

POLITICAL AND INSTITUTIONAL REVIEWS ON SOCIAL STUDIES

Edited by

Assoc. Prof. Cengiz AYTUN

Assoc. Prof. Cemil Serhat AKIN

Authors

Assoc. Prof. Özden AKIN

Assoc. Prof. Metin REYHANOĞLU

Assoc. Prof. Füsün ÇELEBİ BOZ

Asst. Prof. Pinar ÇUHADAR

Asst. Prof. Mustafa KIRCA

Asst. Prof. Ümit YILDIZ

Res. Assist. (Phd.) Sevi DOKUZOĞLU

Res. Assist. İsmi naz ÇINAR

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TURKEY TR: +90 342 606 06 75

USA: +1 631 685 0 853

E mail: iksadyayinevi@gmail.com

www.iksad.net

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From editors,

While there are many different problems in social life, solving these problems requires different perspectives. This study, which aims to bring different perspectives to social problems, consists of seven chapters.

In the first chapter of the book, Pinar ÇUHADAR prepared a review named “*Public Regulations in The Energy Markets of Developing Countries: The Case of Brics Countries*”. In the first part of the study, the concept of public regulations is explained, and the theoretical discussions, tools, methods and institutional structures are examined while the second part covers the public regulations and the energy sector’s place in developing countries as well as the practices in BRICS countries. According to this assessment, when the BRICS countries, which have increased their economic and political powers within the global system through the momentum they have gained during their development process, are examined, similar tendencies can be seen behind the structural and public regulations that they employ. Considering their impacts on carbon emission in particular, it can be said that these countries have created investment opportunities by implementing many institutional and legal regulations along with the public incentives regarding renewable energy.

In the second chapter, Mustafa KIRCA, Füsün ÇELEBİ BOZ, and Ümit YILDIZ conducted a panel data analysis for BRICS+T countries for the period of 2015M12-2018M06 in the study named “*The Effects of Inflation and Economic Growth on CDS: The Case of BRICS+T Countries*”. For this purpose, they applied second generation panel tests on their data. Accordingly, CPI has a significant effect on the CDS, whereas the effect of IPI on CDS is not significant. On the other hand, the effects of CPI and IPI on CDS vary by country. For example, while a negative relationship between IPI and CDS for China, India and Turkey, it is seen that there is a positive relationship between these variables for South Africa. On the other hand, there is a positive relationship between CPI and CDS for Brazil, Russia and South Africa,

while there is a negative relation between CPI and CDS for India. The heterogeneity of the model leads to this situation.

In the third part of the book, Özden AKIN and Metin REYHANOĞLU, the authors of the chapter called “*Applicability of Evidence-Based Management in Business*”, provided some sort of information about the changes that should be realized during the implementation of the evidence-based management practices in the health and social services sectors, and the implementation of these practices in other organizations. According to their conclusion, organizational gaps and deficiencies that affect the widespread use of evidence-based practices need to be addressed. There is a necessity to develop measures to evaluate organizational structures that may affect the implementation process and its outcomes. In this sense, the contribution of leadership gains more importance in evidence-based practices that need a careful attention. Leaders can influence the attitude and behavior of their employees in a positive or negative manner in order to inspire the change and innovation. Therefore, providing a positive organizational climate for innovation may lead to an increase in a favorable attitude towards evidence-based practices.

In the fourth chapter of this book, İsmınaz ÇINAR prepared an assessment named “Environmental Taxes Comparative Analysis for Selected OECD Countries”. The aim of her study is to investigate the purpose and use of environmental taxes imposed by governments. In this context, five OECD member countries (Turkey, Denmark, Spain, Mexico and South Korea) are examined. According to this chapter’s results, taxes used for pollution prevention are far from protecting the environment and preventing pollution. Environmental policy practitioners should prioritize the environmental issue in the taxes to be collected and adopt policies to control the environment and prevent pollution.

Chapter five named “*Local Governments and Theories of Fiscal Federalism*” is written by Sevi Dokuzođlu. In this chapter, the term “fiscal federalism” has been reviewed with theoretical foundations considering the fact that delegation of the spending and taxation

authority from central governments to local governments has become a common policy tool for many countries. In the meantime, Dokuzođlu highlighted the role of local governments in ensuring efficient resource allocation, transparency and accountability of public policies. This study examines theoretical basis of fiscal federalism within the framework of First Generation Theories and Second Generation Theories. This chapter reviews the literature on fiscal federalism briefly.

In the sixth chapter of the book, Muharrem AYIRCI prepared an analysis named “The Food Policy and Economic Roots in Turkey”. As a result, this chapter highlights that nutrition outside our homes has become widespread today. Therefore, the rules of hygiene and sanitation should be complied with in all stages from the procurement of raw materials to the consumption in mass consumption places, these rules should be internalized and the controls of these places should be tightened by the ministry.

“Health Economy And Healthy Cities” is the last chapter of this book. One of the important elements of sustainable development is health. Behzetoglu, made policy recommendations on how to maintain the health level obtained in the long term. He also gave information about “Healthy Cities Project” which can be applied in the long term. In this study, information was given about possible contributions of local government to public health.

We would like to thank our colleagues who contributed to the study and hope that their valuable ideas will help in solving problems.

CHAPTER 1:

**PUBLIC REGULATIONS IN THE ENERGY MARKETS OF
DEVELOPING COUNTRIES: THE CASE OF BRICS
COUNTRIES**

Asst. Prof. Pınar ÇUHADAR¹

¹ Asst. Prof., Mardin Artuklu University, F.E.A.S, Economics
pinarozdemircukadar@artuklu.edu.tr

INTRODUCTION

Developing countries face many limitations in their industrialisation processes. One of these is the supply of energy as a production input. Few countries have an advantageous position with regards to energy resources while many must import energy from outside. Due to its role and importance in production and consumption, energy is also a critical element affecting countries' diplomatic power. Energy is an infrastructural service, and the topics of efficiency, consumer protection, security of supply, and protecting the environment constitute another aspect for the discussions regarding energy within the context of social justice. With pro-free market economy ideas gaining ground after the 1980s, policies of privatisation and deregulation have emerged; yet, the strategic topic of energy supply and consumption continues to require public regulations, which “include the legal, constitutional and institutional tools and public policy practices that states use in order to achieve their social and economic policy goals”. The purpose of this study is to examine the public regulations in the energy sector both from a theoretical point of view and through the practices in BRICS (Brazil, Russia, India, China and South Africa) countries, whose development processes have gained great momentum. In the study, the concept of public regulations is explained, and the theoretical discussions, tools, methods and institutional structures are examined while the second part covers the public regulations and the energy sector's place in developing countries as well as the practices in BRICS countries.

1. The Concept of Public Regulations and Theoretical Discussions

There is no universally accepted definition for the “concept of public regulation”. In general terms, public regulation includes the legal, constitutional and institutional tools and public policy practices employed by states in order to accomplish their social and economic policy goals. Legal tools and institutional regulations are used by states to force individuals and/or firms to a set of behaviours or goals by means of various sanctions and punishments. Some examples would be states determining supply prices for companies’ products, forcing companies to comply with certain standards during production processes, and making minimum wage regulations. Sanctions can involve a series of actions from shutting down businesses to depriving of freedoms, from enforcing special regulations to sharing bad practices with the public (Hertog, 2010; Aktan, 2003; Akın and Aytun, 2016:69).

Public regulations are divided into three categories, which are economic regulations, social regulations and process regulations. Economic regulations are the limitations imposed on prices, production quantities, and industry entrance and exit conditions in a given market. There are two types of economic regulation: structural regulation and conduct regulation. Structural regulations deal with market structure whereas conduct regulations deal with the behaviours of producers and consumers in a market. Economic regulations are mainly used when a market has natural monopolies or an imperfect competition, and aim to reduce the negative impacts of dominant

firm/firms in the market. Social regulations affect a wide range of industry activities. They are mostly regulations on the environment, safety and public health. Finally, process regulations are related to the management of public and private sector activities by the government. These include the regulations on the forms and costs of administrative processes (Guasch and Hahn, 1997:3; Hertog, 2010).

When we examine the origins of public regulation discussions, we see that they go back to 1800s' America, and that they were more focused on the implementation of regulations rather than their functions. Anti-monopoly/anti-trust laws and eliminating the negative impacts of sectors which are natural monopolies by nature constituted the core activities of the regulatory institutions during this era. Europe's introduction to public regulations is relatively recent; most of the sectors subjected to regulations in the United States were already part of the public sector in Europe. The academic studies on competition began in the 1940s while the topic of public regulations first appeared in the literature in the 1970s. In the 1980s, state intervention in economy and loss of efficiency caused by these interventions began to be discussed. Privatisation of state-owned enterprises and deregulations gained momentum with this period, as well (Sarisoy, 2010).

The first group of regulation theories function under the assumptions of full information, perfect enforcement and benevolent regulators. According to these theories, the regulation of firms and other economic actors serves public interest. Public interest means the

best allocation of scarce resources, public goods and services for individuals. Markets constitute the main resource allocation mechanism in liberal economies. Under certain conditions, markets should provide optimal resource distribution. However, this is not usually the case. This is described as market failure. Market failure occurs when resources are not allocated efficiently for the best usage. In a market system, use value is reflected in the prices of goods and services. Market failure happens when there is an inconsistency between the price or value of an additional unit of a given good or service and marginal costs. Increasing production until $P=MC$, where P is price and MC is marginal cost, is regarded as equilibrium point in competitive markets. On the other hand, if $P>MC$, then production should be increased until there is equilibrium. It is the public regulations that enable effective resource allocation when there is market failure. In old public interest theories, market failure was deemed a sufficient reason for enforcing public regulations. The criticisms against public interest theories are as follows: the limited explanatory nature of the concept of market failure, failing to empirically prove the effective results of public regulations and the fact that these cannot actually be measured, public preferences and the shortcomings in turning these into welfare-increasing regulatory criteria. According to private interest theory of regulation, regulatory practices exercised in accordance with the “capture” approach serve the interests of the industry. When law makers decide to regulate an industry through an agency because the existing conditions are being abused, other political priorities may gain importance; in such cases,

law makers' control can be loosened. Regulatory institutions do not want to be in conflict with firms; indeed, they need the knowledge of the firms in order to make the necessary regulations. Over time, regulatory institutions begin serving the interests of the industry which they represent. However, this approach has been heavily criticised due to its theoretical inconsistencies (Hertog, 2010). The theoretical approaches to public regulations as summarised by Nel and Jose (2010) are shown in the following table.

Table1. Theoretical Approaches to Explain Public Regulations

Regulatory Approach	Features
Public interest (normative approach), market failures	Existence of a benevolent regulator that responds to public interests, maximizing a social welfare function. The most influential authors: Pigou (2010), Marshall (1997) Samuelson (1954), Baumol (1980).
Private interests (positive approach), pressure groups and failures of the Government	<p>According to this approach, regulation may have failures to capture regulators from lobbyists (public sector decision may favor the most influential group</p> <p>Existence of a non-benevolent regulator that will try to maximize certain political welfare that goes in favour of its benefits.</p> <p>Compensation process between the parties involved in the economic activity to be regulated. The most influential authors are Buchanan, Joskow (1974), Jordan (1972), Stubblebine (1983), Stigler (1971), Posner (1974), Peltzman (1976), Becker (1983).</p>

New economy of regulation (institutional approach) – transactional characteristics	<p>The new economy of regulation deals with the problem of agency that arises as a consequence of an asymmetric structure between the principal and the agent.</p> <p>Regulation is an application of the principal-agent methodology to the contractual relationship between the regulator and the regulated agent. In the main-agent model, two elements are essential: information and incentives and the efficient design of contracts.</p> <p>The most influential authors are Coase (1937), Williamson (1985), Laffont (1993), Hiriart, et al. (2004), Spiller et al. (2000), Levy, Stern (2000), Goldberg (1974), Weingast (1997).</p>
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Source: Nel and Jose, 2010

An alternative approach given in Table 1 is the new institutional approach to public regulations. This approach stipulates that states should have dominance in order for markets to become effective; and focuses on states' role, obligations and cost of operation in the execution of contracts.

The focus of all these approaches should be examining the root causes of market efficiency or state inefficiency. The theoretical discussions within this context are further separated in terms of regulatory methods and institutional structures.

2. Public Regulation Goals and Methods

The main goal of public regulations in infrastructure services such as energy is to enable a competitive structure in the market. The aim of establishing a competitive market is to prevent dominance of a single group over the whole market or having only one service provider in the market; and in doing so, to keep prices at lower levels. In a market environment where free market rules fully prevail, regulations are needed when consumer costs increase. Regulations aim to protect the environment, provide justice and supply security as well as providing economic efficiency and protecting the consumers. On the contrary, in an economy where free market rules do not prevail, making regulations in the markets is directly a political decision and serves political purposes (UNIDO, 2006).

Yinfang, Parker and Kirkpatrick (2004) argue that in some of the works carried out, regulations were found to produce more positive returns than privatisations. Furthermore, it can be seen from many studies that the measures taken to regulate competition have given consumers the highest amount of benefits. Indeed, privatisations do not result in efficiency on their own; they can only be successful when accompanied by a regulatory capacity. Establishing a regulatory capacity prior to privatisation and competition increases the efficiency of the activities that are carried out. Therefore, the order of policies that are employed seems to be important, as well.

The primary methods of regulation used in infrastructure services like energy are "command-and-control", "self-regulation",

"incentive-based regulation" and "market control". *Command and control* means taking punitive actions that are supported with legal sanctions when services do not meet the required standards; this way, laws eliminate certain behavioural patterns while encouraging others. Service standards can be determined by the state as well as by independent regulatory bodies who have the authority to define regulatory rules. *Self-regulation* is when service providers themselves enforce the command and control function. It means that those providers establish their own performance rules, monitor and audit themselves. *Incentive-based regulation* is used to support a desired situation via incentives or eradicate an undesired situation by imposing taxes. As the system works automatically, the number of regulatory interventions and laws decrease; it also offers advantages to firms in terms of choosing between reward and punishment. There are many methods that are used for *market control*. Providing properly priced services to consumers by regulating competition; making regulations through contracts to enable governments to use their own power in service procurement and have privileges other than operating conditions; imposing government limits on the tradable amounts of matters such as carbon emissions, and granting permits accordingly; making regulations regarding renewable green energy can be regarded within this context (UNIDO, 2006:15-22).

3. The Features of Institutional Structures in Public Regulations

Public regulations are a combination of institutions, laws and processes. This combination gives governments the right to have control over the investment decisions and activities of enterprises either officially or unofficially. Regulations have two aspects. The first is the governance aspect, which constitutes the legal and institutional framework of the regulatory system; and the second one is the substance aspect, which is the content of regulations as determined by the government or the regulatory institution, and their existing practices. The functions of regulatory governance are determining the laws, processes and procedures that regulate enterprises, activities and parameters; and providing the necessary sources and information that supports regulatory decision-making institutions and their decisions. Good regulatory governance should have credibility, legality and transparency (Pardina and Schiro, 2018:3-4). Regulatory models and governance systems should be compatible with the levels of regulatory commitments, development of institutional regulations, and human resources just as much as fitting the political, constitutional and legal structures of countries (Eberhard, 2006; Akin, Aytun and Aktakas, 2014). The basic principles in the independent regulator governance model are given in Table 2.

Table2. Principles in the independent regulator governance model

1.Independence	Freedom to make decisions within scope of authority. Insulation from short-term political pressure.
2.Accountability	Accountability for actions (reporting and audit, transparency, ethical and procedural obligations)
3.Transparency and Public Participation	Availability of documents and information used for decision-making for public inspection. Publicly available procedures and criteria for decision making.
4.Predictability	Reasonable certainty as to the principles and rules that will be followed within the overall regulatory framework.
5.Clarity of Roles	Careful definition of roles in law, avoiding duplication of functions, interagency conflicts, mixed signals to stakeholders, policy confusion.
6.Completeness and Clarity in Rules	Provision, to all stakeholders, of clear and complete timely advance notice of the principles, guidelines, expectations, responsibilities, consequences of misbehaviour, and objectives that will be pursued in carrying out regulatory activities.
7.Proportionality	Regulatory intervention being proportionate to the challenge

	being addressed.
8.Requisite Powers	Possession of all powers required to perform functions.
9.Appropriate Institutional Characteristics	Ability to consistently perform professionally, competently, and thoroughly.
10.Integrity	Existence of strict rules governing the behaviour of decision makers, so as to preclude improprieties or any conduct appearing to be improper.

Source: Pardina and Schiro, 2018:5

In addition to the general principles of governance, Table 2 also includes the main principles that make sure public regulation process is transparent, foreseeable, accountable and consistent.

These main principles, which have been achieved in developed countries to a great extent, are not yet on desired levels in developing countries, which have not completed their institutionalisation. When we think about the role and importance of the energy sector and public services in developing countries, then discussions about environmental problems, sustainability, institutionalisation level, and efficiency-equity trade-off become even more important for regulating the sector. In this regard, the energy sector in developing countries and the related public regulations emerge as an important area of research.

4. General Features of the Energy Markets in Developing Countries

The energy demand in the world has shown a rapid increase in recent years. With industrialisation gaining momentum in developing countries, the oil demand in the world increased by 24% between 1990-2009; and it is expected to increase by 12% in 2025. The factors affecting the energy demand are population, demographic trends, economic activity level, income, and technological and structural changes. Beginning to use energy systems that propel economy requires a series of infrastructure investments from the technologies generating energy to energy distribution systems. Although there is no shortage of reserves for meeting energy demands, the decrease in outputs obtained from the currently used areas leads oil companies towards areas with higher economic, environmental and political costs. This situation increases the tensions in the markets. In this regard, energy policies are among the most difficult problem areas that the world faces. When making decisions regarding energy policies, governments must balance their priorities such as security and supply costs, national and global environmental issues, economic growth and development, poverty alleviation, import dependency, resource incomes, technological leadership and diplomatic relations. All of these require international cooperation. The collective results of the decisions in these matters affect the rate and size of global warming, the stability of energy markets, and establishing amicable

international relations regarding energy (Frogatt, 2012:1-5; IIASA, 2014).

The impact area of the energy sector created by its intrinsic conditions and limitations is so wide and critical that it is not possible to leave this sector to market conditions alone. Therefore, many developing countries resort to public regulations in the energy market. These regulations and their general characteristics are further detailed in the next section.

5. Public Regulations in the Energy Markets of Developing Countries

When regulations implemented in the energy sectors of developing countries are examined in terms of sustainable development, two aspects come to the fore, which are energy efficiency (demand-side) and renewable energy (supply-side). Each requires different policy interventions with regards to security of supply and environmental concerns. The concerns about ensuring security of supply in energy make it necessary for energy consumer countries to produce state-centric solutions. In the energy market, market powers function via supply and demand price mechanism; the key determinant in their investments is the market; however, as with all markets, energy market cannot function without institutions. Institutions embody formal rules, informal limitations and coercive mechanisms. With regards to energy efficiency, energy sector regulators should have the necessary technical capacity, motivation (especially in cases where there is an excessive demand for

electricity), and efficient policy intervention tools for institutional governance. In domestic markets, institutions aim to fix market failures, decrease operational costs, and determine trade standards within the market (Goldthau and Witte, 2008: 10; Berg, 2015).

What lies under the quest for renewable energy sources is the fact that the majority of the world's energy needs depend on fossil fuels, and the increase in greenhouse gas emissions that this need causes. The increased interest in the issue of environmental pollution makes it necessary to implement many regulations in the energy sector, as well. Indeed, the energy need of emerging market economies is expected to increase 90% by 2035. Therefore, new ways are being sought for the generation, distribution and consumption of energy. Green growth strategies include efficient management of natural resources and evaluating the cost of environmental degradation, supporting innovations for environmental and economic purposes, taking into consideration the interaction between efficiency and environment, and creating opportunities for new markets and industries. In order to realise these, there is a need for regulations and the establishment of a new market structure that will remove the obstacles for green investments and that will move us away from the existing fossil fuel energy systems. For decreasing the environmental degradation, a range of means and methods can be used from determining standards to using command and control methods. In addition to these regulatory tools, it is also possible to use softer

policies such as carbon pricing, research and development, education and creating knowledge (OECD, 2011).

Energy sector is highly critical in terms of sustainable development; and it has distinctive characteristics that influence the reform process. The size and type of investments that will be made both by the public sector and the private sector in the energy market fall into the authority and purview of many political and bureaucratic institutions. For instance, the public authorities responsible for protecting the environment has the duty to check and audit the technologies that will be used in energy generation, the costs and credibility of the provided services, and the suitability of the places that the projects will be carried out. While the responsible ministry plans the investments, the central bank deals with debt service and the transferring of foreign currency in energy purchases; and the ministry responsible for work safety provides the necessary health and safety conditions for the workers. The institutions and tools that regulate the energy market are the most important elements of this system. What determine the nature of these institutions and tools is the country's legal and administrative framework, its market structure, and the private sector's dominance within its energy market. If public sector dominates the energy market, we can talk of a vertically integrated system; the private sector has limited mobility in such a structure. In such cases, regulations are mostly made through service and management contracts instead of more complicated mechanisms. In build-operate-transfer type independent energy regulations, such

frameworks are shaped around comprehensive contracts between parties. The key document of these contracts is the power (energy) purchase agreement. Energy purchase agreement covers the topics of taxes, indemnities and other technical requirements. Furthermore, the procedures to be followed in case there are any conflicts and the issues of payments and invoicing are covered by these contracts, as well. Implementation agreement, on the other hand, cover the obligations and rights of the private firm and the state usually, there are also guarantee agreements made between the parties. These are agreements in which the state guarantees that it will live up to its financial obligations to the firm undertaking the project should the services offered by the public utilities fail (Jung, 2007).

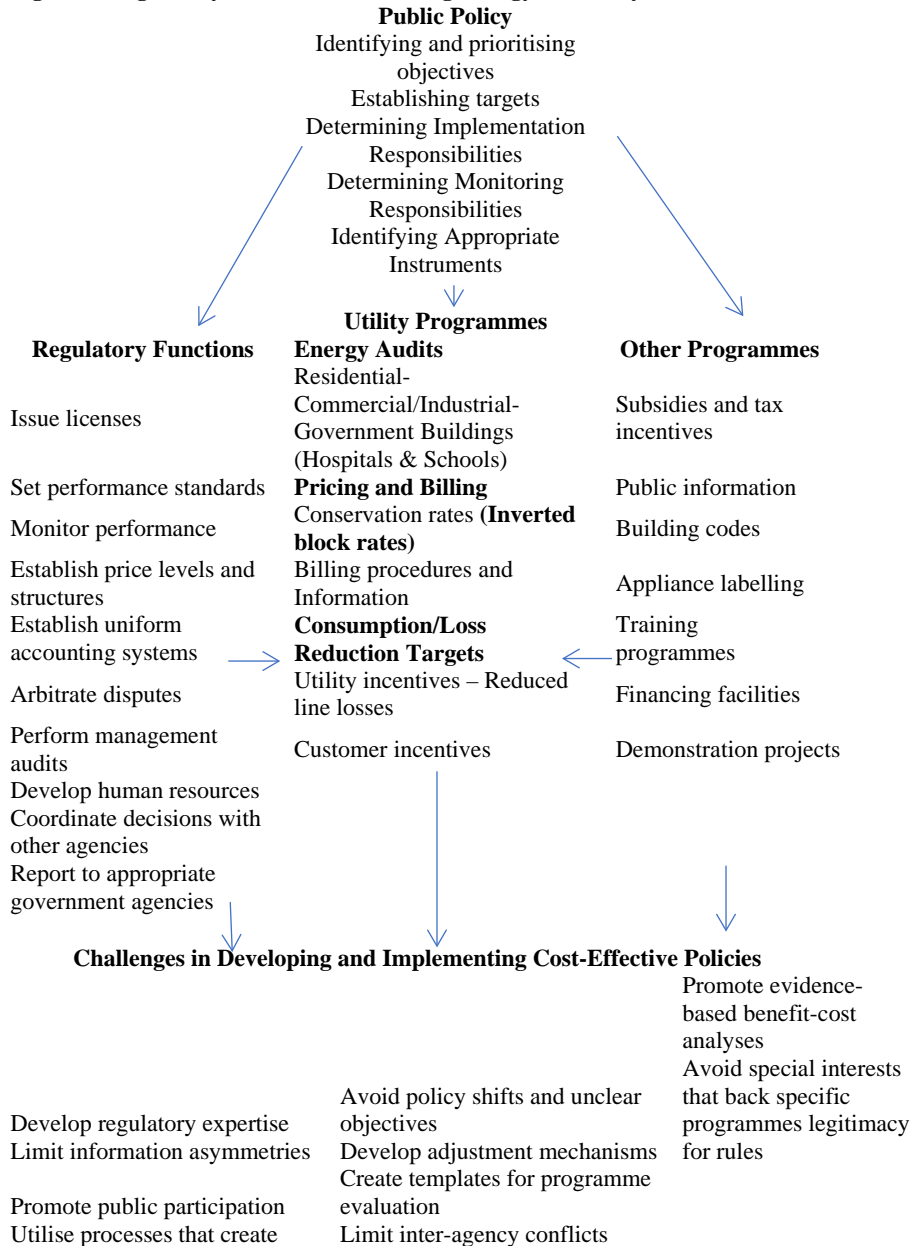
Even in middle-income countries, regulations made via different contracts and third party guarantees against regulatory risks are needed in order to attract big private investments. On the other hand, in small countries with weak institutions, regulations that are not based on contracts are used to a larger extent. In energy markets; economic regulations, market participants (networks and service providers within the market that are generating and supplying energy) and users are all official parts of governance. These regulations are used to control prices and maintain efficient distribution of services. As well as being intended for public assets to protect public interests, regulations can also be directed towards certain private assets by taking into consideration the intrinsic conditions of the markets. There

are also some factors that complicate regulations in energy markets. Because in energy markets;

- The assets are capital intensive; they become sunk cost after being invested; they cannot be redeployed in a profitable way; the investors want to protect themselves from being exploited.
- In a sector with a large scale and scope as the energy market, the network segments do not allow many firms to be active in the energy market; therefore, the government cannot rely on the market mechanisms for protecting the consumers.
- The prices of energy resources like electricity are highly political as they are closely related to the welfare of households.
- Energy sector acts as intermediate input for the development of other sectors (Jones, 2006).

Figure 1 summarises the political and institutional features of regulations made in order to ensure energy efficiency. The figure, in which public policy process is detailed, demonstrates the regulatory function of policies, the general features of public utility programmes, and the obstacles and limitations that policies face. According to this figure, public policy process covers processes such as making jobs and responsibilities clear and transparent, and defining goals. Regulatory functions are about highlighting the importance of utility programs and establishing coordination among institutions. Public utility programmes cover energy audits as well as other programmes about fiscal, financial and legal issues.

Figure 1. Regulatory Functions Influencing Energy Efficiency



Source: Berg, 2015: 17

6. Public Regulations in Developing Countries: The Case of BRICS Countries

Developing countries' efforts to form economic and political cooperation among themselves stem from the need to create an alternative to the international organisations that steer and manage the global system. BRICS countries are Brazil, Russia, China, India and South Africa. The BRICS agreement, with the inclusion of South Africa in 2009-2011, is regarded as a significant dimension of the South-South cooperation. Each BRICS country has different social and cultural characteristic, traditions, development levels and political systems. Yet, what strengthens BRICS countries is the richness of their natural resources. Natural resources are highly important in terms of production and export activities and foreign diplomacy. However, having rich natural resources do not directly translate into economic development. Using the natural resources of a country for diplomatic purposes depends on the existence of national institutions that coordinate the economic activities within the sector. The discussions on the topic of energy cannot ignore the momentum that the BRICS countries' development processes have gained, and the impacts this has had on the world economy. Indeed, the energy needs of these countries are expected to have a significant impact on the economy and global order in the future. These countries are making big investments in the fields of clean energy and renewable energy. The BRICS countries together account for the 38% of the global carbon emissions. BRICS provide a perfect division of labour within the

energy sector. Russia and Brazil are the primary exporters whereas China and India are the consumers (Wilson, 2015; Sahu, 2016; Xavier, Alves, Steiner, Dunda, 2018).

The general features of the methods employed by BRICS countries to regulate the energy markets are further detailed in the following section.

a. Brazil:

Brazil opened its energy market to private sector in the 1990s; and in 2004, it made regulations with regards to security of supply, and ensuring competition and stability in the market. Its regulations on renewable energy go back to 2002. Electricity generation in Brazil has been mainly based on hydroelectric power plants. However, over time, renewable energy sources have also become an important part of electricity generation. The reason for this is the fact that investments in the field of renewable energy are supported with strong incentives. To prevent any problems in supplying energy to remote areas in the country, grid operations are controlled and coordinated centrally. The Brazilian government has constitutional rights and obligations regarding the services offered within the energy market. Private companies can be involved in the sector only as much as the state allows, with Brazilian companies having priority. Ministry of Mines and Energy, National Council on Energy Policy and the Committee for Monitoring of the Electricity Sector are the central bodies that make public policies in the energy sector. The independent supervisory institution ANEEL, which was made autonomous by the

central government but is affiliated to the Ministry, is responsible for overseeing public policies and sectoral activities, ensuring compliance to rules and laws, and monitoring contract performances (Ladeira et al., 2016).

b. Russia:

Russia plays a key role in the global energy market. It is in a co-dependent cooperation with the EU regarding oil and gas. Russia is the biggest non-OPEC country to produce and export oil. It is restructuring its own energy structure to further develop it based on research and development activities (Sahu, 2016).

There is an increase in the number of laws and regulations in Russia for increasing energy efficiency. In 2003, the Russian government determined Russia's energy strategies and increased its support for energy efficiency works. In order to increase energy efficiency, it aims to support private sector and decrease the energy budget of the public. The legislation prepared for this makes the energy efficiency measures a part of the regional policies. In May 2008, the Russian government, the Ministry of Development and other ministries were ordered to prepare incentive projects for energy conservation. These include determining a minimum energy standard in energy consumption, establishing energy efficiency markets, and creating new partnerships between the public and private sectors for energy conservation. The regulations in 2008-2009 focus on supporting renewable energy. With the measures taken via the legislation that was put into effect in 2008, Russia's energy

consumption intensity was aimed to be decreased by 40% in comparison to 2007. Some regulations made as precautions for buildings, workplaces or dwellings in order to save (Wilson, 2015).

c. India:

The Indian economy is in a rapid transformation, and the energy sector plays a key role for efficiently utilizing its full potential. In this regard, the Indian government is carrying out many practices ranging from the financial structure of companies active in the energy sector to calculating energy assets. The transformations that the country's energy sector has been going through have been developed to eliminate inactive capacity, enable efficient usage, ensure security of supply and support renewable energy investments. The energy sector carries out public policies within the framework provided by the Ministry of Power and the Renewable Energy Ministry. To prevent any conflicts between policy goals and institutions, the Ministry of Power, the Renewable Energy Ministry and the Ministry of Coal are gathered under one ministry. The primary law on electricity generation is the 2003 law that regulates its generation, distribution and trade. In India, there are also independent institutions on central government and state government levels. These institutions have jurisdiction, as well. The implementation and monitoring of renewable energy projects, and the enforcement of penalties also fall under the jurisdiction of these institutions. The Department of Atomic Energy regulates nuclear energy; in addition, a Nuclear Safety Regulatory Authority, which will be an autonomous institution, is in the making.

The Supreme Court intervenes when there are firms that disrupt the competitive market. Although generating electricity does not require a licence, its distribution does; and land acquisition, environmental, institutional and labour safety issues make going through the legal approvals and procedures process imperative. State-owned enterprises continue to constitute an important place within the system; yet in the last decade, foreign direct investments began to be able to hold 100% of the shares in energy generation, while also holding 49% of the shares in its transmission and distribution, with the exclusion of nuclear energy. These investments can be possible via specific legal regulations. The interstate transmission system belongs to the public while the intrastate transition is owned by public-private enterprises. The ownership of oil and gas mining sites in India belongs to the state (Menon and Bhagat, 2016).

d. China:

The energy sector in China is for the most part under the ownership and supervision of public authorities, yet there are also foreign and local enterprises in the sector to a certain extent. The regulations in China primarily focus on environmental issues and increasing cleaner energy resources. The main axis of the 2016-2020 economic development plan is about energy investments and improving the energy sector. China's role within the global economy, both as a producer and a consumer, makes the importance given to the energy market and the regulations that are implemented even more meaningful. The Ministry of Land and Resources is the primary

institution in China responsible for the energy sector both in terms of administration and management. The National Development and Reform Commission is influential in the oil and gas industries, and in the evaluation of the investment projects in these areas. The authority responsible for contracts is the Ministry of Commerce. There are many laws and regulations in China that shape the energy sector. The 1986 Mineral Resources Law constitutes the basis for generation and research activities. Since 2008, regulations about energy conservation and renewable energy have been included in the system. The legal regulations in China make it imperative that the foreign companies wishing to enter into the Chinese market partner with Chinese companies. Ministry of Commerce permission is required for storing and trading oil, and for all the works related to these activities. To obtain these permissions, companies are required to have the necessary capital levels as well as making long term supply contracts and having stable sales channels. Furthermore, all local and foreign companies are required to obtain importing licence. In order to trade oil and gas, the safety standards determined by the public authorities must be met. Public authority either determines the prices directly, or it is involved in the matter indirectly by guiding the sector. In addition, since 2010, industry activities and structures that use clean energy are encouraged in order to fight climate change (Sun, Su and Zhang, 2016).

e. South Africa:

In South Africa, there are three institutions that are actively involved in regulating the energy market. The first is the National Energy Regulator, founded in 2004, which makes regulations in the fields of oil and gas. In 1999, the National Nuclear Regulator was founded to regulate the activities in the field of nuclear energy. For oil research activities, the Petroleum Agency began to operate in 2002. Supported by laws, these institutions have the power to regulate the sector in a wide range of activities with approving licences and granting licencing authority being in the first place. In South Africa, energy generation, distribution and transmission belongs to the public to a great extent. The private sector is encouraged to work in the renewable energy field. The National Energy Regulator has the authority to regulate commercial activities such as selling and buying electricity. Local authorities are responsible for electricity sales (Fontana, Govender, Wing, 2016).

General Evaluation

As energy is not only a variable in economy but also in diplomacy, making sure that it is used efficiently is the primary reason why public sector regulates energy markets. The environmental issues caused by the generation and consumption of energy based on fossil fuels have shown the importance of using renewable energy as well as the importance of energy conservation and its efficient use. The incentives and other encouraging tools employed by the public sector

for investments in this regard have been influential in the prevalence of using renewable energy resources.

Although the developing countries' efforts to produce more in order to keep up with the global competitiveness cause environment and social justice concepts to be neglected from time to time, the discussions on sustainable development have somewhat changed this. However, eliminating the public sector monopoly on energy, which is an infrastructure service, and establishing generation, distribution and transmission channels together with the private sector have not been successful in getting rid of the concerns in the matter completely.

When the BRICS countries, which have increased their economic and political powers within the global system through the momentum they have gained during their development process, are examined, similar tendencies can be seen behind the structural and public regulations that they employ. Considering their impacts on carbon emission in particular, it can be said that these countries have created investment opportunities by implementing many institutional and legal regulations along with the public incentives regarding renewable energy.

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CHAPTER 2:

**THE EFFECTS OF INFLATION AND ECONOMIC GROWTH
ON CDS: THE CASE OF BRICS+T COUNTRIES¹**

Assist. Prof. Mustafa KIRCA²

Assoc. Prof. Füsün ÇELEBİ BOZ³

Assist. Prof. Ümit YILDIZ⁴

¹ This study is extended from the the paper titled “The Effects of Inflation and Economic Growth on CDS: The Case of BRICS+T Countries” presented as a full-text paper at IV. International Conference on Applied Economics and Finance (ICOAEF’18).

² Düzce University, Akçakoca Bey Faculty of Political Sciences, Department of Economics, Düzce, Turkey. mustafakirca52@gmail.com

³ Bayburt University, Faculty of Economics and Administrative Sciences, Department of Economics, Bayburt, Turkey. fcelebi@bayburt.edu.tr

⁴ Bayburt University, Faculty of Economics and Administrative Sciences, Department of Economics, Bayburt, Turkey. umityildiz@bayburt.edu.tr

INTRODUCTION

Today, when the world becomes a global market, it is quite important for investors to be informed about the risks they may face while investing. However, it is very difficult and costly for each investor to reach this information individually. For this reason, investors try to learn the risks they face before making an investment decision with less effort and less cost. In this case, there are various risk indicators that show the country risks to investors. Country credit ratings and credit default swaps (CDS) are among the leading indicators of these risk indicators.

Sovereign credit ratings defined as alphanumeric indicators given to countries by a number of independent institutions called credit rating agencies. Credit rating agencies determine a credit rating for each country by evaluating a number of economic and political factors and these ratings are announced with a number of easy to understand symbols. These symbols guide investors about the credibility of countries. On the other hand, CDS is an important risk indicator that is closely monitored by investors. CDS is defined as an instrument that gives the holder right to sell a bond for its real value in the case of a default by the issuer (Kliber, 2011, p.112). CDS premiums are closely monitored by investors in terms of showing the market risk simultaneously.

CDS contracts can be issued for a variety of financial debt securities, as well as for government' debt securities. With this feature, CDS contracts provide important information about the credibility of

countries. The fact that CDS premiums show country risk means that they are closely related to economic and political factors. Therefore, in the literature, there are many studies examining the relationships between CDS and economic and political variables. In this context, the aim of this study is to analyze the relationship between CDS premiums and basic macroeconomic variables for selected countries. For this purpose, the relationships between CDS, inflation and economic growth are analyzed for the BRICS-T (Brazil, Russia, India, China, South Africa and Turkey) countries in this study. In the study, industrial production index representing the economic growth and consumer price index representing the inflation are used. The data set and method used in the study are given in detail under the title of the method. The study consists of four sections, including literature, methods and findings, and conclusion titles, together with this introduction section.

1. Literature

When we examine the relationships between CDS and macroeconomic variables, it is seen that various economic variables have an effect on CDS premiums according to related literature. In this context, variables such as economic growth, current account/GDP, debt/GDP, debt/export, reserves/import, reserves/debt, inflation rate, risk-free rate, real exchange rate, household debt and risk appetite are included in econometric models as potential explanatory variables. Apart from these variables, variables such as the growth rate of exports, government revenues, interest rates and policy volatility are examined in the analysis also. (Sand, 2012, p.19).

Abid and Naifar (2006) explain empirically the determinants of credit default swap rates using a linear regression. In the study they conclude that credit rating is the most determinant of credit default swap rates. According to study, credit rating is considered as the most significant and first indicator of the credit risk and the cost of borrowing.

In the another study, Fabozzi, Cheng and Chen (2007) examine the influence of various fundamental variables on the pricing of credit default swaps. According to result of the study the risk rate, the effect of the industry sector, credit rating and liquidity factors are efficient for determining CDS spreads. In the study, especially they state that credit default swaps that trade with greater liquidity have a wider credit default swap spread.

Longstaff et al. (2007) investigated the risk outlook of government bonds in order to examine credit risk determinants in the financial asset pricing model. In this study, 26 developed and emerging economies are investigated for the period of November 2000-May 2007. According to the results, there is a high correlation between the CDS premiums of different countries and more than 50% of the change in credit risk premiums are explained by three basic variables. These variables are the American stock exchange (AMEX) and the high-yield bond market, capital flows and global risk.

Pan and Singleton (2008) investigated the CDS premiums for Turkey, South Korea and Mexico and they evaluated the factors that influenced the change of CDS premiums. According to this study,

besides the country-specific and regional economic risks, the effect of risk appetite of investors on credit risk premium has become evident.

Remolona et al. (2008) examined 24 countries selected from Latin America, Middle East and Eastern Europe regions for the period of January 2002 -May 2006. According to the study, while there is a positive relationship between the country's risk and risk premiums and inflation, there is a negative relationship between the country's risk and risk premiums and foreign exchange reserves in the short-term. The study also shows that the volatility index has a positive effect on CDS premiums.

Tang and Yan (2010), in their study on the dissemination of CDS, found that the average loan spread decreases the growth rate of GDP, but it increases the volatility in the growth rate of GDP and the risk of the stock market jump. In addition, they stated that the most important component of the spread of credit at the market level is investor sentiment.

Apart from these studies, while some of the recent studies (Kliber (2014), Aizenman et al. (2013), Liu and Morley (2012) and Liu and Morley (2013)) explained the CDS premiums with local economic factors, Longstaff (2011), Wang Yao (2014), Aksoylu and Görmüş (2018) and Yüksel and Yüksel (2017) explained the CDS premiums with global economic factors. According to Kliber's (2014) study, crises in both Hungary and Greece have led to an increase in volatility in Central European Countries. According to study, shocks come from Greece caused an increase the correlation between markets Hungary

and Poland. However, these shocks less affected the correlation between markets of Hungary and the Czech Republic.

Liu and Morley (2012) found that the exchange rate has the most significant effect on CDS premiums and that the interest rates in the country has limited effect on CDS. Liu and Morley (2013) stated that there is limited number of evidence of a relationship between credit ratings and CDS premiums. In addition, they emphasize that the determinants of the relationship between credit ratings and CDS premiums are macroeconomic variables which also indicate that the economy is healthy. According to this, the exchange rate, industrial production, the share of the price index and the unemployment rate statistically have a significant effect on these premiums.

Aizeman (2013) investigated the effect of the factors that make up the financial area (debt/tax and deficits/taxes) and other economic factors on the pricing of the country risk and he focused on five countries (Greece, Ireland, Italy, Portugal and Spain). According to the estimations made, the factors that make up the financial area and other economic factors reveal statistically and economically significant results.

Longstaff et al. (2011), evaluating CDS premium in terms of global economic factors, emphasized that credit risk is related to global factors and global factors are more effective than local economic measurements. They also state that risk premium volatility also has a significant effect on CDS premiums.

In his study, Kargı (2014) examine the relationship between chosen macroeconomic data and CDS spreads for the period of 2005Q1-2013Q3 for Turkey. In the study he uses ADF and PP unit root test, Engle-Granger cointegration test, Johansen-Juselius co-integration test and Granger Causality test for the analyses. According to results, even if CDS datas have relation with GDP in a long term, it didn't have that relation in a short term and the most efficient variable is the interest rates for CDS spreads.

Wang and Yao (2014) examined the financial components affecting the CDS premium and volatility in 6 Latin American countries for the period of August 2006 September 2010. They made their analysis for the period of before and after the bankruptcy of Lehman. In the study, a significant relationship was found between the VIX index showing the global risk perception and the sovereign risk premium before the bankruptcy of Lehman. However, after the bankruptcy of Lehman, they found no relationship significantly and that the impact of the Greek Crisis is significant on Latin American CDS premiums. They also emphasized the importance of liquidity risk after the bankruptcy of Lehman.

In the another related study, Baltacı and Akyol (2016) investigate the relationship between macroeconomic variables and CDS spreads by using Generalized Method of Moments (GMM) and Residual Linear Regression Model for developing countries, including Turkey. In the sudy they conclude that increase in current account balance, real interest rates, GDP growth rates, inflation rates and

positive changes in S&P Global Reit Index significantly effects on CDS spreads.

Yüksel and Yüksel (2017) evaluated the global risk factors affecting the change in CDS premium and volatility during the European Debt crisis for 19 countries. They stated that the Greek debt crisis is related to CDS premium and in most of the countries examined, there is a positive relationship between the VIX index (shows the global risk perception) and these premium. In addition, according to study the VIX index has a strong effect on increasing the volatility of the CDS premiums.

Aksoylu and Gümüş (2018) examined the relationship between CDS premiums and local economic factors such as exchange rate (US Dollar) and 10-years U.S. treasury interest rate for 9 developing countries (Turkey, Brazil, Argentina, Mexico, Poland, Indonesia, Malaysia, Philippines and Portugal) for the period of 2005 to 2015. They also included the global risk index in the model. According to the study, while there is a causality relationship between exchange rate and CDS premiums for Indonesia and Poland, no such relationship is found in other countries. On the other hand, according to results, there is a causality relationship between CDS premiums and the VIX index for Argentina, Indonesia, Philippines, Malaysia and Poland.

Yılmaz and Ünlü (2018) examines the determinants of CDS spread by using time series methods for the period of 2011M01-2017M03 for Turkey. In the study, they conclude that there is granger causality directed from Current Account to Foreign Exchange and

Foreign Exchange to CDS spread. On the other hand, according to results of the study, there is positive relationship between Foreign Exchange and CDS spread but there is no statistically significant relationship between Current Account and CDS spread.

2. Data and Model

This study investigates the effects on the relationship between BRICS+ T (Brazil, Russia, India, China, South Africa, and Turkey) monthly industrial production index (IPI) and inflation (CPI)⁵ for the 2015M12-2018M06 period on the credit risk swap of variable (CDS)⁶ by using model 1 as shown below;

$$CDS_{i,t} = \alpha_0 + \alpha_1 CPI_{i,t} + \alpha_2 IPI_{i,t} + e_{i,t} \quad 1)$$

The constant term coefficient of model 1 is α_0 , α_1 and α_2 are the slope coefficients of independent variables. The expected sign of these coefficients is positive and negative. $e_{i,t}$ is the error term of the model. “i and t” indices that the variables used are panel data. \dot{I} = BRICS + T refers to the time dimensions of the panel with the horizontal section of the panel, “t= 20015M12, 2016M01, , ‘018M06” refers the time dimension of the panel. Changes in CPI and IPI are expected to have effects on CDS.

⁵ Data on IPI and CPI variables were obtained from OECD database.

⁶The data for the CDS variables was obtained from <http://cbonds.com/>

3. Method and Findings

In this study, we investigate the effects of CPI and IPI on CDS by using the dynamic panel data analysis. The empirical part of the study consists of five stages. In the first stage, the cross-sectional dependence of the variables analyzed using by LM, developed by Breusch and Pagan (1980), LM and CD developed by Pesaran (2004) and finally using LM tests developed by Baltagi, Feng and Kao (2012). The purpose of using the cross-sectional dependency test is to determine the analyzes that will be used in later stages. If there is a cross-sectional dependence at variables, the second-generation analysis is used, if there is no cross-sectional dependence at variables, the first-generation analysis is used. H_0 shows no cross-sectional dependence in the setests. If the probability values of the calculated statistics are smaller than the significance levels, H_0 is rejected. This means that there is a cross-sectional dependence for significant variables. As mentioned above, in this situation the analysis should be continued using second-generation tests. Table 1 shows the cross-sectional dependency test results of the variables. For all tests, three variables were found to have a cross-section dependence.

Table 1. Cross-Section Dependency Test Results

Variables	CDS		CPI		IPI	
	Calculated Statistics	Prob.	Calculated Statistics	Prob.	Calculated Statistics	Prob.
Breusch-Pagan LM	220.51*	0.001	136.75*	0.001	91.68*	0.001
Pesaran scaled LM	36.42*	0.001	21.13*	0.001	12.90*	0.001
Bias-corrected scaled LM	36.31*	0.001	21.02*	0.001	12.79*	0.001
Pesaran CD	14.13*	0.001	2.17*	0.001	5.30*	0.001

*There is a cross-sectional dependence on variables according to all statistical significance levels.

After testing the cross-sectional dependence, the stationary levels of the variables are examined in the second stage of the study. The existence of cross-sectional dependence in the variables requires the use of second-generation panel unit root tests. For this reason, stationary levels of variables are determined by using unit root test developed by Smith, Laybourne, Kim and Newbold (2004). The test which is developed based on Bootstrap, five statistics are calculated: IPS(t), Max, LM, Min LM and WS statistics. In the test, H_0 shows the existence of the unit root in variables, therefore, the variables are not stationary. However, if the probability values of the calculated statistics are smaller than the statistical significance levels, H_0 is rejected and it is determined that the variables are stationary. Table2 shows the unitroot test results for the fixed and fixed-trend model of the variables used in the study. According to these results, it is found that the three

variables used in the study are stationary in the first differences for both models (fixed and fixed-trend model). All of the variables are $I(1)$ ⁷.

Table 2. Smith et al. (2004) Unit Root Test Results

CDS				
	Constant Model		Constant-Trend Model	
Test	Level	First Difference	Level	First Difference
IPS Statistics (Probability)	-2.19 (0.062)	-4.25 (0.001)*	-1.35 (0.951)	-4.69 (0.001)*
Max. Statistics (Probability)	-0.04 (0.979)	-3.93 (0.001)*	-1.30 (0.856)	-4.30 (0.001)*
LM Statistics (Probability)	5.01 (0.057)	11.25 (0.001)*	2.40 (0.957)	12.88 (0.001)*
Min. LM Statistics (Probability)	2.08 (0.355)	10.43 (0.001)*	2.25 (0.880)	11.86 (0.001)*
WS Statistics (Probability)	-0.67 (0.860)	-4.01 (0.001)*	-1.18 (0.987)	-4.64 (0.001)*
CPI				
	Constant Model		Constant-Trend Model	
Test	Level	First Difference	Level	First Difference
IPS Statistics (Probability)	-1.46 (0.523)	-4.23 (0.001)*	-2.30 (0.600)	-4.30 (0.001)*
Max. Statistics (Probability)	-0.53 (0.871)	-2.90 (0.001)*	-1.34 (0.846)	-3.11 (0.001)*
LM Statistics (Probability)	2.68 (0.621)	10.93 (0.001)*	5.54 (0.341)	11.57 (0.001)*
Min. LM Statistics (Probability)	1.87 (0.451)	7.36 (0.001)*	3.38 (0.610)	8.15 (0.001)*
WS Statistics (Probability)	-0.96 (0.713)	-3.20 (0.001)*	-1.97 (0.645)	-3.67 (0.001)*
IPI				

⁷The IPI variable is $I(0)$ according to the Max Statistics in fixed model and in the fixed-trend model, IPS and LM statistics of the IPI variable are $I(1)$.

Test	Constant Model		Constant-Trend Model	
	Level	First Difference	Level	First Difference
IPS Statistics (Probability)	-1.81 (0.186)	-7.62 (0.001)*	-2.62 (0.095)	-7.48 (0.001)*
Max Statistics (Probability)	-1.61 (0.048)*	-7.61 (0.001)*	-2.60 (0.012)*	-7.47 (0.001)*
LM Statistics (Probability)	3.70 (0.214)	19.04 (0.001)*	6.51 (0.110)	19.07 (0.001)*
Min. LM Statistics (Probability)	3.11 (0.064)	19.03 (0.001)*	6.44 (0.016)*	19.06 (0.001)*
WS Statistics (Probability)	-1.61 (0.123)	-7.92 (0.001)*	-2.94 (0.009)*	-7.85 (0.001)*

Means stationary according to the 5% significance level,

After the determination of the stationary levels of the variables, the slope coefficients in model 1 in the third stage are analyzed by using the test developed by Pesaran and Yamagata (2008). In this test, homogeneity is investigated by using $\tilde{\Delta}$ and $\tilde{\Delta}_{adj}$ statistics. In the test, H_0 refers to homogeneity. Homogeneity means that α_1 and α_2 are equal for all countries. If the probability values of the calculated statistics are smaller than the statistical significance levels, H_0 is rejected. In this case, it is understood that the model is heterogenous, that is, α_1 and α_2 change from country to country. As seen in Table 3, the probability values of the calculated statistics are smaller than the statistical significance level of 5%. In this case, model 1 is heterogeneous.

Table 3. Homogeneity Test Results

Test	Test Statistics	Probability
$\tilde{\Delta}$	16.969*	0.0001
$\tilde{\Delta}_{adj}$	17.921*	0.0001

*indicates the rejection of the null hypothesis at 5% level of significance

In fifth part of our study it is investigated long-run relationships between the variables with cointegration test which was developed Westerlund and Edgerton (2007). The reason for using of this test is an available test in case of either cross-sectional or heterogeneity. In this test hypothesis is as below H0: There is cointegration. Westerlund and Edgerton used LM statistics with the aim of testing hypothesis. They have calculated two piece of probability values in related to these statistics. The first of these is valid in case of cross-sectional dependency. Because of the cross-sectional dependence in the variables the bootstrap probability value is taken into account to test the hypotheses for using variables in this study. In this table 4 is seen that results of cointegration test. For constant model, H0 cannot be rejected according to both OLS and Yule-Walker estimators the probability values of the bootstrap are greater than probability value of statistical significance levels. In this case it is found that there is a cointegration relationship between the variables. In addition, when the constant-trend model results are considered, it is seen that there is only a cointegration relationship according to the Yule-Walker estimator. Considering the constant model cointegration test results show that CPI and IPI have an effect on CDS in the long term.

Table4.Westerlund & Edgerton (2007) Cointegration Test Results

Constant Model -OLS Results		
<i>LM Statistics</i>	<i>Boostrap Probability</i>	<i>Probability</i>
3.623	0.194*	0.001
Constant Model -Yule Walker Estimator Results		
<i>LM Statistics</i>	<i>Boostrap Probability</i>	<i>Probability</i>
3.626	0.546*	0.001
Constant and Trend Model -OLS Estimator Results		
<i>LM Statistics</i>	<i>Boostrap Probability</i>	<i>Probability</i>
3.546	0.039	0.001
Constant and Trend Model -Yule Walker Estimator Results		
<i>LM Statistics</i>	<i>Boostrap Probability</i>	<i>Probability</i>
3.546	0.483*	0.001

*indicates the rejection of the null hypothesis at 5% level of significance

Finally, after the determination of the cointegration relationships between the variables in the sixth stage, the cointegration coefficient estimates were made. In order to make the estimation of the coefficients, the mean group estimator was used which was developed by Pesaran and Smith (1995). As it is seen an estimator which can be used when the model is heterogeneous is used in this study. Table 5 shows the estimated cointegration coefficients for the panel. When the coefficients are analyzed, one unit change CDs in BRICS + T countries' CPIs increase by 14.52 units. However, with the absence of a statistically significant effect on the CDI, the sign appears to be negative as expected. In other words, in BRICS + T countries, while only inflation is significant on CDSs, economic growth is not

significant. However, the coefficients here are a common coefficient of the panel. Because of the heterogeneous structure in the model, these effects and significance may vary from country to country.

Table 5. Pesaran ve Smith (1995) Coefficient Estimation (Panel)

Variable	Coefficient	z statistics	Probability
CPI	14.52*	2.4	0.016
IPI	-2.95	-0.67	0.501
Constant	425.05	0.91	0.362
Wald Chi2 =19.26			
Prob > chi2= 0.001			

*indicates the rejection of the null hypothesis at 5% level of significance

Table 6 shows the cointegration coefficient estimates of countries. When the coefficient values and significance are examined, it is observed that there are differences between countries. CPI has an effect on CDS for Brazil just like the throughout the panel and an increase in CPI by unit increases CDS by 24.26 units. Similarly, the only variable that is meaningful for CDS in Russia is CPI. One unit increase in CPI increases CDS value by 20.40 units in Russia, both CPI and IPI have a statistically significant effect on CDS in India and South Africa. The one unit increase in CPI for India decreases the CDS value by 2.75 units, and the one unit increase in IPI decreases the CDS value by 2.65 units. Here, the finding of the expected sign of CPI is different for India. For South Africa, the coefficients of the two independent variables are positive. One unit increases in CPI increases CDS to 36.20 units and one unit increase in IP increases to 14.79 units. The only changes in the IPI in China and Turkey have an impact on the CDS. The

one unit increase in China's IPI reduces the CDS value by -18.82 units. This value is -6.28 while in Turkey.

Table 6. Pesaran & Smith (1995) Coefficient Estimation

Coefficients for Brazil				Coefficients for Russia			
	Coef.	z stat.	Prob.		Coef.	z stat.	Prob.
CPI	24.26*	8.63	0.001	CPI	20.40*	6.93	0.001
IPI	-2.37	-0.83	0.409	IPI	-2.40	-0.88	0.380
Cons.	342.52	1.21	0.225	Cons.	334.50	1.12	0.262
Coefficients for China				Coefficients for Turkey			
	Coef.	z stat.	Prob.		Coef.	z stat.	Prob.
CPI	3.51	0.29	0.770	CPI	5.53	1.45	0.148
IPI	-18.82**	-1.79	0.074	IPI	-6.28*	-4.66	0.001
Cons.	2084.66**	1.85	0.064	Cons.	862.40*	7.07	0.001
Coefficients for India				Coefficients for South Africa			
	Coef.	z stat.	Prob.		Coef.	z stat.	Prob.
CPI	-2.75**	-1.78	0.075	CPI	36.20*	5.74	0.001
IPI	-2.65*	-4.12	0.001	IPI	14.79*	2.47	0.013
Cons.	391.70*	5.53	0.001	Cons.	-1465.47*	-2.44	0.015

* indicates the rejection of the null hypothesis at 5% level of significance

** indicates the rejection of the null hypothesis at 10% level of significance

4. Conclusion

In this study, which examined the effects of inflation and economic growth on CDS for BRICS + T countries, the relationship between the mentioned variables were determined as a result of the cointegration test in long term. Moreover, since the countries are heterogeneous, the effect and significance of both independent variables vary from country to country. While we look at the sign of the coefficients of the inflation variable in general, the coefficient in all countries are positive as expected except for India. When we look at the

sign of coefficients of economic growth variable, the coefficient in all countries is negative as expected except for South Africa. Considering the significance of the variable inflation in Brazil, Russia, India and South Africa, while the variable economic growth in China, Turkey, India and South Africa has a significant impact on the CDS.

The findings show that macroeconomic variables such as inflation and economic growth are important factors for CDS. At least one of the variables in each of the six countries examined has impact on countries' CDS it gives clues to the fact that the investors coming from abroad will follow the macroeconomic variables of the countries and act accordingly. the increase in CDS's for example as seen in Turkey, China and India, effect on economic growth negatively. This means that if countries continue to grow in a sustainable manner, CDS will decrease; The decrease in CDS also shows that country risks have decreased and thus investors or savings holders will increase their investments in these countries. However, South Africa should be discussed on the positive side of this relationship. This may be due to the fact that South Africa is lagging behind in the Gross Domestic Product compared to other countries.

The increase in inflation rates, in other words the lack of price stability, is an undesirable phenomenon both for macroeconomics and for investors. For this reason, the increase in inflation causes the risk premiums of the countries increase. This is an important finding that shows how price stability is effective on the risk perception of investors. For Brazil, Russia and South Africa, this can be said as a result of the

analysis. In India, the negative side of this ratio is an important issue to be discussed.

As a result, it is inevitable that macroeconomic variables will have an effect on CDS for countries. However, these effects vary from country to country. It is important to examine them in depth in future studies. In addition, as seen in previous studies, CDSs are affected not only by economic events but also by political events. It is useful to consider the explanations in this case.

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CHAPTER 3:
APPLICABILITY OF EVIDENCE-BASED
MANAGEMENT IN BUSINESS

Assoc. Prof. Özden AKIN¹

Assoc. Prof. Metin REYHANOĞLU²

¹ Hatay Mustafa Kemal University, Faculty of Economics and Administrative Sciences, Department of Business Administration, Hatay, Turkey, ozdendogan@gmail.com

² Hatay Mustafa Kemal University, Faculty of Economics and Administrative Sciences, Department of Business Administration, Hatay, Turkey, reyhanoglu@gmail.com

INTRODUCTION

In order to manage organizations more effectively and successfully, new management models are emerging and the development of these models is rapidly increasing. However, when these management models are examined, popular concepts are preferred rather than researching on organizational problems and solutions (McGill, 1988). Without research results, many fashion models and concepts introduced and marketed by managers, consultants and gurus have been proposed (Burnes, 1992). These models were updated and continued to be used. Turkey has also formed a similar stream that is the greatest evidence of “guru discourse” (Özen, 1999). Especially the management techniques that were founded in the U.S. were used in Turkish academic literature (Özen, 2002) and by Turkish organization management without questioning and proof of application. Due to the increase in fashion concepts in the field of management, researchers take less responsibility for the evaluation and development of different organizational models. Rather than attempting to explain and predict the consequences of managerial action, research efforts have been limited to understanding the different aspects of organizational life. Consecutive models such as centralization, strategic planning, decentralization through the objectives, competition and cooperation, total quality management and business process reengineering were applied.

Because of the increasing importance of organizational performance, especially the managers of the health sector and social

service policymakers, who are financing the sector, started to look for new organizational models and management techniques to reduce costs (Shortell, 2006). In this context, evidence-based practices offer a range of methods to politicians and managers in social work. Evidence-based practices are mostly applied to improve the quality of patient care in the health sector (Aarons, Hurlburt, and Horwitz, 2011; Aarons, Ehrhart and Farahnak, 2014). However, as evidence-based practices are a new topic, empirical studies have not been fully examined to reveal the advantages and disadvantages of social service institutions and managers (Briggs and McBeath, 2009: 244). Although there is a growing interest in the implementation of evidence-based practices (EBPs) in the organizational settings, there are also gaps as to how to implement EBP in the organizational structure (Aarons et al., 2014).

Therefore, the aim of this chapter is to provide some sort of information about the changes that should be realized during the implementation of the evidence-based management practices in the health and social services sectors, and the implementation of these practices in other organizations. For this purpose, in this chapter, it is tried to explain the origin of evidence-based practices and the main difficulties encountered in integrating this concept in social service institutions. Thus, by including the best evidence practices in the decision-making processes of organizations, a solution is sought about how quality and effective management should be in place.

1. Why is evidence-based practice needed?

The evidence-based management approach has first begun with the implementation of organizational and managerial changes in the health sector. It has emerged in the 1970s in the field of health, and it was noted that health care decisions should be based on evidence, not on experience and intuition. This practice has begun with the recommendations of Archie Cochrane, a British doctor, and later it was used in 1992 for the education and training of medical students and for the solution of clinical problems (Estabrooks, 1999; Kocaman, 2003).

Inspired by the evolution of Evidence Based Medicine, many researchers have started to query for empirical evidence on the efficiency and effectiveness of different organizational models. Many health managers and policymakers have begun to demand more scientific evidences to prove their decisions on organizational design (Axelsson, 1998). However, the implementation of empirical findings of the researchers by the managers have led to criticism and confrontation by the healthcare workers. To manage health expenditures more effectively and efficiently, as well as the transparency of public resources has created this entailment. In conclusion, the reasons why evidence-based practices have gained importance arose from the necessity of responding to political, financial and accountability-related principles (Briggs and McBeath, 2009: 244).

The tendency of managers not to change their existing administrative practice habits increases the need for an evidence-based management approach. Even if a new and different situation is

encountered, the managers tend to maintain the current situation because adaptation to the models proposed by consultants requires effort and time. However, this situation leads to incomplete and incorrect decisions and may decrease in performance (Pfeffer and Sutton, 2006). The evidence-based management approach enables action to be taken on predetermined evidence for policymaking and decision-making.

2. Evidence-based practice

The concept of evidence is defined as information based on scientific evaluations as it is an applied field used by employees and managers in the applied health sector (Şenyuva, 2016). Evidence-based practices are clinical-based processes and health interventions that include the process of reviewing, evaluating, and deciding on the basis of research evidence for treatment and various practices (Arslan, Şener & Küçük, 2015; Aarons et al., 2016; Aarons and Sommerfeld, 2012: 423). Evidence-based practice is a concept in which the best research evidence is obtained through systematic research and is thought to be formed by the integration of personal experiences gained with clinical practice and patient's preferences and values.

Evidence-based management is defined as the conscientious, clear and reasonable use of the best available judgment and experience when it comes to making strategic decisions about organizational activities (Kovner, Elton and Billings, 2000; Briggs and McBeath, 2009: 244). In this sense, it is a method that supports effective decision making. It examines different approaches to management decision-

making rather than a uniform management style (Briner, Denyer and Rousseau, 2009). This perspective has brought about changes in the role of middle management as well as senior management in organizations. It is seen that middle-level management has a significant effect on improving organizational performance rather than senior management. Accordingly, the roles of mid-level managers, implementing evidence-based practices, are important as key strategic actors (Dopson and Fitzgerald, 2006).

The adoption, implementation, and maintenance of evidence-based practices have become increasingly important for healthcare organizations (Proctor, 2007) and have improved the quality of care of patients and the accuracy of patient outcomes (Aarons et al., 2014). This method has some features such as the use of scientifically validated clinical interventions, regular data collection, recommending effective methods of cost-effectiveness by organizations and legislators, implementing social services and making them more transparent (Johnson and Austin, 2006). Evidence-based practical principles are widely used to organize service quality and management, particularly in general health, mental health, substance abuse, medical-related fields, and other similar sectors (Gray, 2001; Newhouse, 2006). Improving care costs and quality, increasing the number of correct care activities, standardizing patient care, increasing patient and nurse satisfaction and increasing confidence in health personnel are the reasons for the evidence base of patient care practices in the health sector (Jennings, 2000). Evidence-based practices provide a mechanism to improve the quality of managerial decision-making and problem

solving by clarifying how they use the information to make strategic decisions.

The review of the scientific literature combined with the views obtained from clinical practices in the development and implementation of evidence-based clinical practices yields a concrete conclusion. By making recommendations from these results, more accurate decisions can be made about patient care and standard practices can be provided by reducing the differences in the provision of health services (Grol, 2001). The sustainability of evidence-based practices is important in terms of not wasting the investments made for these practices and their positive effects on public health. In this sense, leadership is proposed as a key factor of practice and sustainability (Aarons et al., 2016). The consumer preference of the organizations performing these practices may increase by establishing this practice culture and specialization about the method within the organization.

3. Models for evidence-based management

So far, although they are frequently used by clinical and front-line employees, evidence-based practices have been considered to be applied in the field of general management. Despite the fact that there is no comprehensive study on the extent to which it is used in management, evidence-based management is supposed to have important contributions in increasing the effectiveness of organizational leadership (Williams, 2006). The leader or manager of an organization plays an important role in the process of identifying

searchable questions, collecting and reviewing evidence, selecting appropriate interventions, and organizing the process. However, there is not enough models to guide managers who want to comply with evidence-based programs in the organizational environment (Briggs and McBeath, 2009: 244).

Roshanghalb, Lettieri, Aloini, Cannavacciuolo, Gitto, and Visintin (2018) have made significant contributions in the field of evidence-based management in health care. Roshanghalb et al. (2018) classified the studies in the literature according to a fixed “process” perspective as an input-process-result model. They examined the practices in the evidence-based management approach with a utilitarian approach in four main logics. These are decision-makers (evidence users), management practices or decisions (results), types of analysis and tools (processes), and sources of evidence (inputs). As a result, the logic of past studies sheds light on future studies. Practitioners can benefit from a “process” perspective to consolidate and share best practices for evidence-based management.

Martelli and Hayirli (2018) observed that scientists do not know what the best evidence actually is and cannot make progress in terms of results. They argue that the concept of the best possible evidence has three basic dynamic keys, such as rank, fit and variety, and that these three keys are a possible solution and way out. It assumes that the evidence generated by certain processes are a higher rank than the evidence generated by other processes supported by real claims. Second, “fit” evaluates the best case in terms of the consistency between the current situation and the evidence compiled for it. Finally,

“variety” assumes that the best evidence can be produced by enabling the exposition and reconciliation of broad types of information among individuals. Accordingly, they claim that the best evidence in the field of health can be produced not only by rank and fit but also by variety.

There are three general evidence-based management models proposed in the literature on business, nursing and health care management (Briggs and McBeath, 2009).

The first evidence-based management model uses a five-step process to guide managerial decision-making in the culture of learning and innovation (Briggs and McBeath, 2009: 246). The first is to identify a questionable question about a problem or issue (for example, what factors lead to employee retention in their organizations?). The second is to collect and examine the evidence about the question. Third, it is necessary to assess the scientificness of each evidence and the logical consistency between the collected evidence. The fourth stage is the summarizing and editing of this evidence. Finally, it is to ensure that managers learn from this process and integrate them into the decision-making process.

The second evidence-based management model develops the five-stage process described above. This decision-making model; it includes the determination of a problem, decision, weights to criteria, development of alternatives, implementation of the alternatives, and evaluation of the effectiveness of the decision. This decision-making model helps managers identify the causes of problems and alternatives in solution development and implementation, and includes continuous

monitoring and evaluation activities (Briggs and McBeath, 2009; Robins and DeCenzo, 2004).

The third model includes a four-stage program similar to the total quality management model. This model comprises the steps of making small organizational changes, observing the effects of managerial changes, defining what is learned and examining the process. The success key of total quality management is not only a technique but also the ability of executives to reach the employees in addition to the philosophy of continuous development adopted by the organization. Data from this approach are compared with data from other organizations (Briggs and McBeath, 2009). When this model is used with the benchmark technique in the form of causality, it can show the basic logic behind the best performers, why and how it works (Pfeffer and Sutton, 2006: 5). The organization needs to determine whether there are steady logic and sufficient evidence before proceeding to benchmarking.

Despite the differences and specificity of the number of stages, there are three basic similarities between these models. First, models emphasize skepticism, empiricism and critical thinking and require the manager to model the process of collecting and using evidence to make strategic decisions. Evidence-based practices can, therefore, be seen as a rejection of the dogmatic and unscientific approach for managerial decisions (Briggs and McBeath, 2009; Kovner and Rundall, 2006). As a result, each model is applied to improve decision-making by using research, information gathering, and alternative management strategies. Using one of these models, managers will be able to make more

informed and transparent decisions from other managers by collecting information, critically examining the best alternatives, and systematically examining the logical options (Newhouse, 2006). Second, evidence-based management provides a framework to help managers clarify the general problems faced by the organization and gather important evidence. Finally, each model is a proposition that encourages more research and information gathering, developing decision-making through determining and evaluating alternative managerial strategies to resolve the conflict of interest between individuals or organizations. In addition to systematic assessment of appropriate options, the best available evidence collection, and critical review, it is believed that managers make more informed and more transparent decisions without bias than their counterparts (Newhouse, 2006).

4. Problems in adapting evidence-based practices to management

It is considered that this process is not used much in management decisions or implementations are not effective. This is due to the fact that, even in simple and routine applications, there is a need for learning and it is an expensive learning method. Leaders can have a positive and negative effect on accelerating change and innovation. For this reason, leadership is regarded as a key element that provides and facilitates a positive climate of management within an organization in creating innovative and positive attitudes towards evidence-based practices. Both current management models and leadership theories emphasize

the importance of leadership in supporting evidence-based practices (Aarons et al., 2014; Aarons et al., 2016).

Some studies have shown that managers are responsible for interpreting research evidence, applying this evidence to organizational contexts, and making practical decisions about research (Kyratsis, Ahmad & Holmes, 2012). Leaders also need to be trained and involved in practices at different organizational levels. It is thought that leadership can affect the attitudes and behaviors of the employees in the adaptation and use phase of evidence-based practices. There are studies showing that management support is a strong predictor of a positive implementation climate for evidence-based practices (Klein, Conn & Sorra, 2001). Therefore, there is a need to identify these behaviors that leaders can implement to create a strategic evidence-based practical climate in organizations and to facilitate the implementation and maintenance of evidence-based practices.

Pfeffer and Sutton (2006) define the concept of evidence-based management as the initiation of a proven management movement in their organizations. They also mentioned the practices that should be included in the organization in order to realize these management practices:

1. Demand evidence. Whenever an employee makes an important and realistic claim to you within the organization, ask for data to support it.
2. Examine the logic. The reason behind the evidence presented to the manager should be searched for by comparing the reasons and effects.

3. Encourage exercising. Managers need to encourage practices and experiments to test the applicability of proposed strategies.

4. Strengthen continuous learning. When managers continually increase their knowledge, they get more reliable evidence for decision-making. It is important to allocate resources to employees gathering, investigating and observing evidence about the causes and potential solutions to organizational problems.

Aloini et al. (2018) argue that evidence-based management makes important contributions to performance improvement in health organizations. Although evidence-based management is not a new concept, the claim that it must foster management practices and decisions through the systematic use of different evidence is new. In this context, Aloini et al. (2018) contends that theories and practices have a new and different approach to performance development should be applied and considered in the field of management. Evidence-based management should be grounded and informed on rational, transparent and rigorous evidence that can help managers discover and evaluate their judgments and practices, the pros and cons of various alternatives.

Managers who want to adopt evidence-based practices to organizations can face important problems such as finding organizational resources, training employees, building an evidence-based organizational culture, expanding the collection and use of various types of evidence. In particular, the fact that business science is an extension of social sciences and having a positivist point of view suggests how to use non-quantitative data as well as quantitative data. Each of these problems can cause difficulties for social service

institutions and managers. These problems are discussed below (Briggs and McBeath, 2009):

1. Resource requirement: Reporting that can be done in an electronic environment and developments in customer databases increased the knowledge and technology competencies needed by managers. Because of, evidence-based practices can further enhance the knowledge and competence of managers (Oster, 1995). Since some managers already think they have an excessive workload, they may see evidence-based practices as unnecessary and see them as an additional job added to their professional responsibilities. In addition, time spent finding and evaluating studies, reports and other evidence from literature research may increase. Many managers complain that in practice there is not enough time to evaluate the evidence. Being involved in gathering information on evidence-based practices can reduce the time managers need to assign to other tasks and responsibilities. The financial costs of evidence-based practices are not known. Particularly for large scale organizational studies, there is no basis for collecting evidence since financing cannot be provided (Sauerland, 1999).

2. Personnel and organizational issues: Some employee-related factors may affect managers' use of evidence-based practices. First of all, when applying evidence-based practices, it requires managers to ask for searchable questions, to be able to conduct research electronically and to be able to make critical evaluations of evidence (Newhouse, 2006). In this sense, evidence-based

practices may be more appropriate for some organizational environments and cultures (Fanning and Oakes, 2006). Due to the lack of adequate researches on evidence-based practices, the organizational conditions necessary to ensure the transition to evidence-based practices are unknown.

3. Issues related to access to information: It is important to demonstrate a positive and rational approach to adapting evidence-based management to organizations. These principles are considered necessary for managers to collect evidence and evaluate the relative values of various managerial interventions. The perspective of evidence-based practices adapts to some managerial theories and behaviors. It may be appropriate to adapt it to scientific management practices based on increasing production, income and profit levels. According to this positivist perspective, managerial decision-making is based on regular objective measurements, testing, and empirical analysis. In this sense, all aspects of staff behavior and program management are included in the checklists used to monitor managerial activities. External data can be combined with local data to provide information about decisions and help staff to dominate activities and results. This numerical-based method uses a hierarchy of evidence that gives importance to evidence from random clinical researches rather than other sources of information (Briggs and McBeath, 2009; Johnson and Austin, 2006; Williams, 2006).

CONCLUSION

Executives are able to perform better if they know the best evidence in organizational applications and put them into practice. In case of lack of information, it is believed that managers would have a difficulty in making decisions, make mistakes and are often subject to criticism. In this respect, managers are like doctors who have to decide on an issue one after the another. Perhaps, they may not always make the right choice. In order to disseminate and improve the application of evidence-based practices in organizations, it is, therefore, essential to provide the requested training support, to monitor the training practices and activities, and to train the qualified personnel required for these practices and to increase the number of experts in this field.

Organizational gaps and deficiencies that affect the widespread use of evidence-based practices need to be addressed. There is a necessity to develop measures to evaluate organizational structures that may affect the implementation process and its outcomes. In this sense, the contribution of leadership gains more importance in evidence-based practices that need a careful attention. Leaders can influence the attitude and behavior of their employees in a positive or negative manner in order to inspire the change and innovation. Therefore, providing a positive organizational climate for innovation may possibly lead to an increase in favorable attitude towards evidence-based practices.

Due to the complexity of this process, however, employees' attitudes are also important for the actual adoption and implementation of these innovations. More positive attitudes towards change and scientific knowledge may distinguish early adopters of innovations

from late adopters. Their attitudes toward adopting and using evidence-based practices should also be taken into account in a way to improve use of these techniques (Aarons and Sommerfeld, 2012).

If the sustainability of evidence-based practices cannot be achieved, organizations' investments in development and implementation may be wasted and their impact on organizational performance may also be limited. The main sustainability factors revealed in the previous studies are management support, an evidence-based practice model compatible with the organization and a supporting organizational culture (Aarons et al., 2016).

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CHAPTER 4:
ENVIRONMENTAL TAXES: COMPARATIVE ANALYSIS
FOR SELECTED OECD COUNTRIES

Res. Assist. İsmınaz ÇINAR¹

¹ Hatay Mustafa Kemal University. F.E.A.S. Department of Public Finance,
isminaz.cinar@mku.edu.tr

INTRODUCTION

Development, which means progress as a society, is also the achievement of contemporary levels as a country's quality of life. The concept of development is often used interchangeably with the concept of economic growth. However, these two concepts are different. While economic growth is a quantitative improvement expressing the increase in economic volume, development is a qualitative improvement covering the improvements in many areas such as economic, social, education, health and environment. Therefore, it is not possible to say that every country with rapid economic growth is developed. Development of health level, high literacy level and long life span can be considered as examples of development indicators.

There are many difficulties in measuring a country's level of development. The Human Development Index is one of the indicators used to measure the level of development. This index provides information on the level of development of the countries by making assessments on literacy rate, education level, lifetime and economic criteria. One of the indicators of the Human Development Index is the concept of environmental sustainability. The concept of environmental sustainability has become one of the important criteria for measuring development because the place of environment in living life is very important. Human health is affected by water, air and soil pollution, these results in negative consequences on the level of development.

Especially since the 1980s, with the advancement of technology and the increase in population and industrialization, environmental

pollution rates have increased dramatically. This situation caused global warming and climate change. Each country has implemented national and international regulations and sanctions to mitigate negative impacts of environmental pollution (Aytun, Akin, and Algan, 2017, p.2; Akin and Aytun, 2016). For instance, environmental sanctions have been tried to be implemented globally with legal arrangements such as Kyoto Protocol and Paris Treaty, but some countries have withdrawn from these agreements for various reasons. These agreements were made in line with the objectives of combating climate change and minimizing greenhouse gas emissions. While environmental destruction is global, sanctions are limited. This has reduced the effectiveness of the agreements. The first duty of countries on environment should be to raise environmental awareness. Another duty is to use the funds obtained from environmental regulations for environmental purposes. The intervention of most countries using financial instruments leads to a “polluter pays” perspective. This perspective should be corrected through education; people should be informed about the effects of the environment to the whole world (Aytun, 2014, p.360).

The aim of this study is to investigate the purpose and use of environmental taxes imposed by governments. In this context, five OECD member countries (Turkey, Denmark, Spain, Mexico and South Korea) will be carried out assessments. In the following sections, first, environmental policies and tools will be mentioned; then the scope of environmental taxes will be assessed. In the sample countries the taxes

considered being related to the environment and environmental tax will be explained according to their types and their advantages and disadvantages will be examined.

1. Environmental Policies and Tools

Each country has implemented specific environmental policies to deal with environmental issues. By means of policy, environmental targets and measures are taken to minimize environmental damage (Canpolat, 2009, p.35). However, even if attempts were made to resolve environmental problems until the 2000s; problems have been constantly ignored. The implementation of actual environmental sanctions accelerated in the 21st century. Particularly in recent years, the necessity for environmental policies have arisen due to changes in the environmental economy.

Climate changes and environmental problems in many European countries have come to the forefront in the policy agenda. Countries advocated taking urgent measures to minimize environmental problems and reduce the cost of pollution. As a first measure, most countries introduced the carbon tax (Fullerton, Leicester and Smith, 2008, p.3).

In Turkey, policy recommendations about the environment have taken part in the 3rd Five-Year Development Plan and 4th Five-Year Development Plan respectively. Accordingly, the Environment Organization of the Prime Ministry was established in 1978 and the

implementation of environmental policies have been progressed (Biyar and Gök, 2014, p.298).

Governments implement various policies in line with environmental problems. Nowadays, policy-makers focus on financial tools among environmental policy tools. However, there is no environmental taxes in some countries because of the considering that the tax will not solve the environmental problems. Environmental policy tools are used to minimize environmental problems and reduce pollution levels (Canpolat, 2009, p.39).

The tools included in environmental policies are as follows:

1.1. Legal Tools: Legal tools are the most common and reliable ones. Individual behaviors are intended to be controlled through prohibition and restrictions; though deterrence is a matter of debate. The practices of legal tools are linking to the license, reporting obligation, setting standards-limit values, environmental planning and environmental impact assessment. Many countries use legal tools extensively. However, legal tools are insufficient since these tools require a legal procedure, which causes difficulties in practice (Canpolat, 2009, pp.39-43).

1.2. Informative Tools: Complementary tools, also known as informative, are intended to ensure people's awareness of the environment (Canpolat, 2009, p.43). For example, renewable energy sources are of great importance for the environment. Inoculating environmental values through education would be a good practice for

the next generation to be aware of the environment. For ensuring environmental awareness, especially at a young age; it is very necessary to reduce the damage to the environment.

1.3. Financial (Economic) Tools: Financial tools are divided into application tools such as environmental taxes, tax reductions, tax differentiation, performance payments, pollution charges, mandatory deposit payments (Canpolat, 2009, p.45). As a result of environmental payments received in each residual emission unit, governments use the financial tool and increase the income level. How much income should be used and the benefit of its use has been a subject of controversy for years (Fullerton et al., 2008, p.3). Environmental taxes from these tools will be focused on:

1.3.1. Environmental Taxes:

The environment is a natural area where all alive things live and interact. The reason of increasing importance of the environment in recent years; human activities directly or indirectly cause a great damage to the environment. Globalization, population growth and release of toxic gases to the nature; are problems on a global scale. As a result of this, the environment is damaged and nature sends the damage back to the living things. Countries have started to impose taxes in order to reduce the negative effects due to harmful activities given to the environment. Environmental taxes are pollution-related or compulsory taxes on environmental conditions.

Countries mostly aim to control or obtain income by applying environmental taxes. The purpose of the audit is to examine the attitudes and behaviors of the people towards the environment. It is important that the main purpose is to supervise. But most of the time the main purpose is to obtain income. The budget deficit can be financed and used for environmental purposes (Kulu, 2001, p.50). For example, fuel taxes were originally intended to be levied for environmental purposes, but when implemented, served a financial purpose (Çelikkaya, 2011, p.102).

2. Scope of Environmental Taxes

Today environmental taxes are implemented in almost all countries. It is thought to be a deterrent for people to pay taxes in cases such as after environmental pollution and before pollution. However, there is no special interest in the environment and it is aimed to obtain an income for most countries. Another issue to be considered in environmental regulations; taxes should not be strong enough to adversely affect competition (Ciocirlan and Yandle, 2003, p.203).

The “polluter pays” policy is common in the European Union. It is based on the idea that people pay for the damage caused. Thus, it is thought that people will turn to cleaner activities and pollution will be reduced. However, when the results and environmental pollution levels are analyzed, it is seen that environmental problems increase with globalization (Ekins, 1999, p.40). Although it is not right to charge a tax from the perspective of pollutant provision, the idea of

compensating the damage is; does not help solve environmental problems.

Externalities which have an important place in social life are one of the reasons for market failures. Externalities can be divided into negative and positive in areas such as production and consumption; it becomes negative externality in the presence of environmental problems (Aktan, 2003, pp.10-17). In addition, the environmental taxation scheme seeks to encourage companies to use the right technology in most countries (Krass, Nedorezov and Ovchinnikov, 2013, p.1036). Thus, cleaner production technologies are more beneficial for environmental and economic reasons. However, the selection and the cost incurred are the factors to be considered (Frondel, Horbach and Rennings, 2007, p.574).

As a result of externalities, measures are taken through market and public (Öz and Buyrukoğlu, 2012, p.84). In general, many countries advocate the bringing of taxes against negative externalities. The reason is the price internalization of externality. The idea is that tax can be used to offset differences between social costs and benefits was first proposed by Pigou (Chan, 2007, p.116). Pigou stated that there is a need for the government to eliminate this negative cost and individual transactions may cause an additional cost among other living things (Tullock, 2005, p.18). Arthur J. Pigou, in his book *The Economics of Welfare*, describes the costs associated with externalities created by people or companies. Pigou developed a tax proposal that would fully meet the costs as a solution and thought that social welfare would

increase. As a result, environmental taxes are considered as a way of internalizing externalities. As a continuation of the Pigou tax, the Plott approach examined the environmental taxes as regulatory taxes (Küçükaya, 2008, p.27).

Coase; within the market economy, there is no need for any external sanctions, it is enough to make an agreement between the sides. It is of the opinion that the harm side should deal with the harm side and that the state should not interfere (Öz and Buyrukoğlu, 2012, p.7). The proposal is an important step in maintaining efficiency and order in terms of policy. However, the fact that the two sides do not know each other causes problems in practice (Harrison and Mckee, 1985, p.654).

3. Types of Environmental Taxes

Environmental taxes are used for many purposes, but also have different functions. It is also not easy to classify environmental taxes because of different forms and functions (Ekins, 1999, p.42).

The classification of environmental taxes generally accepted by OECD and Eurostat is as follows:

3.1. Energy Taxes:

The main purpose of energy taxes is to control greenhouse gas which is the main reason of global warming and climate change. In this way, environmental problems and attacks against the ecosystem are tried to be kept to a certain extent. There is an intense demand for non-

renewable energy sources (fossil fuels) in the world, even if it tries to be controlled by financial means (Ekins, 1999).

Non-renewable energy sources are the most polluting energy types. Environmental taxes due to environmental externalities emitted from fossil fuels should be taxed (Ekins, 1999, p.45). Therefore, more importance is given to energy in environmental policies. Taxes, fees, pollution limits, standards and quotas are tried to be regulated. The purpose of the arrangements is to keep pollution under control by minimizing environmental problems (Wallart, 1999, p.21).

Growing population in Turkey with energy use, air emissions and water consumption has also increased. Commitment to fossil fuels greatly increased the burden on the environment (OECD Turkey, 2019). Especially since the Industrial Revolution, excessive consumption of fossil fuels such as coal, natural gas and oil causes high levels of carbon dioxide emissions. It is necessary to minimize this spread in order to prevent deterioration in the climate (Flavin, 1997, p.32). Therefore, the carbon tax was a tax for environmental purposes. The carbon tax, a market-oriented instrument; it would be right to describe the Pigouvian tax, which proposes the internalization of the spreading negative externalities by price (Hotunoğlu and Tekeli, 2007, p.111).

3.2. Transportation Taxes:

Taxes cover ownership or use of a motor vehicle. Approximately 90% of the taxes imposed in OECD countries are composed of vehicle fuels such as gasoline and taxes on motor vehicles (Bilgin and Orkunoğlu, 2010, pp.82-85).

3.3. Natural Resources Taxes:

These are the taxes levied on the rental amounts from the lands where precious metals are extracted. Its share in tax revenues is low compared to tax types, indicating that it is progressing towards the protection of resources rather than income (Demir, 2017, p.70).

3.4. Pollution Taxes:

With the increase in population, there has been a significant increase in the amount of liquid, solid waste and noise pollution. Countries have sought to reduce pollution levels with financial instruments, but many have failed. It is one of the types of environmental tax collected to reduce waste levels (Toprak, 2006, p.157).

4. Evaluation of Environmental Taxes in Turkey

As there is no application area for direct environmental taxes in Turkey, classification is not possible. In terms of the purpose of acquiring, there are many environmental taxes. When we look at the share of these taxes in total income, it is seen that Turkey has a high

rate among OECD countries. Taxes considered to be environmentally qualified in Turkey are as follows:

	Why Is It Considered An Environmental Tax?	Criticism Advantage /Disadvantage
Motor Vehicle Tax (1963)	Heavy vehicles causing disorder on the road, it is a tax that tries to prevent damage to the environment by taking taxes for reasons such as causing air pollution due to the toxic gases it emits.	<ul style="list-style-type: none"> - Taxation is done without regard to the polluting function of the vehicles. - While it is covered by road and environment tax in many countries, it is covered by a wealth tax in Turkey.
Value-added Tax (1984)	The delivery of all energy products, taxation of the purchase and sale of motor vehicles may be considered to have environmental purposes.	Its structure is not intended for environmental protection.

Environmental cleaning tax (1993)	-It is the first tax brought for environmental purposes in Turkey. -It is also called a garbage tax.	-Taken directly for environmental purposes. However, it does not aim to minimize environmental problems. - It has no deterrence. - Only municipal areas fall within its remit.
Special Consumption Tax	It can be considered as an environmental tax to levied on energy and vehicles.	In Turkey ; does not serve the purpose of environmental protection.

Source: (Ferhatoğlu, 2003)

The first tax issued for environmental purposes in Turkey is the environmental cleaning tax. However, in some cases, fees may also be taken to protect the environment and minimize the damage to be done in non-taxed areas. Administrative fines may also be imposed for damages (Biyani and Gök, 2014, p.304).

The special consumption tax paid on the purchase of motor vehicles has a heavy tax burden. However, in 2016, special consumption tax rates on hybrid and electric vehicles were reduced. In addition, in the taxation of motor vehicle tax, engine cylinder volume has been an important criterion in taxation in line with environmental targets.

One of the most important innovations in the environment in recent years has been the ‘zero waste’ project. Although this application was made for both audit and earning purposes, nylon waste rates decreased (OECD Turkey, 2019).

The purpose of the tax in Turkey is often taken to be helped earn income whether to provide budget financing. Taking taxes in this way does not make a positive contribution to the environment. The polluter pays outlook lacks the ability to protect the environment and nature. In order to ensure that the taxes to be collected are environmental, informative tools should be used and care should be taken to ensure that people have an understanding of environmental awareness. As a result, tax incentives should be given against protecting the environment. (For example, a subsidy should be given if a factory uses filters that would cause less air pollution.) It is natural that citizens do not understand the environmental qualities, as the understanding of tax taking from every movement carries only the purpose of generating income. The area of taxes should be well decided and should not cause people to think ‘I pay what I pollute’.

5. Evaluation of Environmental Taxes in Terms of OECD Countries

In OECD countries, there are many taxes imposed for environmental purposes. However, there is a qualitative change to the many environmental taxes imposed here. Because the main purpose of taxes collected; to protect the environment and minimize the damage that may occur. In other words, many countries ignore the purpose of

obtaining revenue. The OECD's positive image of its revenue generation is not present in all countries, but in many countries, environmental problems are at high levels. As a result, OECD average levels give positive views, but OECD countries are not homogeneous.

In OECD countries, there are studies on tax differentiation and tax advantages while applying tax types such as emissions, usage costs and product based taxes (Öz and Buyrukoğlu, 2012, p.95).

5.1. Denmark

Denmark is one of the OECD countries that gives the highest importance to environmental transformation. With its competence in issues such as waste, cyclical economics and chemical management, it is demonstrating pioneering moves towards sustainable development and green growth. The most important feature of Denmark in the OECD countries is that it is a leader in the use of renewable energy sources. These studies have made progress with a green growth perspective (OECD Denmark, 2019).

5.2. Spain

In many developed countries, environmental taxes have been applied since the nineteenth century (Ekins, 1999, p.42). In order to protect the environment and fight pollution, Spain makes taxation according to CO2 emission densities. With the policy implemented, it is aimed to use energy more efficiently.

In addition, as in many European Union countries, environmental regulations such as motor vehicles, batteries, plastic

bags, coal, natural gas, pesticides, batteries have been tried to be protected in Spain. Another environmental regulation within the European Union was to create the Climate and Energy Package. This package aims to reduce greenhouse gas emissions by 20%. In environmental policies, the relationship between environment, economy and society is discussed in the win-win method (Gemechu, Butnar, Llop and Castells, 2013, pp.752-765). Measures to be taken in this direction have been tried to be made by keeping environmental values in the foreground.

5.3. Mexican

With the Paris Treaty, most countries have taken measures against climate change through environmental policies. Environmental texts were published under the name of green tax reform and global problems were identified. Countries that are important for the environment have turned their technological efforts towards non-renewable energy resources. The reason for this is the high level of pollution from energy and the increasing demand for energy with the increasing population.

In 2016, Mexico enacted the Environmental Protection Law and the Climate Change Law and made arrangements to protect the environment in many areas (iklimhaber.org, 2017). For example, the law stipulates that administrative fines should be levied against damage to the environment. Looking at Mexico's income in the environment, it can be said that it has an environmentally low income. Mexican transport fuels have higher tax rate than other fuels (OECD, 2016). It

has also been pursuing a pro-environmental stance, particularly in recent years, by providing incentives for environmental purposes

5.4. South Korea

South Korea has sought to implement a system with an emphasis on democratization and environmental policy formation, rather than a policy that has difficulty resolving regional conflicts. Especially in the late 1970s, there was a policy change in the face of increasing environmental pollution with industrialization; solutions were sought with the Nature Conservation Campaign. With the national constitution adopted, Environmental Protection has also become the main objective of the welfare plan (Lim and Tang, 2002, p.569).

But in recent years, extreme air pollution in South Korea has been negatively affecting the health and quality of life of all living things. In the face of this situation, the government has aimed to reduce pollution levels by implementing certain policies. However, it is very difficult or time-consuming to return the environment to the process of degradation. South Korea firstly introduced restrictions and an additional tax on the use of diesel vehicles to deal with environmental problems (www.cnntürk.com, 2019). How effective the solutions received will be or how much will help reduce the level of pollution is a matter of debate.

Conclusion

Environmental problems continue to increase despite the measures taken with the innovation of our age. The increase in pollution levels directly affects living life and disrupts health conditions. Each country takes environmental measures in different areas, but not enough capacity in the environmental order. The reason for this; most of the legal and financial tools applied by countries in the direction of the environment is not intended to protect the environment and reduce the harm to the environment.

In every country's environmental policy, the issue of energy plays a major role. However, we can see that energy policies are not evaluated correctly today. When taxing, the emission of fuel or energy to the environment must be taken into account. When natural gas and coal fuel types are evaluated in terms of the environment, we can say that natural gas is much less harmful. However, taxation is at very high levels in many countries. This leads the citizen to cheaper, more environmentally harmful fuel. If the environmental policies are to be environment-oriented, the emphasis should be given to environmentally tools or methods, and the goods and services should be encouraged by using low prices.

The main purpose of the collection of environmental taxes was the payment of pollutants by each country and thus ensuring efficiency. It is thought that the cost of the pollution is paid as a result of the taxes and other sanctions taken for the purpose of generating income, but the ineffectiveness arises. To make a comparison, in most OECD countries,

environmental taxes have a lower share of total tax revenues than in Turkey. This indicator shows that the income objective in Turkey is held ahead of the environmental values. However, in recent years, there have been practices that deviate from this goal. The main objective of environmental policies is that the revenues collected through environmental taxes and regulations should be used for environmental purposes.

In order to eliminate environmental problems completely, all countries need to set common policies and take actions and operations in line with the established policies. However, the fact that many countries do not want to participate in common agreements and protocols for different reasons does not diminish the problem. The practices and policies of each country in order to solve environmental problems and protect the environment are state-funded. However, the fact that states try to solve this problem as a means of generating revenue causes some problems and so solutions cannot help prevent damage to the environment. In practice, some countries have considered this path as a source of revenue collection.

As a result, environmental practices have been implemented in many OECD countries and positive results have been achieved. However, it should not be considered that all OECD countries give equal importance to environmental values. As in the case of the countries above, it is seen in different structures. However, Turkey made in this direction in the past to the present study is very rare. For example, taxes used for pollution prevention are far from protecting the

environment and preventing pollution. Environmental policy practitioners should prioritize the environmental issue in the taxes to be collected and adopt policies to control the environment and prevent pollution.

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CHAPTER 5:

**LOCAL GOVERNMENTS AND THEORIES OF
FISCAL FEDERALISM**

Res. Assist. (Phd.) Sevi DOKUZOĞLU¹

¹ Hatay Mustafa Kemal University. F.E.A.S. Department of Public Finance
sdokuzoglu @mku.edu.tr

INTRODUCTION

The term “*fiscal federalism*” refers the devolution of authority regarding public expenditure and taxation policies from the national to subnational levels. The devolution related to expenditure decisions, revenue-collecting power, subnational borrowing and fiscal transfers among local jurisdictions. The rationale of fiscal federalism is that local governments allocate resources more efficiently than central governments since local provision of public goods and services reflects the tastes and preferences better. Furthermore, citizens are more willingly to pay taxes in that they obtain public goods and services they desire. The differences in regional demands leads to competition (such as level, mix and quality of public goods and tax rates) among local governments. The fiscal competition improves accountability and transparency of public policies and limits the monopolistic power of public sector.

This study examines theoretical foundations of fiscal federalism within the framework of *First Generation Theories* and *Second Generation Theories*. This chapter reviews the literature on fiscal federalism briefly.

1. Local Governments in Public Finance

The effective implementation of the functions imposed on the state within the framework of public economic theory requires an optimal organizational structure. The state organization has a two-

dimensional structure: central and local governments (Oates, 1972, p. 3).

“The general conception of local government is one of a locally-elected democratic statutory organization below the level of the state, province or region, providing public sector services to the populace within the area of its jurisdiction”. In democratic systems, local governments play important roles in realization of pluralism, participation and public choice in a number of way (Bailey, 1999, p.3).

In Musgrave’s seminal work (1959) the functions of public sector have been divided into three branches: allocation of resources; redistribution of income and macro-economic stabilization. According to Musgrave, central government should undertake the functions of income redistribution and macro-economic stabilization by its nature; allocation of resources should be provided by local governments substantially (Musgrave, 1959, pp.12-13). The main reason is that the benefit of some public goods and services is national-scaled (such as national defense; health etc.) while the benefit of some is (such as street light; fire station) limited within the particular region. In Musgrave’s allocation theory; the public goods and services whose benefit is nationally should be provided by central government; the provision of public goods and services whose benefit is specific to a particular region should be left to the local governments. (Musgrave & Musgrave, 1989, pp. 445-447). If there is no economies of scale, a decentralized allocation of public goods and services can ensure welfare-enhancing effects because of reflecting the differences in tastes and preferences

(Oates, 2005). In central provision, while tastes and preferences of society are fixed, that is the uniform production, the differences in tastes and preferences are considered in local provision. In fact, the local governments which consider these differences compete with each other on supplying and taxation of public goods. fiscal competition provides a pareto-efficient allocation consequently (Tiebout, 1956, pp. 418-420).

Local authorities are responsible for satisfying the local demands. In the framework of the Median -Voter Model, the equilibrium point of public goods and services fully reflects the preferences of local residents (Oates, 1993, p. 238). In this context, the existence of different local governments is decisive in order to ensure an efficient resource allocation.

2. Decentralization and Fiscal Federalism

Decentralization refers to the allocation of authority, responsibility and resources from the central government to the local units; is a concept with political, economic and financial dimensions (Oates, 1993; Akin, Aytun and Aktakas, 2014).

Over the last few years, delegation of the spending and taxation authorities from central governments to local governments has become a common policy implementation. The policy is for not only federal states; but also states which have a long unitary history.

Public expenditures have been increased enormously by central governments due to the conditions of the post- World War II period which has been called *fiscal centralization*. The normative roles

imposed on the states with Musgrave (1959) has been questioned; especially in the Anglo-Saxon countries in the late 1970s. Increased public expenditures and high tax rates at the central government level have led to tax avoidance and informal economy and affected growth rates negatively. Accordingly, the *Public Choice School* has emerged due to efficiency losses arising from taxation, structural budget deficits, stagflation and unsustainable debt levels during this period. Subsequently, the debates about public sector and the search for policies that aimed to reduce the size of public sector has arisen. In this period, two policy recommendations have been popular: Privatization as part of the Washington Consensus and fiscal federalism (Tanzi, 2008, pp. 705-707).

The rationale of fiscal federalism is to reduce the power and responsibilities of the central government and to increase that of the sub-units. Fiscal federalism means that the decentralization of the governments in terms of the public expenditures and the taxation policies. Fiscal federalism which is an essential element of decentralization has become an economic development policy tool for many countries (Bahl, 1999, p.55; Tanzi, 2008, p.707).

3. Theories of Fiscal Federalism

The effects of fiscal federalism on quality and effectiveness of the public policies have been discussed in the literature from two different point of views. The first one is the *First Generation Theories*, also called *Classical Theory*, and the other is the *Second Generation Theories*. The First Generation Theories (FGT) are based on the

Welfare Economics while Second Generation Theories (SGT) are based on the theories that *Political Economy*, *Information Economics*, *Constitutional Economics* and *Industrial Organization* (Jha, 2015, p. 242; Garzarelli, 2004, p. 91). In the meantime, FGT are based on the assumption of socially-benevolent government while SGT focus on the fiscal and economic tendencies of the policy-makers. However, both theories are complementary rather than competing (Weingast, 2006; p. 48; Weingast, 2009, p. 279).

3.1. The First Generation Theories of Fiscal Federalism

The FGT argues that local governments make better resource allocation than central government since the local officials are in line with households' preferences and thus provide economic efficiency (Vo, 2010, p. 659).

The FGT favors the decentralization of allocative functions. The so-called '*decentralization theorem*'—propounded by Tiebout and advanced by Oates—states that “*each public service should be provided by the jurisdiction having control over the minimum geographical area that would internalize benefits and costs of such provision*” (Tiebout, 1956, p. 416; Oates, 1972).

3.1.1. Charles Tiebout: Voting by Feet Approach

This approach argues that local governments achieve efficient resource allocation by removing public goods and services being uniform.

Tiebout's notion of public goods is differs from *non-excludability* and *non-rivalry* pure public goods as developed by Samuelson (1954). In Tiebout (1956), public goods and services are impure and local. Tiebout argues Samuelson's argument about ineffective allocation of public goods and develops the idea that the problem of market failure can be solved in case of voting for public goods by consumers' preferences (Tiebout, 1956; Vo, 2009, p. 661).

According to *voting by feet approach* which is Tiebout's seminal contribution; the differences in tax rates and public goods between local jurisdictions cause the citizens to choose their living area. In this approach, local governments offer to citizens the policies on public goods and tax rates; and mobile households choose to live the local area which reflects their preferences best. In Tiebout's Model, consumer-voters are fully mobile, perfectly informed and there is no restriction in employment opportunities (Tiebout, 1956, p. 419).

3.1.2. Mancur Olson: The Principle of Fiscal Equivalence

The principle of financial equivalence is a notion associated with public activities, geographical boundaries and public finance. Olson argues that public expenditures should be financed in the administration level and geographical scope where the public service is provided. Thus, free-rider problem can be solved; marginal benefit and marginal cost of public goods are equalized and pareto-optimal allocation is provided (Olson, 1969).

3.1.3. Wallace E. Oates: Decentralization Theorem

In this approach, Oates argues the cost of centralization and the theorem based on policy uniformity (Lockwood, 2002) .

According to Oates (1972), not all public goods have similar characteristics. Public goods such as defense benefit the whole country while street lights benefit the particular area. The differences between regions in a country might also lead to different preferences in public goods and services. Central government tends to supply uniform public goods since the officials may ignore citizens' preferences or not have enough information. Local provision ensures perfect correspondence with households' demands; and prevents welfare losses due to heterogeneous preferences (Tanzi, 1996, p. 298; Oates, 1972, p. 34).

Decentralization Theorem provides a solution to the problem of the allocation of resources and authority between central and local governments. Accordingly, fiscal federalism mechanism improves the performance of the public sector; ensures pareto-efficient allocation, accountability and transparency of public policies. Local provision which reflects the differences between the states might be welfare-enhancing policy if there is no economies of scale (Oates, 1999; Oates, 2008, p. 314).

3.1.4. Geoffrey Brennan and James Buchanan: Leviathan Hypothesis

The basis of this approach is the theory of public finance. Brennan & Buchanan (1980) describes the state as a leviathan that over-

supplies and over- taxes for re-election. The politicians in central governments maximize their own interests rather than social welfare and act as leviathan. Fiscal federalism prevents excessive intervention of central government and limits its monopolistic power. In this approach, the main point of fiscal federalism is to reduce the government size.

In Leviathan Model, the government increases tax rates up to the peak of the Laffer Curve to maximize the size of public sector. The power of taxation and intervention to the economy can only be restricted by constitutional limitations and inter-governmental competition. Fiscal federalism leads to competition among public authorities and prevents excessive growth of public sector (Crowley & Sobel, 2011; Vo, 2010, p. 664). In this framework, the competition between local jurisdictions regarding tax rates, property rights, sort of public goods and services is decisive (Brennan and Buchanan, 1980; Breton, 2006; Weingast, 1995).

3.2. The Second Generation Theories of Fiscal Federalism

The SGT are developed within the framework of the bureaucratic, political and economic tendencies of public officials in the political process. The SGT are based on the assumption that policy-makers are self-interested. In these theories, the assumption of benevolent social-planner is abandoned; in the Median-Voter Model approximately efficient equilibria has been reached with competition of election (Oates,2005, p. 356 ; Oates, 2008, p. 315). The SGT build on

the FGT literature within the framework of political economy and asymmetrical information.

3.2.1. Political Economy Approach

Political Economy Approach deals with inefficient outcomes of centralization due to over-supplying of the governments.

Efficient markets require not only economic systems such as property rights, laws of contracts; but also political systems which limits the power of policy-makers. Public officials make the central decision-making process inefficient because of the incentives of re-election and rant-seeking behavior. In this framework, fiscal federalism restricts the discretionary policies since local governments have harder budget constraint than central government (Weingast, 1995, p.2; Quian & Weingast, 1997; Besley & Coate, 2003, p. 2612).

3.2.2. Principal -Agent Approach

The main source of principle-agent problem is the asymmetrical information between the politicians (agent) and the voters (principal). Fiscal competition among local governments improves transparency and accountability. In other words, fiscal federalism ensures control mechanism over the politicians and eliminates asymmetrical information (Seabright, 1996).

4. Conclusion

Fiscal federalism is an essential element of decentralization policy for many developed and developing countries and become a

popular policy tool for development strategy of governments. The rationale of fiscal federalism is ensuring pareto-efficient resource allocation, accountability of public policies and reducing the monopolistic power of central governments. The theoretical foundations of fiscal federalism is based on *welfare economics*, *political economy*, *public choice school*, *information* and *industrial organization economics*. In welfare economics framework, that is *First Generation Theories*, includes seminal works of Tiebout (1956); Olson (1969); Oates (1979); Brennan and Buchanan (1980). The FGT are based on the ideas that socially-benevolent planner and the cost of policy uniformity. The SGT deal with self-interested politicians, rant-seeking behavior and asymmetrical information. The FGT and SGT are complementary rather than competing. In this study theories of fiscal federalism have been reviewed briefly.

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CHAPTER 6:
**THE FOOD POLICY AND ECONOMIC ROOTS IN
TURKEY**

Muharrem ÇAYIRCI¹

¹ Independent Researcher , muharremcayirci88@gmail.com

INTRODUCTION

In our country, on the other hand, due to the developments in the world during the republic period, supportive and interventionist policies in the country and protective customs policy were followed. In the early years of the Republic, the main objective of food policies was to promote all food production units and to increase the marketable production level by creating an environment that encourages production. The aim of being self-sufficient in our country until the 1950s, after 1950, through the mechanization of producing and exporting to foreign markets has left the target. As a result of these policies, domestic production increased and exports increased in these years. Between 1960 and 1980, policies of increase in production and productivity were followed. Since the 1980s, the liberal movement that has been trying to minimize state intervention in the economy has come to the forefront and the protection and incentives of the state on the food sector have started to weaken. Foreign dynamics such as International Monetary Fund, World Bank and World Trade Organization have been determinative in determining the food policies of our country since 1980s. Food policies in Turkey in recent years has evolved in the direction of free trade. Increased demand for food, consumer awareness, drought, fluctuations in agricultural production, and the increase in prices has led to increased concerns for food security in Turkey. As a result, issues relating to food security were among the priority issues of the agricultural policies in Turkey.

Although nutrition is one of the basic needs of people, people with a certain purchasing power seek health, hygiene, quality and service

characteristics in the food they buy, and they try to get enough food in quantitative sense in people who do not have purchasing power. The income groups in Turkey should be examined by the parameters of household food demand. In addition to its economic characteristics, socio-demographic characteristics should be taken into consideration. In addition, determining how the parameters related to price-demand, income-demand elasticities and socio-demographic characteristics' change according to income groups should be the most important food policy moves (Lang et al.,2001:540)

Another important reason affecting access to food is the increase in food and agricultural input prices in the world and in our country in recent years. Increases in food prices affect not only the quantity of food consumed, but also the quality, increasing the risks that can lead to serious health problems in food safety, another pillar of food security. Agricultural production and food production, which are directly related to human health, environment and economy, are among the main fields of activity of countries and various international organizations. The whole world sets various strategies in the field of food security and safety and integrates food security and security into its regulations and policies. Food security and safety is of utmost importance in terms of ensuring that the food requirement, which is fundamental in human life, is provided by providing the necessary conditions and concerns environmental health (Lang et. al, 2009). Maintaining supply-demand balance, fluctuations in producer and consumer prices, possible effects of climate change, increasing concerns about health and environment,

improving changing production conditions, global food security and food safety concepts It stands out in the studies (Akin et al., 2016: 665). In this context, countries are reforming their food policy instruments (Timmer and Alderman, 1979: 983). Owing to globalization, international food trade is developing, thus transporting, storing and storing times of foods increases. However, failure to implement these practices under necessary conditions, failure to detect and prevent the spread of foodborne diseases may have negative consequences for food security and safety. Although the level of development is different, countries face problems in terms of food security and food security and experience food insecurity and insecurity. Developed countries' success in dealing with economic and sociological problems may not have the same effect on food insecurity (Eryilmaz et al.,2018:239). In developing countries, food security and safety are sometimes underestimated alongside existing problems and sometimes they cannot be solved due to lack of sufficient information, infrastructure and economic power. Inadequacy of the legislation prepared for the purpose of ensuring food safety, lack of institutional stability, production of unregistered and uncontrolled food, and ineffective functioning of control mechanisms are the political reasons for not providing food security and safety (Bulut and Akin, 2017: 57). In Turkey, it is important that legislation developed for the implementation of food safety and security. Unless necessary measures are taken in the areas where problems are identified, significant problems may be encountered in accessing adequate, healthy and nutritious foods in the medium and long term due to factors such as population growth and

global climate change. On the other hand, the reliability of the databases provided for international indices for food security and safety is also important for future strategies. Since 2018, the Ministry of Agriculture and Forestry has undertaken the central policy of food policy with these headings. The objectives set by the Ministry for this purpose are; to increase the effectiveness of food and feed control services, to strengthen the infrastructure of food and feed enterprises and to ensure compliance with standards, to increase sensitivity to food safety in society (Kaya et.al, 2008:420).

In the last period of the Ottomans, as in all areas, there is an insufficiency in food control. Nevertheless, studies conducted especially at the beginning of the 20th century are important in terms of emphasizing the importance of food control. The Meat Inspection of Directive of Ottoman Empire, published in 1918 as 16 articles, is an important development especially for the prevention of meat-borne diseases. This regulation was continued to be in force until 1932. 1929 the next 1938-1946 period of interventions in terms of agricultural policies in Turkey and has a solid understanding of statism that dominated the period. During the Second World War as Turkey's relations with the states of the world is extremely low, due to a possible war country, he was forced to feed an army on a lot of opportunities. In the 1950s, it left its target to produce more and export to foreign markets through mechanization. During this period, especially from 1948 onwards, agriculture was financed by the aid received from the Marshall Assistance Program. In agricultural development, Marshall

Assistance has been the driving force, thus the number of tractors and plows in agriculture increased, then the expansion of cultivated areas, increasing agricultural credits, supported prices, good climatic conditions and widespread use of fertilizer also helped and increased production. Agricultural production and productivity increase was the first aim of agricultural policies as a requirement of industrialization policies by import substitution method which was undertaken from 1960s to 1980. In the world, to get rid of Turkey affected by the crisis resulting oil crisis in the 1970s and resorted to IMF requirements for external debt and has agreed to implement the IMF's stabilization measures. Neo-liberal policies that have been effective in the world since 1980s have been effective in determining the agricultural policies of our country (Akder, 2007: 521). The number of supported crops reduced in the 1980s has been increased since the early 1990s, support prices have been improved, the amount of agricultural loans has been increased and some of the accumulated debts of farmers have been erased, and in 1993 a premium system has been introduced on a product basis. Increasing subsidies in agricultural products ensures the stability of agricultural supply. Since 2001, the domestic market-oriented Agricultural Reform Implementation of the WTO Agreement on Agriculture to continue the negotiations and Turkey is the EU's Common Agricultural Policy has entered into an integration efforts are directed at the agricultural policy. Agricultural production at nominal prices followed a fluctuating course in the 1990s. In 2001, when the economic crisis was experienced, it decreased to approximately 18 billion dollars and increased rapidly in the following years. Agricultural

production at its current prices reached its highest value in 2010 and but unfortunately decreased in the following years (Şenses, 2003). In times of insufficient or high domestic food supply, the state intervened in the markets to protect consumers and producers after 2010. Along with the liberalization process, the privatization of the institutions that have an impact on the development and direction of agriculture came to the agenda and the country's agricultural policies were left to the initiative of international institutions rather than the priorities of the country. The primary objective of the countries should be to ensure the sustainable food supply of their people and to direct their policies in this direction (Chaherli and El-Said, 2000)

1. National Institutions in Turkey, Interconnecting International Institutions and Food Policy

While the 1990s were a number of measures to agriculture in favor, however, this period has played an important role in the development of agriculture and directing the agricultural sector, Dairy Institute, Agency, Food Factory, Meat and Fish Institution, Turkey's agricultural kits such as Agricultural Equipment Corporation was privatized (Tan et al, 2016:239). Along with the withdrawal of these institutions, which constitute a market guarantee for livestock and milk producers, price instability has occurred in the market; fluctuations in the supply of meat and dairy products. Another important condition for ensuring food security is the economic accessibility of foods, namely the affordability. The availability of food; low income and inequality in income distribution, unemployment, rising food prices and poverty make it

difficult (Zeller et al, 1997). Low per capita income will negatively affect people's access to food, which is the most basic need. The ability of nations to ensure food security consistently is directly related to agricultural policies pursued. Developed countries with good food security levels have historically supported the agricultural sector by using high budget facilities and tried to keep it away from the liberalization process. However, in most of the developing countries, structural adaptation programs of organizations such as WB, IMF and WTO are the main determinants of agricultural policies rather than meeting the needs of the country and solving the problems of the sector. Organizations such as FAO (WHO), WHO (World Health Organization), OIE (World Animal Health Organization) and WTO (World Trade Organization) have taken action in order to prevent health problems related to globalization in recent years. These institutions cooperate with universities, industrial organizations and other institutions, and make decisions taken as a result of the studies and reports prepared by the scientific committees within them, and form the basis of food safety (Yıldız et al, 2011:350). As a result of the harmonization with the EU, the “Food Law 51 no. 5179 was made as a single text and published on 11.06.2010 as 5 Veterinary Services, Plant Health, Food and Feed Law 5 no. Turkey is also affected by global challenges for food security as well as other countries. However, in order to solve the problems related to food security in terms of agricultural policies at the national level, solid databases are primarily needed (Bulut et.al, 2016: 1841). In Turkey, the establishment of farm accounting data network systems and records for reasons such as

macro-level policy impact assessments can be made at the desired level of informality. On the other hand, when policy impact analyzes cannot be conducted at regional and macro level, the objective hierarchy cannot be determined. Short-term policies and instability for various reasons cause imbalances on the supply and demand fronts other than climate change. European Union accession process of Turkey's negotiating framework interviewed one of the chapters is related to food safety. 12th Food Safety, Veterinary and Phytosanitary title includes food safety, hygiene and presentation rules for consumer protection and information, mechanisms for the provision of food safety and regulations for inspections. It also includes more stringent hygiene rules for processing and placing food on the market, especially for animal foods. This chapter reflects the EU's integrated approach to food safety, animal and phytosanitary and welfare. Food safety and nutrition issues were discussed at the G-20 Leaders' Summit and G20 Agriculture Ministers Meeting (Clapp, 2011). The “Food Safety and Nutrition Framework” was established. In this context, it is aimed to increase responsible investments, incomes and qualified employment in food systems. In addition, targets have been set to increase productivity in a sustainable manner in order to expand food supply. In the Ministry of Development's Activity and Food Safety in Agricultural Structure report, the priority area for sustainable food safety is identified as ensuring the effectiveness of the agricultural structure.

The first food-related applications in Turkey have begun with the provisions of the Municipal Act No. 1580 enacted in 1930 and was later

found in the same year entered into force in 1593 as the Public Health Act in place more comprehensive. Based on the Law on Public Hygiene, the Food Regulation was issued in 1942 and then the Food Regulation was issued in 1952. In 1995, No. 560, Food Production, Consumption and the Law on the Supervision Decree issued until all of the food legislation in Turkey Food Regulation and consists of several regulations. The Decree no. 560, which is a framework regulation, introduced fundamental and structural changes for food services, and the authorization of licensing of food production enterprises and all food inspection services were left to the Ministry of Health.

2. European Union and Its effects of Turkish agriculture and Food Policy

The Common Agricultural Policy is a roof policy implemented at the level of the European Union implemented for food and agricultural processes. Originally, it is based primarily on price controls and subsidies, aimed at modernizing and developing agriculture. It is implemented by the Directorate General "Agriculture and Rural Development" 1 of the European Commission. At the Turkish level, it is carried out mainly through one agricultural office under the supervision of the Ministry of Agriculture and Forest. It now consists of two pillars: the first pillar, market support, prices and farm incomes, and the second pillar, rural development and saving forests (Timmer et. al, 1983)

The CAP is criticized for the difficulty of stabilizing its budget, the operational problems posed by the enlargement to 28 and the inequality

of aid that benefits producing countries and owners of large holdings, since are proportional to the areas of the farm. Since 2003, the budget amount has been stable because it is not indexed to inflation and decreasing compared to the total EU budget. The reforms of 1992 and 1999 sought to bring it closer to the market by lowering guaranteed prices and replacing them with direct aids. The 2003 reform pursued them by providing a response to the financing difficulties related to enlargement. From now on, the aid is no longer linked to production. Farmers are paid a single payment per hectare, provided they comply with European standards on the environment and food safety. A new revision of the scheme set the CAP for the period 2014-2019. The discussions were launched by the European Commission in spring 2010, with public debate. They culminated in June 2013 in a new reform. This goes in particular towards a more balanced distribution of aid between Member States, regions and farmers; put in place greening measures; and tools to strengthen the organization of the sector. The Treaty of Rome, signed on March 25, 1957 by the founding members of the European Economic Community (EEC), gave the CAP a resolutely productivity orientation , because it was necessary to increase agricultural production, and protectionist , because the construction of a customs union required protection at the borders. It was then a question of making the Community self-sufficient, more solidary and of modernizing an agricultural sector still very disparate according to the countries (Ellison, 1999).

As the economies of the candidate countries in the new enlargement wave are more dependent on agriculture, there is a need to prepare for the problems that may be experienced by the common agricultural policy. As in the negotiations held with the other candidate countries for accession negotiations with Turkey will be carried out by the EU, it is expected to be requested transition period for agricultural support. According to Turkish producers probably already be provided at the time of the entire scope of support provided to EU producers and rural development will also be broad support to be given to Turkey (Knowles, 2007: 52). Considering the fact that the membership will free trade in agricultural products and this will have consequences against our country, it is important to seriously focus on the negotiations on agricultural supports.

Decisions on the reorganization or amendment of directives and regulations will be subject to co-decision since the entry into force of the Lisbon Treaty. This means that decisions must be taken by both national and national Ministers represented in the Agriculture and Fisheries Council, as well as by Members of the European Parliament, after the negotiators of the two institutions have reached agreement on all the details. The legal acts are prepared by the Directorate-General for Agriculture. In agriculture, there is a section that advocates a free market against state intervention and, according to them, agriculture should be saved from all interventions, as a result of which resources can be used more efficiently. Setting prices by government intervention leads to distortions in the market and to produce more than necessary

(Yıldırım et. al, 2015) The aim of the criticism is to ensure that prices are evaluated and put according to the supply-demand relationship within the market. In this way, the farms will take steps regarding the efficient use of resources, will provide training to their farmers, and will strive to improve pest control and infrastructure.

The first step in the development of food legislation in Europe began with the Green Paper published in 1997. Then, in 2000, the White Paper was published, where all food safety issues were dealt with for the first time. In this document, which sheds light on the basic principles of EU's understanding of food safety from farm to table, many issues such as consumer protection, human health, animal health, animal welfare and phytosanitary were discussed and the necessity of establishing European Food Safety Authority (EFSA) was emphasized. Along with the publication of Regulation No. 178/2002 / EC, also called General Food Law of the European Union 2002 in 2002, the necessity of the products of both food and feed operators to be in compliance with the international standards at every stage of the food chain was established on a legal basis. EFSA, which provides independent scientific advice on food safety, was established based on this regulation (Meyer, 2008).

In 1963, Turkey has signed a partnership agreement with the European Economic Community. In 1987, he applied for full membership and entered the “Transition Period. Living the turning point with the approval of his candidacy officially in 1999 in the EU harmonization process in Turkey, in 2004, enacted Law No. 5179 is important. The Law on the Amendment and Adoption of the Decree Law on the

Production, Consumption and Inspection of Foods has revolutionized food safety. A new direction has been tried to be drawn to harmonize with EU legislation. In the EU accession process, Food Safety, Veterinary and Phytosanitary, which is the 12th of the negotiation chapters, came into play. This chapter aims to establish a comprehensive legislation that envisages the provision of food safety in the entire process from farm to table. Law No. 5179 is based on EU food legislation (Aşan, 2006). This, however, was not sufficient for the “Food, Feed and Veterinary Framework Legislation criterion of the six opening criteria required for the opening of Chapter 12 in the negotiations. Looking at this scope, studies have been started and in 2010, Law No. 5996, which is a law in line with EU legislation on food safety, was enacted. In other words, Veterinary Services, Plant Health, Food and Feed Law was adopted. Along with this Law, regulations have been introduced in the fields of food and feed safety, public health, plant and animal health, animal breeding and welfare, consumer interests and environmental protection. The Laws which previously regulated these issues and the secondary legislation enacted under these Laws were gathered under one roof. Along with the Law No. 5996, the Ministry of Food, Agriculture and Livestock has the sole authority on food inspection. Today, this authority belongs to the Ministry of Agriculture and Forestry (Aral, 2005).

3. Food labeling issue in policies

Food labels are an efficient food policy tool that reduces the cost of access to information about the health degree of food products by

consumers in the food market where information asymmetry is high between producers and consumers (Maxwell and Slater, 2003: 542). Nutritional labels include foodstuffs such as inputs, additives, fat, saturated fat, salt, calories, sugar, cholesterol, carbohydrates, sodium, and production and expiry dates of products on and on the packages of prepared food products and even information about the small lists. Food labels are defined as a direct and cost-effective policy tool to help consumers make healthy food choices in the food market where information asymmetry between producers and consumers is high (Duru and Seçer, 2019:7). In recent years, health problems associated with nutritional habits have been increasing rapidly, food labels have become an attractive policy tool in order to allow consumers to make free choices about food products, while at the same time allowing them to make healthy choices and reducing access to information. This state of humankind, which has placed its sense of taste at the center of its decisions on food preferences for thousands of years, is a paradox in its efforts to make its health healthier through food labeling policies. When the studies to date are examined, it is noteworthy that the concept of food security and food safety sometimes interchange. Failure to define these two concepts correctly and precisely leads to misinterpretations. On the other hand, although FAO conducts regional assessments according to food security criteria, it is noteworthy that recent studies evaluating the results of these criteria on a regional and country basis are limited. Agri-food policies have a special importance in terms of food security and food security and are shaped in line with macroeconomic policies (Weber et al., 1988: 1052).

The term food regime is understood to mean periods of relatively stable relations in food production and consumption, which have been historically governed by certain rules on a global scale, and changed and transformed by changes in power balances. The Turkish Food Codex Regulation on Food Labeling and Consumers Information entered into force after being published in the repeated issue of the Official Gazette dated January 26, 2017 (Karaman et al, 2012). It has opened an avalanche of regulations setting out the general rules, requirements and responsibilities for information on food, particularly food labeling. The new information requirements and the need to provide sufficient flexibility in order to respond to subsequent developments. Label, any mark, stamp, stamp, label, label, label, label, label, label, embossed, cold-stamped, glued or affixed on food packaging, printed, stencil printed, marked is one of the most important tools that bring food together with the consumer. The label showing all the ingredients in the food composition on the package forms the identity of the food. The accuracy of the label information is the responsibility of the food operator. The consumer is also required to pay attention to the label information when purchasing products. There is not a small number of findings in the literature that food labels do not lead consumers to healthier food intake preferences. These findings indicate that food labels may not be able to perform the tasks assigned to them. The fact that nutritional labels are not sufficient to enable individuals to make healthier decisions is more likely to be related to the level of awareness of the community about healthy eating rather than the labels themselves, and this can be done by public and

universities and non-governmental organizations in order to enable consumers to use nutritional labels more efficiently.

Consumers should read the label information of foods to ensure that the food in the package is fully identified, that is, whether the name of the food and the ingredients / ingredients are compatible. Consumers susceptible to allergen substances should examine the allergens that are clearly reported in the list of ingredients. It should also pay attention to warnings about the presence of caffeine or food with components that may cause laxative effects, which may affect vulnerable consumer groups such as children and pregnant women. Label reading is important for preventing nutritional health problems. The recommended expiration date, which is the responsibility of the food operator, indicates the time during which the food retains its unique properties when properly maintained. It should be noted that food beyond the expiry date will not be considered safe food.

4. Food Industry on policies and economy

Although advantageous in terms of natural resources, Turkey is experiencing difficulties in the agricultural products that may be complementary. In other words, apart from fruits, vegetables, tobacco and cotton, in most agricultural products, especially animal products, the disturbance in the structure of agricultural enterprises is visible. It could not compete with developed countries due to problems such as inadequate technology usage and low productivity. This situation is also reflected in the food industry, increasing costs in production, and on the other hand, low demand and instability in production affect producers

and industrialists negatively. Complementary and effective food control from farm to table and safe food production are among the priorities of our country as well as the European Union (Güney and Tekin, 2015). Efforts to develop control systems that provide effective and adequate food control to ensure food safety are ongoing and the current national food control system is aligned with more effective internationally accepted approaches. Increase in the value of production in the food industry in Turkey, has lagged behind demand and imports. The sector has undergone significant structural changes since its inception and this process continues (Özyılmaz and Ataç, 2019:403). Some of these developments are the inclination to contract farming, the expansion of quality systems, the renewal of technology, the increase in product diversity, the marriage of firms and the spread of new marketing techniques. Turkey is taking steps to comply with the laws and regulations of the EU interests in the food area. But, the main problem is the practice of laws, as well as focusing on the structural issues of the industry in particular, and in this respect, innovations and studies are needed (Bakkaloğlu and Güneş, 2018:186). However, the continuing problems in the agricultural structure and the inability to develop standard quality and continuous raw material supply for the industry, the presence of enterprises in informal production reduce the competitiveness of Turkish food industry in EU integration. In creating a sustainable society; common interactions between actors or structures with different purposes, resources or capacities are important (Keskin et. al, 2018). For example, local governments have political responsibilities as well as political parties. These processes are expected

to be developed by emphasizing different aspects of sustainability through social arrangements and local collaborations between local and other actors (Yıldırım et. al, 2016: 123). In this context, local progress is seen as very important in the development of sustainability in food.

5. Result and Discussion

Awareness should be created about the green economy practices by providing visibility of the enterprises performing the green economy by the relevant public institutions and organizations. In addition, individuals should be informed about green economy practices. In this context, increasing the demand for green products, green purchase and so on. Green food economy supportive behaviors should be encouraged. However, green collar jobs should be encouraged. Finally, the researcher / researchers in the field of green economy should disseminate the work in all sectors and carry out studies on a larger sample size. Food is one of the most important elements of human life and is critical to public health. The main task of the food industry is to produce high quality, healthy and reliable food products by processing agricultural raw materials and to offer these products to the society. In the process starting from production to the consumption chain; healthy raw material supply, efficiency in input use, effective resource use and systematic waste management, packaging and sustainable distribution channels. Food and beverage industry which is one of the important building blocks of Turkish economy; production value, contribution to employment, export and foreign trade coverage ratio is important for the country's economy (Gündüz, 2018).

Germany, France, Italy, England and Spain are the countries with the largest food sector in the EU. Turkey in the EU member states, especially Germany, France and Britain as the developed countries are far behind. Turkey continues its structure small- and medium-sized food processing sector. In the meantime, it pioneers the development of the sector with the small number of large, modern techniques and technology and internationally operating enterprises. It should be emphasized that the small business structure in our country takes place in the food sector. Capital and its structural status are important for the continuity of production activities in enterprises. Credit is one of the sources where the insufficient equity capital is met. Demand for food products is important for the development of the food sector. The majority of businesses operating in the food sector are SMEs in Turkey is. The main problems of SMEs such as management and organization, marketing and finance are also experienced in food enterprises. Financing types of small and medium-sized enterprises according to the sources of capital in general; own funds, foreign financing and auto financing. Equity financing and auto financing are internal and foreign sources are external financing. These enterprises, which are generally established with limited equity, need foreign resources to continue their activities. Although there are alternatives such as financial leasing, factoring, forfaiting, buyer-seller loans and barter, the weight of loans in foreign resource usage continues. The structural problems of the banking system and the inadequacy of incentive policies and financial management of enterprises can be cited as the main reasons for this situation. The development of long-term and rational policy for

financial problems of enterprises in Turkey is emerging as an inevitable necessity. Along with the policies to be developed in cooperation with SPO, KOSGEB, BRSA, relevant governmental organizations, Chambers of Industry and Commerce, NGOs and Universities, thus the solutions to the financial problems of these enterprises can be produced (Bulut et al, 2017:27)

Apart from financial problems, food enterprises also face many chronic problems. For the food industry all over the world, the agricultural sector is an indispensable source of raw materials. In general, developments in both sectors are parallel to each other. In order to increase the international competitiveness and efficiency of the sector, the problems experienced in the process starting from production to the table should be analyzed and precautions should be taken. Turkey adversely affect the structural problems of the agricultural food sector. The multiplicity of agricultural land, the small and only subsistence farms are abundant, generalized agricultural policies implemented without taking into account the differences in yield and income between regions, the lack of a guiding production planning to control agricultural supply, agricultural production costs and accordingly product prices medium and long-term policies that will eliminate the negative effects such as the fact that they are above the world market should be followed with determination. Some food businesses in Turkey is located on a large scale in an effective and successful activities in the EU and world markets. However, the sector generally consists of small and medium-sized enterprises. Policies that will increase the scale size should be

implemented in terms of eliminating the problems arising from the small size, making the enterprises more productive and international competitiveness, and enabling small and medium-sized enterprises to switch to market-compatible production by using modern technology. The weak financial structure of small and medium-sized enterprises, unregistered production and the inability of the sector to benefit from the loans to the economy is another problem experienced in the sector. As with the agriculture sector, especially with the zero interest loans to be applied to investment loans, solutions should be sought for the financing problem of the sector and consequently to the small scale size problem in the following periods.

The price increase experienced in basic food products in Turkey in recent years drew reactions of consumers. According to experts, the problem is not in domestic products, but in an approach that makes production dependent on the outside. To prevent price increases, the government has long been preparing for Market Place Law. Market Place Law aims to prevent commission activities in case of wholesalers and thus lower prices. However, the draft law caused criticism in its current form. Farmer's organization broker closes the gap in Turkey. Countries' policies on food safety, their ability to provide food safety and their targets for people's access to safe food vary according to their development. Food safety risks and public health risks increase due to serious systemic problems especially in underdeveloped countries due to the detection of food safety problems, the elimination of these problems and the necessity of a complex and serious infrastructure

(Santeramo et al, 2014). Ministry of Agriculture and Forestry is the competent authority in ensuring food safety in Turkey, and the General Directorate of Food and Control are also acts as a contact point in the eyes of international organizations. In addition to this duty, he is the competent authority in the field of feed safety, aquaculture, veterinary and phytosanitary. Another impetus in the preparation of food-related policies has been international obligations such as European Union harmonization efforts. One of the issues discussed in the Negotiating Framework for Turkey in the accession process is concerned with food safety. It includes hygiene and presentation rules, mechanisms and controls for consumer protection and information, and more stringent hygiene rules for animal food processing and placing on the market. The most basic problem in our country in terms of food safety; the failure to record and control all stages of food production. This problem also indicates the inadequacy of the qualified auditor staff in the audits. Particularly in the control of high-risk additives, inspection programs and parameters not covered by the Turkish Food Codex should be updated. Otherwise, it is not possible to avoid imitation and adulteration. As a result, nutrition outside our homes has become widespread today. Therefore, the rules of hygiene and sanitation should be complied with in all stages from the procurement of raw materials to the consumption in mass consumption places, these rules should be internalized and the controls of these places should be tightened by the ministry.

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CHAPTER 7:
THE HEALTH ECONOMY AND HEALTHY CITIES

Vahit BEHZETOĞLU¹

¹ Independent Researcher, behzetogluvahit@gmail.com

INTRODUCTION

Health economics, the legal regulations in the field of health, the economic consequences of regulations concerning the health of the individual and society. For this reason, health policies should be restructured through management, organization and manpower dimension in order to develop health policies and to evaluate the results, to ensure the effective use of resources in health services, to establish the prevalence and continuity of the services provided, to increase the benefits obtained by the service providers behind activities (Mooney, 1994:17). In short, health economics covers all activities related to health and health services. Therefore, the subject, content, operation, application and results of health economy are of great importance.

Health is directly or indirectly affected by many factors. Therefore, health is among the concepts that are difficult to define and understand, and different definitions are made. According to the literature, health is defined almost everywhere in terms of not being sick, in connection with the concept of disease, that is, giving a negative message. Some thinkers make a rather biological definition of health and define health as the process by which a living organism can work without a disorder and achieve a higher level of organization in order to preserve its codified integrity and stability in its cellular nucleus. Health is also defined as positive and negative (Weiss and Sullivan, 2001:6). Negatively, health is defined as the absence of disease. On the other hand, in terms of positive, individuals' ability to hold on to life, their ability to withstand the stressful situation, the level of

psychological well-being and physical adaptation, are defined as the ability to establish good relationships in society (Getzen, 1997:33)

By the course of time, the importance of health and having a healthy society has been accepted by all, and people have sought resources to increase the current health output. As the idea that resources should be used effectively, the idea that health is an economic as well as social phenomenon has gained weight. In order to meet the needs in health services in the best way, the limited resources available made it necessary to examine the issues that could be related to health economically (Bridges, 2003: 218). As a result, health economics has emerged as a sub-discipline with the application of concepts, techniques and methods of the general economy to the health sector. Health economics; legal regulations in the field of health, economic consequences of regulations concerning individual and community health, the formulation and evaluation of health policies, ensuring the effective use of resources in health services, establishment of prevalence and continuity in the services provided; management, organization and manpower (Yaylalı et. al, 2012:563). Given the size of the health sector and its relationship with other economic sectors, it is not surprising that the development of health economics as a separate discipline within economic science.

1. Health economics and items behind it

Regardless of the level of development, insufficient funding is the most frequently complained issue in the management of health services in all principles (Çelikay and Gümüş, 2010: 189). While the rate of

increase in health expenditures in high-income countries exceeds the rate of increase in national income, there are significant deficiencies in terms of health resources in low-income countries. Today, in the financing of health services all over the world, indeed, a system, where expenses are fully covered by the budget, premium-based social insurance system, private health insurance and systems where individuals pay for their services from their own pockets are applied. Regardless of the systems applied, as health expenditures increase, efficiency should be increased and extravagance should be prevented. This increases the importance of health economics and shows that it will benefit more from health economics science in the coming years. The main condition for effective use of health economics is to have a good database and to make it available to all interested parties (Tıraşoğlu and Yıldırım, 2012: 115).

The most important sources of financing in public health expenditures are the state budget or the taxes that constitute the budget. Tax-financed systems are those in which the majority of health expenditures are covered by tax payments, or where the tax-financed portion is larger than other components. The public health systems of the various European countries have in common the concern for the right to health and solidarity in the context of the welfare state. However, their diversity can't be reduced to a simple duality between the Beverly and Bismarckian systems (Kutzin, 2011: 21). If, in response to the expansions in health care, all countries have undertaken extensive reforms aimed at regulating the supply of care from the perspective of

equity and efficiency, each has done so in a clean way. Linked to the characteristics of which, it has historically been endowed and to the specific expression of its regulatory problems. The generality of the reform practices should therefore not suggest that they reflect or facilitate a convergence of health policies at EU level (Hitiris and Nixon, 2001: 229).

The "economists" interested in the health sector in the 1950s-1970s are primarily hospital physicians close to the public sphere, who produce work on medical consumption and health expenditure. But these works are not part of the concerns we have today. If one is interested in the cost of health, it is not so much to reduce it as to improve the use of expenditure in order to cover needs which seem at once enormous and legitimate. The so-called "medical economics" economy of health first appears to be the extension, in the health sector, of the rationalization effort driven by the Plan and national accounts at the global level (Bleichrodt and Van Doorslaer, 2006: 953). This state expertise develops at the initiative of civil servants and aims first at producing statistical information that decision-makers need within the framework of the Keynesian reference system at the time. The particularity of the health sector is that this expertise is developing under the supervision of doctors. This state expertise develops at the initiative of civil servants and aims first at producing statistical information that decision-makers need within the framework of the Keynesian reference system at the time. The particularity of the health sector is that this expertise is developing under the supervision of

doctors. This state expertise develops at the initiative of civil servants and aims first at producing statistical information that decision-makers need within the framework of the Keynesian reference system at the time. The particularity of the health sector is that this expertise is developing under the supervision of doctors (Coast et. al, 2008: 1193).

From the 1970s, new actors claim the title of health economists. But this time it is about economists training who develop new centers of research and teaching in health economics in the faculties of economics. In the decades that follow, health economics is becoming increasingly closer to economics and gradually gaining autonomy over medicine, but also from the state. This empowerment can be interpreted, as Frédéric Lebaron has done for economists on a more general level, as a sign of a tendency towards the professionalization of economists (Denord, 2007: 296). This professionalization project is carried by academic economists, true "entrepreneurs of professionalization", for which it is a question of "imposing a certain definition of what is an economist, to mobilize and represent the group most conform to this definition and the resources it presupposes " By setting standards in terms of training, publication, membership of learned societies and the very work of economists (teaching and research), academic health economists, in this view, only reproduce level the process that characterizes all economists. The controversies that oppose them to the actors who consider doing health economics without being trained economists - doctors, statisticians, but also managers - are related to a more general split between economists and economists "economists"

(Selvaraj and Karan, 2009: 57). However, this disciplinary empowerment of the health economy occurs in the years 1980-1990, at the moment when a restrictive budgetary policy is being implemented which is generating a demand for growing expertise, both from the public authorities and from the actors in the sector. Seeking to break with their image of blind payer, the Social Security funds start to sponsor studies in health economics. Fearing that the debate does not escape them and seeking to legitimize their practice, the medical and paramedical professions require training. As drug price controls are tightened, the pharmaceutical industry becomes a demand for a medico-economic evaluation demonstrating the contribution of its products. Indeed, in the 1980s and 1990s, there was a twofold process of internationalization, the first one is the internationalization of scientific knowledge, the health economics, on the Anglo-Saxon model and, at the same time, the internationalization of the repertoires of action, and the second one is the disease protection. Scientific and political logic intersect and reinforce each other, thus contributing to transnational cognitive harmonization of health protection policies. For both scientists and political actors, health system reform is becoming a leitmotif that needs consensus. Most European countries adopted at the same time (1990s) reforms of their health system based on principles of action and tools inspired by neoclassical economics and new public management (Akin, 2018: 278).

At the international level, recent interest in health protection policies by organizations such as the World Bank or the OECD creates

a favorable context for disseminating an economic reading of the stakes of these policies (Baltagi and Moscone, 2010: 808). These international economic organizations seek to produce an agreement on the general framework in which reflections and debates on social protection in general and health protection in particular must be set. They aim to define major orientations and especially to make them accepted by the various national actors. However, these organizations rely on health economics to develop a doctrine of health protection because they approach health policies in terms of the expenditure they cause and that should be controlled (Sen, 2005: 151). Health economics and public action have always had close links, but these relations became more complex in the 1980s and 1990s, because the health economy is constituted as an independent scientific knowledge at a time when budgetary concerns regarding health protection (at national as well as international level).

In the area of health policy, there were numerous indications of similar economic objectives, problems and reform approaches in the EU health systems as well. Similar health policies and approaches could be found across social security systems and national health services as well as within the countries belonging to both groups (Bulut et al, 2017: 1060). However, the analytical categories of health policy convergence still have to be defined. Finally, convergence has been explored in the context of the exchange of health goods and services. Despite the health sector's growth, the volume of cross-border supply is still very small, and convergence across Europe is not to be expected for the time being

(Yıldırım et. al, 2016: 19). For good tradable goods the example of patented new chemical agents was shown that from a welfare theory point of view even a price differentiation between the European member states could be optimal (Bulut et. al, 2017: 446). In determining the allocation of the common research and development costs, however, problems arose suggesting a further theoretical and empirical treatment of the topic. Today, the economics of health is an area of economics devoted to the study of health. The health economics is concerned with the organization of the health system, the determinants of the supply of care and the demand for care (Getzen, 1997: 27).

2. Health Tourism as a factor

The health tourism, healthy tourism or medical tourism is a global phenomenon that involves traveling to another city or country to receive some form of treatment or medical care (such as surgeries, treatments, rehabilitation) or type of welfare as aesthetic or spa treatments (Yıldırım et. al, 2016: 582). Medical tourism is not a new phenomenon worldwide. From the time of the Greeks, Epidauria was traveled in the Saronic Gulf, in order to receive medical attention at the sanctuary of Asclepius. Centuries later, we also have in Egypt in 1248, the inauguration of the Mansuri hospital in Cairo, being one of the most developed in the world, a factor that caused many people to travel there to receive medical attention (Newhard et. al, 2014: 385)

The diversification of health services, the problems experienced by the country's health systems, the expectation of high quality and low-cost services of the people brought forth the travels for therapeutic

purposes. The high level of health expenditures in developed countries, the difficulties experienced by the social security systems of these countries, the rapidly aging population and the developments in transportation technology have been the starting points of the travels for therapeutic purposes. The emerging market makes the health care producers appetite. Developments in communication technologies and ease of access to all kinds of information have been the driving force of therapeutic travels (Arellano, 2007: 196)

Medical tourism is an important part of health tourism. Surgical procedures such as dental, eye, aesthetic, cardiovascular and joint prostheses, infertility treatment and IVF are on the agenda. People seeking this kind of health care are turning to countries and centers that come to the fore with both success and price advantages. These countries and centers attract attention in Southern Europe, South Asia and South America. Because the prices of treatment and surgical interventions in these countries are much lower than in the northern countries (Henderson, 2004: 175).

3. The Wellness concept and its tourism

Wellness is an English term that is generally used to define a healthy balance between mental, physical and emotional levels, resulting in a state of general well-being. Although it began to be used in 1950 by Halbert L. Dunn , later known as "father of the wellness movement", the term "wellness" modern, was not popular until the 1970s. Wellness Tourism consists of travel to promote health and well-being through physical, psychological or spiritual activities (Akin et. al,

2018: 2629). Although wellness tourism is often correlated with health tourism because health interests motivate the traveler, wellness tourists are proactive in seeking to improve or maintain health and quality of life, generally focused on prevention. For their part, health tourists often travel reactively to receive treatment for a diagnosed disease or condition. Wellness travelers seek a variety of services, including fitness and sports; beauty treatments; healthy diet and weight control; relaxation and stress relief; meditation; yoga; and health-related education. Wellness travelers can look for procedures or treatments using conventional, alternative, herbal or homeopathic medicine (Chen et. al, 2008:111).

4. Healthy Cities

Healthy city is a term used in public health and urban design that emphasizes health policy. Its modern form stems from the World Health Organization initiative for Healthy Cities and Villages since 1986, but it has a history that dates back to the mid- 19th century (Yıldırım et. al, 2016: 123). The term is used in conjunction with the European Union, but is quickly becoming international as a way of establishing health policy at the local level by promoting health (Akin and Yıldırım, 2016: 679). It emphasizes the many dimensions of health, as laid down in the WHO constitution and more recently by the Ottawa Charter for the Improvement of Health. An alternative term is Healthy Communities, or Municipios saludables are also the others used in Latin America (O'Neill and Simard, 2006:150).

The German Healthy Cities Network was founded in Frankfurt am Main in 1989 by nine member municipalities, four years after the launch of the Healthy Cities action program launched by the WHO Regional Office Europe to implement the WHO Health for All strategy (García - Barbero, 1995:6). It was intended to anchor central premises of health promotion such as inter-sectoral cooperation, active citizenship, equal opportunities for health and community orientation as elements of a newly-understood public health practice at local level. The German Healthy Cities Network, with its secretariat in Hamburg, has a spokesman council, which is made up of equal numbers of five elected representatives of local authorities and five representatives of health initiatives and self-help associations (Plümer et. al, 2010:349). The term of office is two years.

For Turkey, the private health institutions that can compete with European standards have started to increase in big cities such as Ankara and Antalya (Gül et. al, 2016: 559). However, construction and operation costs of these opened health facilities are quite high. One of the most important ways to reduce these high costs is the opening of health facilities to overseas markets. In addition, trained in the health sector and geographical location of our country and trained manpower are among the important advantages of medical tourism in Turkey.

Chronic diseases, obesity and sedentary lifestyles are among the health issues facing world cities today (Yıldırım et al., 2016: 907). It is increasingly recognized and proven that the way our cities are planned, designed and built can contribute to these problems. Many of the

strategic levers for addressing the built environment exist outside the health sector, at the municipal level, in areas such as urban planning, transportation, parks and recreation, and housing (Akin et. al, 2017:459). The challenge for the public health sector is to build and sustain partnerships and collaborations across sectors to integrate health into built environment policies. Along with the new orders of urban sustainability and the spread of discourses of an institutionally integrated ecology, neo-hygienist concerns continue to focus on public health, health security, hygiene and the healthy living environment. And while it is clear that health-hygienism is not enough to make a lasting policy, the fact remains that the discursive and ideological forms of modern public health embrace those of the "sustainable city" (Gray & Demirjian, 1977: 195).

The concept of healthy city is a concept that includes many different disciplines. A healthy city includes all the elements expressed by the concept of a livable city. It is the city, which is expressed with the concept of healthy city, aims health and aims to become a healthier, more peaceful, livable city, and initiates the necessary structural changes and processes and conducts its studies with determination in this direction. The World Health Organization, with the European Healthy Cities Network all over the world, aims to support health development plans at the urban level and bring health-related and social issues to the agenda of non-health sectors (Tsouros, 2009:8). The main objective of the Healthy Cities Project initiated by the World Health Organization is to develop healthy cities by making changes for a

healthy city, to spread more cities and to increase cooperation between cities.

It is possible to define the city's livelihoods as non-agricultural and non-livestock occupations, which are different from rural areas in many ways such as administrative structure, social relations, cultural areas and population density. Beyond being just a space, historical, social, cultural, political, and economic and so on. Most of the properties are also located within the settlements. Historically, cities have fulfilled a number of military, religious, political, commercial, symbolic and cultural functions, depending on the history and geography of their formation and transformation. Health is directly linked to our environment, both locally and globally. Health is defined as a state of complete well-being in terms of physical, mental and social aspects. It is difficult to protect human health unless adverse environmental conditions in a region or country are corrected. On the other hand, health services provided to the society remain limited unless negative environmental conditions are corrected. It covers a healthy lifestyle, social unity, housing quality, work, accessibility, food, safety, air quality, water and sanitation, soil and solid waste, and climate stability. The most threatening factor in health in cities is the increasing urban poverty in all countries. In developed and developing countries, health conditions are also poor in relation to poor groups. The quality of life of people, being healthy, is an indicator of the manifestation of the interaction with the public health and the environment that is capable of meeting the needs of the individual (Boonekamp, 1999:

109). The quality of life, peace and happiness of the individual are not independent of urban peace and quality of life, but they are in constant interaction. Healthy cities play a major role in improving the quality of urban life. Healthy Cities are places where the planning of the cities supports the well-being and health of the people and the urban environment and quality of life are not damaged by the planning activity. In many cities, however, the links between urban planning and health have been ignored or largely ignored by urban planning systems, where economic and financial gains are taken into account.

5. Result and discussion

Responsibilities are increasingly being distributed from the center to other places in areas that directly affect the determinants of health, and cities are therefore increasingly becoming key players for health and sustainable development. In the sustainable development approach, four key issues are addressed together: social and economic policies, management of natural resources, environmental protection and the needs of future generations. Urban sustainability is the sustainability of the residential areas, the country and the world in which we live, with the responsibility initiated by ensuring social and personal welfare by protecting the right of people to live in a healthy and balanced environment. Economics as a science can be seen as making the best use of limited resources. The health economy and determination to create a healthy city help decision-makers to get the most out of these limited resources by analyzing alternatives. We have access to almost unlimited technology that can be used for the provision of health

services. However, it is not possible to purchase all new technologies for those who provide or pay for these resources. Our studies in the field of health economics optimize the available limited resources in terms of clinical efficacy, distributable efficiency, technical efficiency and patient safety and provide the best value for these resources to decision-makers through cost-benefit analyzes. Our Health Technology Assessment studies help to make policy decisions about acquiring or reimbursing new technologies through a systematic review of the characteristics, outcomes, and impacts of these technologies. Analysis methodologies include cost-benefit, cost-benefit, cost-effectiveness and cost minimization for cities.

The long-term objective of the Healthy Cities Project is to improve the health of people living in European cities. The project implements the World Health Organization principles Health for All in the 2000s. These are the principles highlighted in the Ottawa Charter for Health Promotion and the European Charter for Environment and Health at the Local Level (Akin and Yıldırım, 2016:31). The main objective is to enable cities to implement local health for all. In this case, it is necessary to develop a city-specific plan and to provide new organizational and descriptive structures. The most important contribution of the Ottawa requirement is that it broadens the scope of the concept of health promotion and defines it as a method of controlling and improving the health of individuals (Potvin and Jones, 2011: 246)

The analysis and control of health economics is viewed critically by many healthcare professionals. Often politicians decide against the rationalization and rationing recommendations of the health economists, as they are not feasible for political reasons (like hospital closures). Since the health economy is very medical and pharma-heavy, the social life of each individual patient is largely ignored. A very strong focus on price and market mechanisms, as well as their self-interest, many experts doubt the methods of health economists. The independence of health economics analysis is often questioned because most studies are commissioned and funded by stakeholders (such as the pharmaceutical industry, health care professionals or health insurers). Demands are for better explanations and viable solutions that can be translated into an easily understandable health economics. Methods such as "standard gamble" and "time-trade-off" are only suitable to a limited extent because they are very complex, costly and thus difficult to introduce into everyday life (Dolan and Sutton, 1997: 1525). Therefore, the health economics in a city or a nation is strongly influenced by methodological limits. This includes the quality of life, as well as the monetization of benefits. Another not to be ignored limit is the appreciation of life. Ethical conflict situations occur frequently. Health economics is the application of economic theory to not only the phenomena in cities but also the problems associated with health. Among other matters, it includes the meaning and measure of health states, the production of health services, the demand for health and for health services, cost effectiveness and cost benefit analysis, territorial health, health insurance, health services markets, financing, disease

cost; evaluation of options in health services, human resources planning, the supply of related industries, equity and inequality determinants in the use of health services, economic management of hospitals, budgets, territorial allocation of resources, the remuneration methods for personnel and comparative systems analysis.

Healthy cities project is not only for increasing the level of health in the medical sense, more health centers, more hospitals; education, planning, transportation, infrastructure, industry etc. is a development project involving all sectors. It is emphasized that the project covers the works that are in full responsibility of local governments and local governments are also responsible for the health of the city. Health is the work of all sectors, not only the health sector, and every sector should make the necessary contribution. The health problems that arise in urban life should be one of the central aims of many professions and representations and they should work in cooperation especially in urban planning, healthy environment, peaceful and livable city. Although there are many interests in improving urban life; each has limited knowledge and expertise. In city administration; the participation of different disciplines in the city-related issues, the integration of their knowledge and experience, will facilitate the delivery to a healthy city in order to reach acceptable and applicable approaches. Local governments play an important role in health promotion and sustainable development and are responsible for the main factors affecting health in areas such as environment, housing and social services. The social and physical environment in which people live and their lifestyles are

the main determinants of health. One of the most important tasks of local governments was to formulate public health policies considering all conditions of urban life. In terms of municipal legislation, there are supportive, but not restrictive, provisions in their fulfillment of duties, in the development of new projects and in the development of cooperation with other municipalities for Turkey as well. Administrative and financial support should be given to the activities of both municipalities and Healthy Cities Union at the desired level. Health economics began to arrive in Turkey on the agenda in recent days. Increasing health spending, as well as all over the world are among the priority issues in the government in Turkey.

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