faces a challenging period in its social history. Until recently there was optimism that Australia would continue growth and prosperity but the financial effects of complacency and mistrust in our political and economic systems have been real and problematic. A national drought has ravaged a once prosperous agricultural sector. The lucky country's real life and real economy has been manipulated and mismanaged by the political class, where government responsibilities have been privatised and where corporate share buybacks seem more important than the health of communities.

Australia's broad, and hard fought for, democratic systems have become highly influenced by corporate elites, business interests and a monied class that, increasingly, has an entrenched influence on political outcomes. Australia is becoming decoupled from its image of social and economic fairness. Australia has rising levels of inequality and a rising distrust in political systems at both Federal and State levels.

Political parodies, ineffectual parliamentary agendas and a recent series of elected members engaged in soap-opera style real life dramas have shaken an electorate and disenfranchised the Australian voting public from the machinations of effective government, right across the country. A Royal Commission into the Australian Banking Industry has demonstrated the utter contempt that elected political representatives have shown during their responsibilities in Parliamentary office. Outcomes from the Banking Royal Commission demonstrated the contempt that many corporates have for working Australians and families.

Against the will of the political and corporate classes, the Commission unearthed hidden blatant misdeeds at high levels. The Australian Parliament, State and local governments appear to be disconnecting, en-masse, from an electorate that is increasingly frustrated. Within the broader scope of Australia's political economy, a study by Professor Ian McAllister of the Australian National University reported record low levels of satisfaction with democracy and trust in government. Professor McAllister described the findings as "a wake-up call to Australia's political leadership" (McAllister, 2017).

There remains an increasing perception within the Australian *real politic*, that "the system is broken". A poll conducted by the *newDemocracy Foundation* found that 54% of Australians agreed with the contemporary assertion of rising political, democratic and economic malaise, whilst 39% opined that the current system was the "best there is" (newDemocracy Foundation, 2018).

A further indication that the Australian political system was failing the electorate surfaced when a public poll¹ on the least trusted professions in the country attracted 69% of respondents to nominate politicians, well ahead of 36% for journalists and 34% and 32% respectively for lawyers and bankers. A strong testament to the disdain felt for the political and capital classes, after a decade of democratic decline (Australian Council of Superannuation Investors, 2018).

The Australian Parliament, State Governments and local governments appear to be disconnecting from an electorate that is increasingly frustrated by the real or perceived incompetence by elected members. These disconnects are given impetus arising from issues falling out of the Banking Royal Commission – revelations of customer exploitation and lack of trust, a corporate structure removed from core banking client trust, and overarching issues related more to corporate greed than patterns of client satisfaction. Australians feel unanchored by the apparent lack of decency, honesty and dignity of its elected officials. Further testament to the democratic disenchantment is deduced from citizens who believe the system does not provide the leverage, personal and agency, required to recalibrate their confidence levels.

An international survey conducted by Ipsos International demonstrated that "the nation needs strong leadership to take the country back from the rich and powerful", a position supported by 70% of respondents, 68% of whom stated their belief that the economy was rigged to benefit the rich and powerful, and 61% believed that politicians "*don't care about people like me*". Middle Australians believe that they have been overlooked by major Australian political parties (Ipsos International, 2017).

This degenerative effect on citizens in Australia has its modern nemesis in a political class that is decoupled from its electorate. Past politicians who have been ineffectual or caught out in scandals of all types have been stood down, only to be given high-level, high-paying positions in foreign countries. It comes off monumental scandals in the finance and banking system, political discord and a population that is intimately connected to news feeds and relentless, immediate, social commentary cycles.

Australia has, over its short white settlement history, welcomed immigrants and refugees, displaced from all over the globe, and immigrants from war-torn European countries. Until new immigration laws were enacted in a move intended to stop refugees in New Guinea entering the country, these new anti-immigration laws have been highly political and contentious. A report by the United Nations Law Centre challenges the Australian Government's stand as "draconian". A recent report questioned the Government's "democratic slide", reporting that recent actions had been raised at the highest levels of the UN Human Rights Council.

In the report (Statistics — Asylum Insight, 2018) the UN Special Rapporteur to the Human Rights Council concluded:

- He (the Special Rapporteur) is astonished to observe "mounting evidence of regressive measures" being pursued by the Australian Government,
- He was astounded to observe frequent public vilification by "senior public officials" of charities, community groups, and democratic institutions who hold the Government to account "in what appears to be an attempt to discredit, intimidate, and discourage them from their legitimate work", and
- That there is increasing discrepancy and incoherence between the Australian Government's statements on the wold stage and its actions at home.

These issues are raised regularly in Federal Parliament as refugees appear to be selected on a discriminatory nature which discredits those in Nauru and Manus Island detention centres. There are now heavy constraints on genuine refugees who seek to come to Australia. The cost of containment of these refugees has amounted to AU\$1.1 billion in 2014-15 and AU\$1.2 billion in 2013- 14. These actions have been described as "base politics". They are widely challenged. An overwhelming majority of Australians see through the scare campaign by conservative Australian Government Ministers.

There is evidence of polarisation of Australian communities and political aspirations. Once a multi-layered and inclusive society, Australia is at once more diverse, more tolerant, more harmonious. But at the other end of the

scale, more individually fragmented and discriminatory. This is at a time of endless channels of information technology of all kinds. And deliberate high-tension messages to the Australian population on border security.

The Australian market economy is producing reduced working conditions, overseas ownership of corporations, and an ever-strengthening speculative corporative finance system and a concentration of profits and wealth. Neoliberalism has transferred government agency to the private sector with key services privatised to advantage corporate players, most of whom are foreign based and ever ready to expatriate profits. Business executives have a large controlling interest in property markets in most Australian capital cities and as such, their dominant financial interests in property force prices up generally.

6. A Land of Social and Hierarchical Contrast

Once a broad society with a confidence suggesting that "everyone could get a hand up", has become class-centric and mean-spirited under the neoliberalist regime. The concept of a "Fair Society" is splintered. The economy is increasingly class structured. As with other comparative economies the era of neoliberalism has had a dramatic and continuing affect in terms of inequality and class struggle. In the final years of this decade (2010 to 2020) the words from an Oxfam Report on inequality provide context to broadening inequality issues. The report stated "The richest 85 people on the globe – who between them could squeeze onto a single double-decker bus – control as much wealth as the poorest half of the global population (3.5 billion people) put together (World Economic Forum, Oxfam Report).

As previously mentioned, nearly three million Australians are living below the poverty line, including 1.1 million children - a two per cent increase in the past decade. Such staggering statistics reported in a new Australian Council of Social Service (ACOSS) report come at a time when welfare payments are again under the political spotlight as the Morrison Federal Government sets out on an "investment approach" for social services (Australian Council of Social Services Poverty Report, 2018).

Centrelink, Australia's designated social services department, has recently been discredited for its uncompromising attitudes, and lack of balance, toward the great number of unemployed and underemployed Australians who genuinely struggle for existence in the present environment of privatisation and corporate dominance. The restructuring of part-time and casual work programs alone make work more precarious and, concomitantly, the rewards are considerably reduced. Agencies like Centrelink have been under pressure in this secular environment to provide a balanced approach to those who cannot compete for jobs in an ultra-competitive environment.

Australian Council of Social Services (ACOSS) CEO Dr Cassandra Goldie has been vocal in her levels of frustration at the alarming increase in child poverty, revealed by a recent report. Goldie is seeking an urgent appeal to Australian Senators to reject further cuts to family payments, currently under scrutiny (SBS Your Language Report 2018). Dr Goldie suggested, "We frame it as if it's the fault of the individual, you're either lazy, not working hard enough, not retraining hard enough, but the basic numbers are there, one job available for every five people, conservatively, is the estimate looking for paid work, but over the last 10 years we've seen no change in the level of poverty among the Australian population. Children are really at risk".

Dr Goldie said the overall picture from the last decade was one of persistent and entrenched poverty across the community, culminating in an increase in child poverty which she described as a national shame. Those most

at-risk are children in lone-parent families who are three times more likely to be living in poverty than those from "couple families". Australians doing it toughest were overwhelmingly people living on the \$38 a day Newstart payment, 55% of whom live in poverty. This is an indictment on any civil society.

Professor Uval Harare has suggested that "If you make inequality normal it will come back to haunt the next generation, and that the profit motif over-rides the common good aspect of democracies". Harare warns that democratic processes are hampered by politicians who over-commit to change during campaigns and then "under-deliver in office and promote funding terms that are tied to election cycles, whilst the precariat that is struggling to negotiate a life path that has a middle, and an end" (Harare, 2002).

7. Inequality levels of Australia's Real Economy.

Indicative of the ACOSS findings is a recent report that the top one per cent of income earners (AU\$11,282 per week) in Australia receive as much in one week's employment as the lowest 5 per cent of income earners (\$436 per week) receive in a year. Australia is now amongst the most unequal "wealthy" nations in the world along with two other neoliberalist-based economies, the United States and the United Kingdom. An interesting indictment of the financialisation processes and outcomes. These issues of inequality challenge Australia's long held belief that the country was amongst the foremost egalitarian countries in the world. The Australian experience in recent decades shows that inequality has increased strongly in economic boom times and flattened with a slower economy and slow wage growth across the board.

Variations in Australian socio-economic outcomes are highly visible when comparisons are made against the wealth of the finance sector in Australia's political economy. Inquiries into the banking and finance sectors confirmed the level of corporate sector distrust, as details of commercial malpractice and customer disdain dominated proceedings at recent Royal Commission levels. Deliberate corporate malpractice goes to issues of criminal activity at the corporate level.

Whilst the economies of country and smaller towns and cities across Australia tell of challenging times of drought and structural employment change, there is a business community, mainly based in Sydney and Melbourne, which hosts a plethora of investment wealth and production on a global scale. The recent boom in the real estate sector has added great wealth within these cities, adding to imbalances across the economy and to the rising levels of inequality.

Amongst these imbalances is evidence of abnormal growth in the domestic and speculative finance sectors. Australia has a longstanding offshore finance sector, it is placed fifth globally in speculative finance activities and, concomitantly, with investment interests in domestic banking and mining. Australia's strong capital markets have been credited with the listings of CEOs' substantial windfalls, at a time when public trust in business is at a record low ebb and wages growth in the broader economy is described as anaemic. The *Australian Council of Superannuation Investors Report* describes how a "broadly static" corporate remuneration climate has, after ten years, shown recent significant increases "not seen since the lead up to the Global Financial crisis" (The Australian Council of Superannuation Investors Report, 2018).

The Report suggested "Against this (increases in bonuses), background decisions to significantly increase bonuses appear not only *tone-deaf* but also make me wonder whether Boards have lost sight of the link between communities and investor expectations, and a company's social license to operate". The ASX100 Chief Executive Remuneration stated that the average CEO renumeration rose 12.4 percent to AU\$4.36 million in 2017-18, and the average CEO renumeration for ASX200 rose 22.1 percent to AU\$1.76 million (ACSI CEO Pay Survey, 2018).

Another major benefit to this exclusive Australian business cohort is the additional increase in bonus payments. Both the average and median total bonuses to ASX 100 CEOs were the "highest recorded since the ACSI began collecting data in 2011". Additionally, the ACSI Survey suggested "the bonuses paid continue to be near the top end of their maximum potential". CEO Davidson further suggested "that CEO's are more likely to lose their job than their bonus".

In summary, a greater number of Australians are succumbing to the effects of a rapidly transitioning economy where 28% of the population trust the elected governments to "do the right thing by them, either most of the time or almost always, compared to 48 percent in 2009. Just one decade ago. Over a third of participants in a Monash University Survey stated that Australia's current political system needs either a major revamp of replacing altogether" (Scanlon Foundation Social Cohesion Program Report, 2018).

8. Conclusion

The Australian market economy has a history of solid inclusiveness in so far as business and society have created an egalitarian community and an economy that until recently could be described as fair. Evidence of egalitarianism appears to have been weakened by several social and economic factors. Under strengthening systems within the paradigm of financialisation there has occurred a weakening of the social and economic circumstances across middle and lower socio-economic sections of the population. Finance and business have separated from the historic nature of the democratic process that had given Australia its unique character through war and peace. The intensifying regimes of financialisaton have claimed major social consequences on the contemporary landscape (Willans, 2014). The Australian economy works for a lesser number of participants in the population. It has lost its inclusive community fairness to the forces of capital.

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10 The socio-economic analysis of using historical water mills for electricity production: zonguldak case

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Abstract

Hydropower structures have been the key to economic and social development since the early days of civilization. Today, it creates opportunities for improving the quality of life in rural areas in less developed countries. Hydroelectric systems are one of the indispensable components of energy generation with quick responsive characteristic to demand fluctuation and relatively lesser amount of adverse environmental effects. On the other hand, the impact of micro hydroelectric facilities on environment is minimal when it compared with the large hydropower plants. Besides they are more effective when they serve for local production and consumption. Thanks to the rising environmental awareness in recent years, the harmful effects of electricity production facilities on the local climate conditions and vegetation cover are more clearly revealed. In recent years, micro-hydroelectric power facilities have been preferred as clean and cheaper alternative electricity generation systems in scarcely populated areas and the places that are far away from city centers especially in Asia. The electricity generation of such kind is not only cheap and green in micro scale but also a socially and economically development triggering issue that could be utilized for improving the lives of local people in the region in the mezzo and macro scales. Many water mills were built to grind grains during the Ottoman period and in the early years of the Republic of Turkey in Zonguldak Region. These mills have become unusable with the proliferation of large flour factories and the widespread use of packaged flours. In this study we focus on the historical water mills with a conversion opportunity to a micro hydropower plant as a green, sustainable and economic alternative of electricity production. The energy availability and security question is another important issue within the electricity production and these mills could be an answer for such issues as for the region. Within the scope of this study, 10 historic water mills which have an advantage of closeness to continuous and regular water flow were selected. In the selection of the water mills the power structures condition is considered for decreasing the conversion cost. The economic analyzes are made by calculating the electricity production income to demonstrate the usability and efficiency of such micro power generator systems. With a view to having them to take more parts in the sustainable development architecture of Turkish economy, it is also expected that reissuing the historical mills in the new green energy development plans will increase both the income and the environmental awareness of the people in the region. As micro hydro systems, converted historical water mills will also boost the local economies and empower the locals as owners, managers and consumers of their own energy systems.

Keywords: Sustainable Development, Renewable Energy, Watermills, Micro Hydroelectric Power Plant, Energy Availability and Security, Economic Analysis, Environmental Awareness.

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1. Introduction

Human societies nowadays have very comfortable and quite longer lives, which depend mainly on energy production and in particular on electric power. Capacity development and the investment processes are the two faces of energy production, and especially for infrastructure designs with regard to electricity production. Energy transmission and distribution line network is a must for accessing the electricity from any conventional power plant. Easy and equal access to electricity is also conditioned by the distribution of electricity to consumption area that might be quite problematic. In addition to the importance of a strong, reliable transmission and distribution network, the proximity of production site to the consumption area is another crucial criterion for the use of electricity. Recent studies have stated that on site small energy production units are more efficient for preventing energy losses when energy is consumed on and around its production site.

The most prominent resources of new centuries' capacity development plans of electricity are expected to be renewable ones and there emerges a new approach proposing that the production and distribution infrastructure should be taken into consideration and planned altogether. Globally electricity and its infrastructure investment operations reached the peak of last eight years by 2017. Within the new approach of seeking long run and steady returns, the main share belongs to the transmission and distribution operations while renewables took the second place in the whole processes by 28% increase with respect to previous year (URL 1).

Renewable energy can be supplied by many sources like hydro, solar, wind, geothermal, biomass, oceans etc. In need of source diversification and environmental concerns, electricity generations from renewables have increasingly become widespread; investment and technical costs have decreased tremendously. Renewable technologies gained more importance and popularity and especially local products which were being promoted by developing economies. The cost of photovoltaic solar panels lowered by 80% since 2009 and this inclination is expected to undisrupt. Similarly, costs of wind turbines decreased by 50%.

As a result of such developments there seemed registered improvements in the renewable energy sector especially in the last five years. Almost more than half of the all recently constructed power production plants are renewables. For this reason, many countries initiated the important transformation processes of energy infrastructural architecture. In the sector, there is an apparent need for flexible electrical infrastructures making the way for increasingly advanced methods for power generations from renewables. In order to provide this flexibility, considerable efforts and studies have been made to effectively connect renewable resources to the already established transmission and distribution networks. Those can be count as local and disseminated energy solutions: Digital solutions for system interconnectivity and effective usages of sources; enriching the transmission and distribution networks; flexible power generation and demand management. These technical and political solutions let consumers take their own decisions and make their own productions in the sector as well.

Likewise, Turkish energy system is also in the transition period. This swift and radical transformation process goes along with both rapid development and increasing energy demand with its own specific economic priorities, potentials and growing competitive market environment. Not only big scale renewable energy investments but also expanding decentralized and dispersed micro energy systems and facilities point at this transformation. Besides, energy market model is also transforming and progressively giving a way to the new models that offers an opportunity to consumers to determine their own energy resources. Recently in Turkey renewable based electricity production has rendered prominent cost and supply security advantage with incrementally realizing solar, wind and micro hydro power plants constructions, renewable resources tenders and productions licenses. In the sector, domestic resources, technologies and related-end products are being prioritized and this choice augments the macro-economic added values of this energy transformation processes. Energy efficiency constitutes the central place of national energy strategy, and policies of nearly all countries for decades. There are various energy efficient technologies and tools in the national energy market with their comparatively lower costs. Most of those renewable solutions are practical and offering different benefits to both energy producers and consumers in Turkey. For example, portable solar energy systems that were utilized in many individual consumptions are more economically sensed today. Micro-water systems may be another promising electricity production alternative. The use of cheaper domestic electricity generation mechanisms in these systems can help both local economic development and individual budgets.

Small hydroelectric power plants in Turkey began to be widely used to build and run together with privatizations in the electricity market starting in 2005. Revenues per unit micro-electrical systems for the private sector in Turkey has remained low. In addition, there is not enough information about project planning and licensing of micro systems. Due to the fact that electricity infrastructure is largely available even in rural areas, micro systems did not show a similar spread in Turkey as compared to developing countries.

However, water mills provide a unique opportunity for small local producers and public authorities to develop the micro hydroelectric system. There are 188 water mills in Çaycuma region which is selected as the research area of this study. Similarly, it is known that there is a large number of water mills that has spread to different parts of the country but has not yet been inventoried. These mills can be transformed into micro-hydro systems with minor improvements. This study is pioneering work in Turkey regarding the conversion of old historical water mills into modern micro hydroelectric systems and its economic and social impacts.

2. Literature

2.1. Turkey's Energy Infrastructure Condition

Turkey has a wide variety of conventional and renewable energy resources including lignite, hard coal, asphalted, bituminous shale, oil, natural gas, hydro, biomass, geothermal, wind and solar. However, most of these are of inadequate quality and quantity. Each of its coal, geothermal and hydro reserves is estimated to be around 1% of world reserves, and its oil and natural gas reserves are negligible compared with the world total (Yüksel İ., Arman H., Demirel İ.H., 2017). Table 1 shows both development of electricity's installed capacity and generation in Turkey between 1995 and 2015. Turkey's national energy resources consist mainly of hydraulic, lignite and hard coal resources. Although 35–46% of electricity generation was provided by hydropower before 1993, the share of hydropower decreased to 25% in 2016. With the diversification of capacity in renewable energy sources, 7.3% energy production was obtained from geothermal, wind and solar energy systems, and 32.3% of total production was supplied from renewable energy.

THE SOCIO-ECONOMIC ANALYSIS OF USING HISTORICAL WATER MILLS FOR ELECTRICITY PRODUCTION: ZONGULDAK CASE

Reşide Adal Dündar, Onur Dündar, Mine Polat, Mustafa Tanış, İsmail Hakkı Özölçer

Installed Capacity (MW)				Generation (GWh)				
Years	Thermal	Hydro	Geotherm+ Wind+Solar	Total	Thermal	Hydro	Geotherm+ Wind+Solar	Total
1995	11074.0	9862.8	17.5	20954.3	50620.5	35540.9	86.0	86247.4
2000	16052.5	11175.2	36.4	27264.1	93934.2	30878.5	101.4	124914.1
2005	25902.3	12906.1	35.1	38843.5	122242.3	39560.5	153.4	161956.2
2010	32278.5	15831.2	1414.4	49524.1	155827.6	51795.5	3584.6	211207.7
2015	41903.0	25867.8	5375.9	73146.7	179366.4	67145.8	15271.0	261783.2
2016	44411.6	26681.1	7404.7	78497.4	185798.1	67230.9	21378.7	274407.7

 Table 1. Development of Electricity Installed Capacity and Generation in Turkey (1995-2015) (URL 2)

Turkey's renewable energy resources are based largely on hydroelectric power. Until 2005, large dams constituted a significant portion of the capacity in hydroelectric power systems developed by the state. With the privatized energy market since 2005, river type and small hydroelectric power plants were also established. The development of renewable energy sources between 2000 and 2017 is given in Table 2. In 2005, geothermal, wind, solar and biomass power generation facilities were started to be established in addition to hydroelectric power with the incentives given to the renewable energy resources introduced during the privatization of the energy market. Renewable resources, which accounted for about 40% of the total installed capacity in 1993, fell by 33% in 2005 and reached up to 45.5% in 2017 with the incentives granted. In addition, renewable resources have been diversified with the state incentives given to different renewable resources.

Years	Hydro	Geothermal	Wind	Solar	Biomass	Renewable Installed Capacity	Total Installed Capacity	Renewable Share %
2000	11175.2	17.5	18.9		10.0	11221.6	27264.1	41.2
2005	12906.1	15.0	20.1		13.8	12955.0	38843.5	33.4
2010	15831.2	94.2	1320.2		85.7	17331.3	49524.1	35.0
2015	25867.8	623.9	4503.2	248.8	277.1	31520.8	73146.7	43.1
2017	27273.1	1063.7	6516.2	3420.7	477.4	38751.1	85200.0	45.5

 Table 2. Development of Renewable Based Installed Capacity (MW) Share in Turkey (2000-2017) (URL 2)
 Comparison

World Economic Forum [WEF] regularly compiles the countries' energy infrastructure and ranks them. Turkey ranked 40th and 41st in 2016 and 2017 accordingly in the list of Global Energy Architecture Performance Index (WEF 2016a; 2017a). Turkey's scores regarding "economic growth and development" and "environmental sustainability" components raised, however the energy access and security criteria index fell. World Energy Forum Executive Opinion Survey indicates that such infrastructure characterized with frequent electric cut-outs and voltage fluctuations beside relatively high electricity prices approximates the country to the ones with weaker energy infrastructure⁷ (WEF, 2016b).

⁷ Other indicators are primary energy supply diversity, importer country diversity (Herfindahl Indexes), energy import dependence, and electrification rate. In this study, importer country diversity and electrification rates were left out.

According to Global Competitiveness Report 2017-2018 (WEF, 2017b), Turkey is listed as 88th place in respect of the electricity supply quality criteria among 137 countries. On the other hand, many developed countries like EU-28, manage well such issues with their newly growing skills of diversifications in their electricity production sources. While EU-28 natural gas depended electricity production is 15.4%, worldwide ratio is almost 22%, and Turkey's dependence on natural gas is 36.5% (Table 3) (U.S. Energy Information Administration [EIA], 2016, s.82; Enerji Piyasası Düzenleme Kurumu [EPDK]⁸, 2016). Relying on different and varied energy sources increases the flexibility of energy dependence of a country. According to Eurostat 2019, energy imports dependency of EU 28's average is 55.1% while Turkey comes second on the list of dependency after Portugal with a score of 77.2% (Eurostat, 2017).

	Combustible fuels (oil, waste, biomass; nat .gas; coal)	Nuclear	Hydro	Other (solar, wind, geothermal and other)
Turkey	71.2% (1.6+36.5+33)	0	19.8%	9%
EU-28	49%	25%	10.4.7%	15.6 (4.2%+11.4% wind)
World Average	67.4% (6+23.1+38.3)	10.4%	16.6%	5.6%

 Table 3. Electricity Generation Source Diversifications

Extracted from Eurostat 2017; International Energy Agency [IEA] Report on Global Power 2017; and Republic of Turkey, the Ministry of Energy and Natural Resources Statistics 2017 (URL 3&URL 4).

In other respects, Turkey has an advantage point. Even though the country has not utilized its full potential, Turkey has generated more electricity from his hydraulic assets by 2017 than EU-28 countries did even staying above the world average as well. EU hydro generated electricity ratio follows both Turkey's and world averages behind. For this reason, within the green policy agendas, micro hydro power sources have come forward recently as the main development theme amongst the renewables within the EU.

2.2 Mini-Micro Hydropower Role in the Energy Supplement

Hydroelectric systems are one of the indispensable components of energy supply infrastructure with quick responsive characteristic to demand fluctuation and a relatively lesser amount of adverse environmental effects. In these days the role of hydropower is enlarged as a most economical and reliable energy production alternative for rural areas of both developing and developed countries. With this new role, hydroelectric systems help to eliminate socio-economic inequalities in developing countries and support social development, while in developed countries it helps to eliminate inequalities in power distribution in the electricity distribution networks and increases the quality of the energy supplied from the grid.

The term "small hydropower" typically refers to installations that are less than 10 MW in size, primarily utilizing interconnection at a distribution voltage. The terms "micro hydropower" and "distributed hydropower" are used

⁸ From now on, Turkish institutions' original abbrevations will be used in the text.
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interchangeably in this study to mean hydropower built or rehabilitated with existing infrastructure. These can be defined in terms of capacity as follows: Micro hydro power plants are from 5 kW to 100 kW; mini-hydro power plants are above 100 kW and below 1 MW; small hydro power plants are above 1 MW to 10 MW (Jia, Punys, Ma, 2012). According to these criteria, water mills can be classified under the small-micro hydro power systems.

In many countries such as China, Indonesia, Sri Lanka, Bangladesh, Bolivia, Peru, Nepal, India, discrete or integrated micro-hydroelectric systems have been widely used in rural areas in recent years (Fulford D. J. Mosley P., Gill A., 2000; Erinofiardi et. al, 2017; Bhandari R., Saptelena L. G., Kusch W., 2018; Khennas S. and Barnett A.,2000; Razan J. I., 2012). The small hydropower program application was started at 1949 in China. Nowadays the installed capacity has been reached up to15000 MW in rural areas. Low-cost micro-hydro systems have been developed and tested in Nepal since the mid-1970s; these were mostly realized through long-term funding from aid programs of Switzerland and Germany.

Simplified turbine model's production technologies were transferred to local factories and producers in Sri Lanka, Peru, and Indonesia that opted for and implemented the technology shortly after. Alongside, the UK witnessed the development of Electronic Load Controllers (ELC's) that utilize solid-state power electronics and transferred these to other countries in 1980's. That was the key component of the application of small hydropower development. One of the most important problem during the development stage of the small hydro was frequency fluctuations that was also solved by technology transfer from UK.

Social impacts of micro hydro programs are far reaching all around the world. Along the target goals also is to help pastoral people have access to electricity as of its significance of being a social and individual tie to the modern world. Supplying the energy to the marginalized locals and tribal people especially in hilly areas who are out of electrification and lack of its facilities to assure their livelihood presents another objective of the micro hydro program. Besides existing structures, exploration of new potential sites and proper utilizations of them improve their life standards and provide them with small scale job opportunities in remote places. (Mondal, Kamp and Pachova, 2010). Thereupon, self-employment opportunities to start home based industry is an option as well saving locals from huge transmission and infrastructure costs (Kopp, 2010). Further, these mountainous areas become attractive tourist spots bringing good revenues thanks to electricity like in the case of Bangladesh. Among the country's essential sources of foreign incomes besides tourism is the cultivation of shrimps. However, modern techniques of cultivations cannot be exploited because of the shortage of electricity. Micro-hydropower facilities would empower the local farmers to employ intensive methods of cultivation.

According to Renewables Global Future Report (REN21 Policy Network&ISEP, 2017), the role of "decentralized energy technologies" will be quite important and critical for especially both "space-constrained megacities" and isolated, faraway places. Those technologies are expected to be the main suppliers of the demand by 2050. Hydroelectricity has always played a leading role in urban and economic developments. In this context, those new green and cost sustainable micro-mini-small systems could be complementary to the both traditional and other renewable resources. (Bódis, Monforti, Szabó, 2014).

As stated by the World Energy Council, almost all countries of the developed world have already overused their big hydro-power plant potentials. These large hydro structures have important roles especially delivering the electricity at most valuable peak times. However, this will not be enough for future demands and pressures, thus they could be supported by small power plants. EU policies consider these small hydro structures as quite relevant and

critical part of the sustainable development plans and, EU supports such small hydro projects (Garegnani, Sacchelli, Balest& Zambelli, 2018). In the EU, it is assumed that over 350,000 micro-mini hydro sites have existed so far. These economically and environmentally promising structures are becoming more visible with their potentials of "Europe's thousands of historic mills, weirs, water wheels, inoperative hydropower stations, and other lateral structures in rivers" (Steinkusz, 2015; Punys, Kvaraciejus, Dumbrauskas, Silinis, Popa, 2018, p.1109). For example, there are about 120 sites operating to produce 100MW of small hydro capacity, within the UK. Despite the fact that England owns several tens of thousands of humble sites known as watermills, amounting to over 50MW of further potential, Scotland and Wales stage most of the possible remaining interest (Ibid).

2.3 Water Mills' Resurgence as Micro Power Units

The water mills are the *private enterprises, foundation or common assets*⁹ that are used in the process of crushing or grinding all kinds of granular agricultural products (Dıraman 1997, p.56). It is believed to have been invented in 2000 BC by the Chinese (Bloch, 1935; Gille, 1954). It is known that, when there was no water and wind power to be used, human and animal power was employed to turn the mill stones in order for the mill to function. With the transition to settled life, mills have become the most important technological tool for grinding. The importance of the mills in the change of economic and social life has been revealed by many economists and historians (Cipolla, 1992; Basalla 1995; Newman 2001; Munro, 2002; Gimpel 2005). Having been used in Europe since 1000 BC, water mills became more popular between X-XIVth centuries especially in Northern Europe (Mazoyer&Roudart, 2010, p.344).

It is estimated that water mills are also an important part of both production life, commercial life and social life (Özcan, 2016). From the 13th century onwards, water mills have made great progress. In the late 18th century, it was found that there were active water mills with more than one wheel (stone), in hundreds of thousands. In the same period, it is also surprising that in China, water mills were used to inflate bellows in metallurgy rather than flour milling. The water mills were then used as a water force plants, and they caused a very rapid change in the European economy, both in rope, fabric and iron processing as well. Gimpel (2005) describes the relationship between a European city and water as follows; *"Water is not only turning its mills, beer goes to wine factories, it is used in boilers, it goes to whiskers, it produces the necessary power to whip the fabric, and it leaves the city without leaving a job that doesn't do it by cleaning up the mess of the city."* Watermills were actively used until the 20th century, and then waterpower was replaced by diesel or electric motors.

The first examples of the watermills in Anatolia were found in the Urartian in the X. century. Later on, they were built on almost everywhere sufficient and proper water resources exist. Even though there are very few mills still in use in Anatolia, it is known that many water mills registered in the historical archives had been made, and used for centuries (Gürses&Taşkın, 2007; Soyel&Ahunbay, 2011; Özcan, 2014, 2016; Yörük&Kabak, 2016 and Yörük, 2014; 2016; Dündar, Polat, Özölçer, Tanış, Dündar&Sekmen, 2017). All these studies emphasized the technical, social and economic roles of the water mills from different aspects.

Technically, water mills can be defined by two main components: the structural system and mechanical system¹⁰ (Figure 1 and Figure 2). There are also areas in the building where the miller can sleep and eat at night. In time,

⁹ Italic expressions belong to writers.

¹⁰ The structural system of the mill consists of water transmission channel, water intake structure, aqueduct, water tower and mill building. The second system is the mechanical system which provides the operation of the impeller, the vertical shaft, the upper and lowers grinding stones, the grain-flour storage elements and the mill.

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extra areas were created by adding another floor on the main building or constructing adjacent structures, for the families of the millers to live and for the guests and customers to accommodate. It is a fact that the water mills had been junction and a place for people meet, eat, rest, communicate, socialize and get news. The transport of raw materials and milled products required more convenient and proper ways, and the road networks to and from the water mills improved economic and social life around both the villages and the water mills (Yörük, 2014).



Figure 1. General Architectural Sketch Of Traditional Water- Figure 2. General Mechanical Sketch Of Traditional Watermill (Soyel&Ahunbay, 2011)



mill (Danisman, 1977)

3. Methods and Analyzes

3.1 Hydrological and Technical Analysis of Study Area

As preliminary steps of feasibility analysis in energy development projects and planning, resource and its potential estimations come first. Technical potential means resources' availability in the region. Thus, in this study initially "water" was checked in the region. Zonguldak is among the natural water richest cities of Turkey. Four season intense precipitation regime provides the area with plenty of water sources in continuing cycle. However, all constructed big water supply premises reached their final capacities. The main surface water source is the Filyos River which has a wide valley by upstream. The many streams, which originate from both sides of this valley, reach the Filyos River by crossing the valley transversely. The selected water mills are provided by the Büyükmağara and Kongul streams whose water flows are observed as steady and continuous throughout the year. The Büyükmağara and Kongul streams have more step creek bed when they compared with the Filyos River. However, the constructed channels for water mills have relatively low bed slopes. It was ensured that the elevation difference which provides the waterpower to feed the mills was obtained at shortest channel length. According to hydro literature, selected water mills are classified as run-of-river hydro power plants that do not have water storage.

The other technical issue is energy conversion. The energy losses estimations are conditioned by the geometrical characteristics of the system like calculated channel length, pipeline etc. During site visits, such variables were evaluated in order to measure the potentials of water mills. Therefore, especially those mills were selected where there are already installed network nearby brought by the Turkey Electrical Distribution Company. The easiest and cheapest way to connect those assumed micro systems to grid in systemic harmonization requires double tariff electrical meter. To inject the synchronized and steady current to grid i.e. for obtaining regular wave requires alternator, accumulator and inverter combination systems. Since the technology is well-advanced, domestic infrastructure is available and cheap, technical process yields very efficient results without energy losses.

Under those circumstances, selected 10 watermills in this study are Mağara, Baş, Çayır, Kışla mills in Çayır village; Hacıoğuzların, Değirmenözü in Kışla village; Tozuğan, Ali Kadı, Kadılar, Paşaeli in Dereköseler village of Çaycuma district of Zonguldak (Figure 3). They are similar with respect to general structures and basic elements of the water mills with vertical axis and horizontal wheel¹¹.



Figure 3. Location of The Selected Water Mills

3.2 Technical Potentials of the Water Mills

During the site visits general structural and service building condition, operational status, building materials, loading room material, number of mill stones, approach channel, aqueduct and water shaft dimensions, mill stone diameter, boat sizes and especially water shaft heights of each water mill are noted. The main two parameter for

¹¹ In this type of water mills, the wheel rotated by the water force in the horizontal axis conveying the movement to the mill stone with a vertical shaft.

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the estimation of the power is discharge and water shaft height. Hydro-turbines are an energy conversion apparatus. The total energy of the flowing water is converted to mechanical shaft power which can be used to drive either an electricity generator or other machinery. The power available is proportional to the product of total head and volumetric flowrate. The general formula for any hydro system's power output is

$P=\eta \rho g Q H$

where P is the mechanical power produced at the turbine shaft (watts), η is the hydraulic efficiency of the turbine, ρ is the density of water volume (kg/m³), g is the acceleration due to gravity (m/s²), Q is the discharge passing through the turbine (m³/s) and H is the effective total head of water across the turbine (m). The best turbines can have hydraulic efficiencies in the range from 80% to over 90% (higher than most other prime movers). Micro-hydro systems tend to be in the range 60% to 80% efficient.

Power potentials of the selected watermills are given in Table 4. These mills are classified as "micro hydro power plant" with their varying potentials from 7.5 kW to 8.7 kW. It was also concluded that the Baş mill has the most power potential and the Çayır mill has the least power potential. If mechanical and electrical equipment consisting of turbines, alternators, accumulators and inverters are added to these identified mills in accordance with their potentials given in Table 4, they will be able to generate electricity actively as a micro hydro power plant throughout the year.

Watermill site	Height (m)	Discharge (m ³ /s)	Power Potential (Watt)
Mağara	4.90	0.195	7496
Baş	5.40	0.205	8672
Çayır (Kayışbacak)	4.80	0.193	7268
Kışla (Hakkıbey)	4.90	0.195	7496
Değirmenözü (Kaşaltı)	5.10	0.199	7960
Hacıoğuzların	5.30	0.203	8432
Tozuğan	4.90	0.195	7496
Ali Kadı	5.00	0.197	7727
Kadılar	4.90	0.197	7496
Paşaeli	5.20	0.201	8195

Table 4: Power Potentials of Watermills

3.3 Financial Potential of the Water Mills vs Electricity Pricing in Traditional Power Generation Systems

In terms of *financial potential*, the feasibility issue is quite important in highland settlements, remote and isolated places that require higher distribution and connection costs. While calculating the energy potential, only economically feasible water mills were selected. Thus, cost evaluations were carried on with respect to the site specificity, and then electricity prices were calculated both according to traditional power generation systems and alternative renewable revenues from those water mills in comparison.

Although electricity pricing varies widely from one country to another and even from one county to another within a country, unit cost of electricity is normally priced over kWh (Kilowatt per hour). Unit cost is for total 1 kWh energy consumption including other transmission costs and taxes. Unit prices according to different electricity tariffs announced by EPDK in January 2019 are given in Table 5.

Unit energy consumption (1 kWh/TL)		Residential	Commercial	Industrial	Agricultural
Electricity cost	(a)	0.2791	0.4150	0.3809	0.3745
Distribution cost	(b)	0.1541	0.1576	0.1163	0.1295
Energy Fund (a, 1%)	(c)	0.0028	0.0042	0.0038	0.0037
TRT Share (a, 2%)	(d)	0.0056	0.0083	0	0.0075
Electricity/Municipality Consumption Tax (a, 5%)	(e)	0.0140	0.0208	0.0190	0.0187
Value Added Tax Basis	(f)	0.4555	0.6057	0.5200	0.5339
Value Added Tax (f, 18%)	(g)	0.0820	0.1090	0.0936	0.0961
Total Amount for 1 kWh (f+g)	(f	0.5375	0.7148	0.6136	0.6300

Table 5. Electricity Unit Prices with Respect to Usages Tariffs.

Source: EPDK, 2019 January Tariff Spending Items With Respect to Usages

Electricity prices also vary according to the source of electricity¹² and the policies of the private enterprises or state-owned retailer companies those who bring electricity from the plant to the end consumer, and wholesale price manufacturers. In the energy sector, the regulatory and supervisory body that acts as a lever is the country's Energy Regulatory Authority. Energy Market Regulatory Authority (EPDK) is in charge to determine the operating costs of electricity in every three months. The national price tariffs, which are determined by the agency, do not include funds and taxes. Retail electricity unit rates vary according to the usages like household, commercial, industrial and agricultural usages as well as given in Table 4.¹³ Therefore, in the electricity bill, there are several costs included that can be grouped into two: Technical expenses¹⁴ and taxes.¹⁵ The main shares of electricity prices can be count as 51.5% electricity consumption rate, 29.1% distribution rate, 15.2% added value tax, and 4.1% rest items.

¹² Depending upon gas availability and price fluctuations mobilized by international political and economic agendas, gas generated electricity prices are getting higher globally each day. This increasing tendency of production costs is unlikely to be disrupted in the future making the electricity prices and bills increase accordingly.

¹³ There are different customer tariffs and plans associated with changing pricing schedules like higher day and lower night rates of pricing in conformity with the customer usage tendencies and demands on electricity.

¹⁴ Technical expenses include items as follow. The distribution cost emerges from all technical steps of bringing power from its generator assets to the homes and maintenance costs of all transmission networks with high voltage lines. In some pricing schedules transmission cost is included in the distribution cost as another specific spending item which is for bringing power from its generator to the city. Cost of electricity losses in transmission and distribution systems used to be taken for both balancing the costs of technical energy losses and illegal uses. Retail sale service prices are taken by the distributor companies in return of selling and metered consumption reading services they provide to end users.

¹⁵ Taxes are taken over four different items: 1% energy fund, taken for using in energy researches and development projects; 2% Turkish Radio and Television Company (TRT) share; 5% electrical consumption tax taken by municipalities if in their jurisdiction areas; and 18% end user value added tax over active total amount of previous items.

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Revenues from the conversion of water mills generate different values if the users in the region directly use the generated electricity or sell it to the electricity distribution network. In the case of direct use, since the electricity to be purchased from the distribution network at their own tariffs is substituted, the benefit or revenue to be generated will be equivalent to the electricity bill they will pay. In this case, the unit price of electricity will be equal to the unit price of the distribution company at different tariffs. If the generated electricity is supplied to the distribution company as an auto producer, these autonomous local producers will generate a certain gain over the unit price of renewable energy. In Table 6, if the micro hydro-power system is active for 300 days annually, the electricity generated and the revenues that can be obtained from each tariff unit price are given respectively. In the last column, the revenue to be earned is given if the micro hydroelectric system provides electricity to the distribution company as an individual producer.

Watermill Site	Power Potential (KW)	Annual Power Generation ¹ (KWh)	Benefit Residential Price (TL)	Benefit Commercial Price (TL)	Benefit Industrial Price (TL)	Benefit Agricultural Price (TL)	Benefit Base Renewable Energy Price (TL)
Mağara	7.50	53971	29009	38573	33111	33996	8743
Baş	8.67	62439	33561	44625	38306	39330	10115
Çayır (Kayışbacak)	7.27	52327	28126	37398	32103	32961	8477
Kışla (Hakkıbey)	7.50	53971	29009	38573	33111	33996	8743
Değirmenözü (Kaşaltı)	7.96	57309	30803	40959	35159	36099	9284
Hacıoğuzların	8.43	60713	32633	43391	37247	38243	9835
Tozuğan	7.50	53971	29009	38573	33111	33996	8743
Ali Kadı	7.73	55632	29902	39760	34130	35042	9012
Kadılar	7.50	53971	29009	38573	33111	33996	8743
Paşaeli	8.19	59003	31714	42169	36198	37166	9558

Table 6: Watermills Benefits/Revenues with Respect to Usage Tariffs¹⁶

Calculated base renewable energy revenues from these 10 mills vary between 8000 to 10000 TL. The minimum revenue is from Kayışbacak with 8477 TL and maximum revenue is Baş watermill with 10115 TL. If 8.7 kW of Baş mill energy was bought from the system and used in commercial purposes the price the local consumer would pay is 44625 and for agricultural usage 39330 TL. However, if locals use this mill to produce electricity, they would not pay these amounts. Renewable revenue from Baş mill is 10115 TL. Producer may choose to use its own energy and sell unused amount to the system in the first place. Green injections to the regional grid system are paid by EPDK over its advantageous green producer tariffs. Usages and injections are calculated in subsequent invoices and if more electricity is used than injected amount to system, invoice is reduced. If consumer usages stay under production and injection amount to the system, the rest of citizen's unused energy injections in the system are paid off by feed in tariff of EPDK. As a result, differences between out and incoming power (net metering) is set. For all parties, every scenario is win-win.

¹⁶ Assumed 300 working days in a year.

In contrast to traditional systems with their high distribution and technical costs, this micro system is cheaper solution. Calculated return on investment for electrical and mechanical equipment is eighteen months for smallest potential water mill. Turbines, accumulator-alternator-inverter and waterwheel costs are around 13000 TL. After pay back, each mill provides minimum 8000 TL net revenue for consequent years. The operation life of such micro-hydro system is around twenty years in case of good maintenance. For a replacement of any units, the systems are cheap and it is easy to accumulate by small charges within the community (URL 5).

3.4 Rural Development Potential and Environmental Feasibility

Zonguldak is among the secondary industrial cities and it has a huge potential for infrastructural transformation. Its Çaycuma and Gökçebey districts are mostly populated in rural and remote mountainous areas. Each settlement is classified with varying development scales from less developed to developed (Bati Karadeniz Kalkınma Ajansı [BAKKA], 2013). Local people especially youth migrate to developed areas of the region for more job opportunities.

There are 188 water mills mentioned in the records in and around Çaycuma district in Zonguldak Province (Ceylan, 2014). It was observed that many of the watermills be inoperable, some of them in operation, some of them did not have a grinding mechanism, and some of them could not be entered because they were covered by wild vegetation. Only, in very few villages the good condition active mills were found. Almost all of these mills selected for the study are located in the area between Gökçebey which is lesser developed area and the Black Sea where two main branches of the Filyos River meet. All these water mills provide an opportunity waiting to be used for increasing micro hydro potential in the region and contribute the rural development.

Electricity generation is a significant source of industrial air pollution. Hydropower provides electricity which is emission-free, however, there are still quite controversies about the big hydro structures. On the other hand, micro alternatives are considered to eliminate the drawbacks of big hydro structures. Emission problem will be eliminated. Fish passage problem of run-of-river structures will not be seen in these micro systems. Stream waters will not be diverted from their natural waterways. Thus, such micro hydro projects are not environmental costly projects and so non-controversial are they regarding environmental issues. Also, it is expected that local communities will be interested in and support such projects as compare to huge oppositions to big development projects (Hydro Research Foundation, 2015). Briefly, if old water mills are converted and used as micro hydro systems, they would offer local communities more economical and environmentally wise solutions in their lives.

4. Results and Suggestions

More green and renewable source means more secure, equal and fair priced accession to electricity as well. The vantage point of this study was conversion of water mills to renewable, environment friendly electricity generating micro hydro power structures. While such conversions provide the application area with energy security, also offer various social and financial benefits for communal, local and national economies. Repowering the old historical water mills results in "enhancement of energy supply security" through generation of hydroelectric power by locals themselves for both local productive and consumptive use and for the regional electrical grid injections. Examples of productive use in mechanical way are textile fabrication, cooling, drying, agricultural processing, timber sawing. Local households may also use electricity as intermediate for other mechanical uses like heating and lighting. Micro-hydro schemes are economically and environmentally low-cost energy productions. Affordable

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power from these helps keep grid electricity costs and electricity bills to a minimum for low-income groups. In most cases, villagers and rural households will need small amount of energy to lighten homes, run small electrical appliances like televisions, radios, kitchen and cleaning ones.

To meet the return on investments of local communities, there are several suggestions. Firstly, the system can be set by domestically produced cheap and safe infrastructural materials. Secondly, the load could be limited to the prescribed values by means of load limiters. The simple and cheap limiting meter device automatically disconnects power supply when the current gets over the set value and expensive meter reading services and costs would be eliminated as well. Also, load limited supplies can reduce the cable and other connection devices' costs.

There is public support to micro systems for certain degree. Credits, national incentive funds and free producer licenses to micro power generators up to 10 MW is an opportunity for local people to overcome the economic burdens of initial entry costs of conversion and grid connection. As of January 1, 2019, according to Article 31 (2) of the EPDK Electricity Market Unlicensed Electricity Generation Regulations, there is no the annual system operation costs up to/including 10 MW. In addition, after connection, decreasing bills and savings on other energy expenditures could help them to make repayments.

Invigorating abandoned water mill sites result in revival of social life and job creation. Developing the capacity of local energy sources will provide locals with new income and job opportunities. The most important result is community involvement and new way of management. Locals may form their own cooperatives or energy committees for lower costs and better services as active citizens. They control, manage and audit all their tasks by themselves in each step including technical and financial processes like raising funds for initial investment, construction and maintenance of the system and their revenue collections. They may become owners, investors, managers and customers at the same time. The costs of such management model are inconsiderably minor like insurances, water abstraction fees if apply etc.

European Union and IFIs support the micro-hydro power systems in many developing countries with their technology transfer and capacity building programs that concentrate on the social, economic and technical aspects of such systems as a whole. Thus, new local design and manufactures are adopted as cheap and green solutions. There is no need for much civil engineering costs. With small briefings and trainings, citizens can even manage to construct their own systems by themselves. Local management, common asset and community participation mean such schemes are under the control of local people so operation and maintenance tasks are usually carried out by local craftspeople. Such schemes and models create incentives to build new water mills downstream of the Filyos River. Technically, it is also possible to establish up to 20 mills on the streams like Çayır stream that flows throughout the year and the length extends up to 10 kilometers for further developments and energy expansions.

As a result, benefit for all is the key driver in this study. Not just only environmental but also social and economic benefits for all parties both in the short and in the long run could be realized by using historical water mills for electricity production in the region.

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Globalization, Poverty, Inequality, & Sustainability

This e-book is part of the series that come from the proceeding of the International Conference on Political Economy (ICOPEC) 2019 that was held at Marmara University, Istanbul, Turkey in June 2019 and sponsored by several other academic institutions. The general theme of ICOPEC 2019 was 'If Globalism is Dead—Long Live What?' and touched upon a crucial issue of the contemporary global economy. The volume at hand carries the title 'Globalization, Poverty, Inequality, & amp; Sustainability'. It contains ten selected papers from the conference that bene(ted from comments and discussion during the conference and were subsequently signi(cantly improved.







