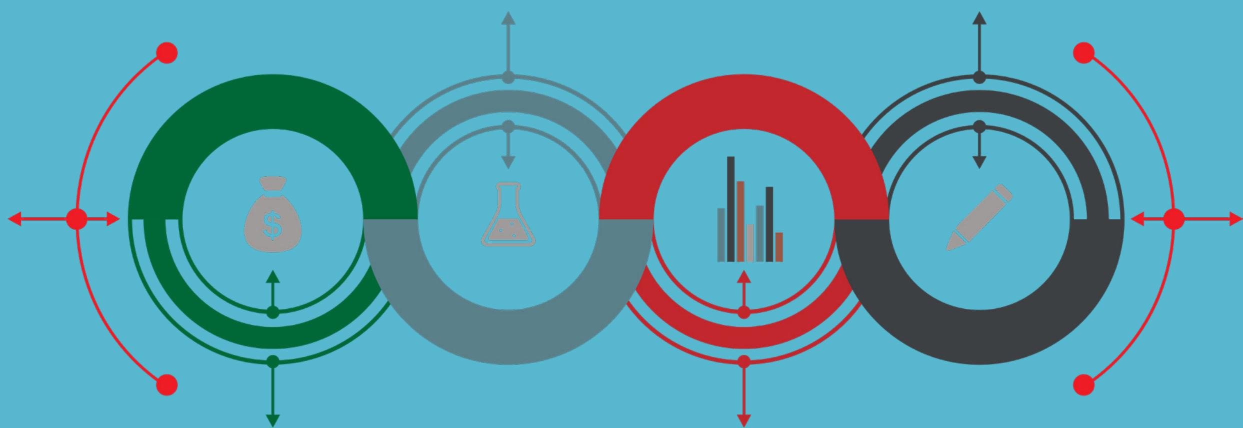
PUBLIC SECTOR ECONOMICS & DEVELOPMENT



M. Mustafa Erdoğdu
Michel S. Zouboulakis
Sevda Mutlu Akar
Başak Turan İçke

IJOPEC PUBLICATION
London ijopec.co.uk Istanbul

PUBLIC SECTOR ECONOMICS & DEVELOPMENT

Edited By
M. Mustafa Erdoğdu
Michel S. Zouboulakis
Sevda Mutlu Akar
Başak Turan İçke

Public Sector Economics & Development

(Edited by: M. Mustafa Erdoğdu, Michel S. Zouboulakis, Sevda Mutlu Akar, Başak Turan İçke)

IJOPEC Publication Limited
CRN:10806608
615 7 Baltimore Wharf
London E14 9EY
United Kingdom

www.ijopec.co.uk
E-Mail: info@ijopoc.co.uk
Phone: (+44) 73 875 2361 (UK)
(+90) 488 217 4007 (Turkey)

Public Sector Economics & Development
First Edition, December 2018
IJOPEC Publication No: 2018/41

ISBN: 978-1-912503-62-9

A catalogue record for this book is available from Nielsen Book Data,
British Library and Google Books.

The publishing responsibilities of the chapters in this book belong to the authors.

Printed in London.

Composer:
IJOPEC Art Design

Cover Illustrators designed by Freepik

CONTENTS

EDITORIAL ADVISORY BOARD

LIST OF CONTRIBUTORS

This is a list of those who contributed to *Public Sector Economics and Development.*

Editors

M. Mustafa Erdoğdu is a Professor of Public Finance at Marmara University in Istanbul, where he is the head of Financial Economics. He received his MA and Ph.D. degrees in development economics from Manchester University, UK. He is co-organizer of *International Conference of Political Economy* and associate editor of *International Journal of Applied Behavioral Economics*. He has authored many articles, a book and co-edited eight books on a wide range of issues. His research interest includes economic development, behavioral public finance, human capital, industrial policy, industry 4.0, renewable energies, green buildings, and financial crises.

Michel S. Zouboulakis is a Professor of Economics at the University of Thessaly, Department of Economics, Volos / Greece. He holds a B.A. in Economics, Aristotle U of Thessaloniki, an M.Sc. in Epistemology and History of Economics, and a Ph.D. in Economics, University of Paris 1, Pantheon-Sorbonne (1988). His research interests are in the Methodology and the History of Economics and in various fields of Institutional Economics. He has published 3 books in English (Routledge 2014), French (PUF 1993) and Greek (UoThP 2007), as well as 86 articles in international peer reviewed Journals and collective vols.

Sevda Mutlu Akar is an Associate Professor of Public Finance at Bandırma Onyedi Eylul University in Turkey since 2016. She earned her Ph.D. degree in public finance at Marmara University, Department of Public Finance. Her Ph.D. dissertation was "The Impact of Natural Disasters on Public Finance: Turkish Case (in Turkish, 2009-2013)". Her teaching and research are in the area of public economics, public finance and budgeting. She has also worked on health expenditures, public expenditures, taxation and time series analysis.

Başak Turan İçke received her Bachelor's Degree in 1996 from Istanbul University, Faculty of Political Sciences, Department of Business Administration. She received her master's degree in 1999 in finance in the same university. She got her Ph. D. in 2006 in Accounting and Finance from Marmara University. She is working as an associate professor at Istanbul University. She has articles, chapters in edited books and other publications on mergers and acquisitions, behavioral finance, efficient market hypothesis, firm valuation, socially responsible investment, and financial literacy.

Authors

Aristomenis-Christos Papageorgiou holds a Bachelor's Degree on Insurance and Investment and a Master's Degree on Insurance and Risk Management from the City University Business School in London. He received his Ph.D. from the University of Macedonia in Thessaloniki and the title of his dissertation was "The Political Economy of Long Waves: A Theoretical and Empirical Investigation". He teaches political economy and finance courses and his research interests include cyclical fluctuations, economic growth and the theory of value.

Aylin Soydan is an Associate Professor of Economics at Istanbul Okan University, Faculty of Business and Administrative Sciences. After receiving a BSc degree in Industrial Engineering from Istanbul Technical University, she did an MA in Economics at Istanbul University and Ph.D. in Economics at Middlesex University, UK. She has undertaken a number of theoretical and empirical studies, and her research interests comprise subjects like financialisation, economic growth, economic development, (de)industrialisation, international economic and financial issues, public sector debt and deficits, among others.

Binhan Elif Yilmaz is a Professor of Public Finance at Istanbul University, Faculty of Economics, İstanbul / Turkey. She received her MSc degree on Theory of Public Finance in 1994 and her Ph.D. degree on Public Finance in 2001 from Istanbul University. She became an Associate Professor of Public Finance in 2008 and a professor in 2014. Her research interest includes Public Debts, Public Finance, Political Economy and Fiscal Sociology. She has more than 70 academic works and she has been working as an executive and researcher in projects supported by TUBITAK and BAP.

Christos Papatheodorou, Ph.D. (LSE), is Professor of Social Policy at Panteion University (Greece). He was a Researcher at the National Centre for Social Research (Athens), a postdoctoral researcher and a visiting academic at LSE-STICERD and a visiting professor at the Dept of Sociology, VU Amsterdam. His research interests and publications are in the fields of political economy of social policy, social and economic inequality, poverty, macroeconomic environment, and social protection, functional and personal distribution of income.

Çağatay Edgücan Şahin is an Associate Professor in Ordu University, Department of Labor Economics and Industrial Relations. He graduated from Uludag University, Faculty of Economics and Administrative Sciences, Department of Labor Economics and Industrial Relations in 2003. He holds his MS degree from Marmara University, Institute of Social Sciences, Department of Labor Economics and Industrial Relations in 2005. He holds his Ph.D. in Labor Economics and Industrial Relations from the Marmara University in 2009. His research interests include labor history of modern Turkey, social policy, unions, solidarity economy, and political economy.

Erkan Doğan is an Assistant Professor of Political Science at Kocaeli University (Turkey). He received his MA degree in modern Turkish history from Boğaziçi University (Turkey) and Ph.D. degree in politics from Bilkent University (Turkey). His PhD dissertation focuses on the relationship between nationalism and the Turkish left in the 1960s. His main research interests are Turkish politics, Turkish political thought, Turkish left, nationalism, national developmentalism, and political ideologies. He has been a visiting fellow at International Institute of Social History (Amsterdam) and University of California Irvine, Center for the Study of Democracy (Irvine, CA).

Funda Tunçel was born on 27.08.1976 in Ankara. In 1997, she successfully completed undergraduate studies at Department of Public Finance of Anadolu University and was admitted to a master program of Fiscal Law at the same university. In 2000, she successfully completed master studies and she was admitted Ph.D. program in Fiscal Law at Marmara University Social Sciences Institute. She graduated from the Ph.D. program with her thesis entitled “Tax burden on corporations” in 2007. Since 2001, she has been working at Faculty of Economics Department of Public Finance in Marmara University.

Özal Çiçek is a Research Assistant in Suleyman Demirel University, Faculty of Economics and Administrative Sciences, Department of Labor Economics and Industrial Relations. He graduated from Marmara University, Faculty of Economics and Administrative Sciences, Department of Labor Economics and Industrial Relations in 2010. He holds his MS degree from Suleyman Demirel University, Institute of Social Sciences, Department of Labor Economics and Industrial Relations in 2013. He aims to finish Ph.D. in Labor Economics and Industrial

Relations from Suleyman Demirel University in 2019. His research interests include labor markets, industrial relations, social policies, history of labor and new cooperativism.

Savaş Çevik is an Associate Professor in the Department of Economics at Selcuk University in Turkey. He received his M.S. and Ph.D. degrees in public finance from Marmara University. He teaches public finance, public economics, and tax law and policy. His research interests are in public economics, politics and economics of taxation, and behavioral economics. He has recently published papers and books on tax compliance, international taxation, taxation economics, and fiscal preferences.

Stefanos Papanastasiou holds a Ph.D. and an MSc in Applied and Comparative Social Policy Analysis. He is postdoc researcher in the Department of Social Policy of Panteion University of Social and Political Sciences. He has been an adjunct lecturer in the Department of Social Administration and Political Science of Democritus University of Thrace and research associate in CESSDA/ERIC. He has been a researcher in the Observatory of Economic and Social Developments, Labor Institute, Greek General Confederation of Labor (INE/GSEE).

EDITORIAL INTRODUCTION

M. Mustafa Erdoğdu, Michel S. Zouboulakis, Sevda Mutlu Akar, Başak Turan İçke

This book is one of the products of the ninth International Conference on Political Economy (ICOPEC) held in September 2018 at Panteion University with the main theme "10 years after the Great Recession: Orthodox versus Heterodox Economics". This conference was co-organised by the Greek Association for Political Economy (GAPE), the Department of Social Policy of Panteion University, and the Faculty of Economics of Marmara University. The main objectives of the conference were to emphasize that Heterodox Economics and in particular the tradition of Political Economy are much better equipped to understand and to cope with the problems of the modern economy. This volume contains eight selected papers that benefited from comments and discussion during the conference and subsequently improved significantly. They analyze the relationship between the public sector and economic development.

The role of the state in the capitalist economy has been one of the most controversial issues in Economics since the emergence of the discipline. Almost everyone agrees that the state has a role to play, but there is little agreement on when and how it must act. Respective roles of the state and the market in the development process was discussed continuously, especially after the Great Depression of 1929, which clearly showed that the danger of destabilisation was too high when the market was left to the realm of the 'invisible hand' (Woo 1990: 404).

In the years after the Second World War, economies in all parts of the world were dominated by government regulation systems. The prevailing focus of economic policy in the 1950s and 1960s had given the state an important role in repairing market failures. Developing economics was born out as a rejection of the neoclassical view that it is generally not possible to improve upon the market outcome. Development economists identified the greater extent of market failure in less developed economies, justifying the extension of state intervention (Shapiro, 1994: 4). In the second half of the 70s, if not before, the mainstream of reflection on development policy (especially in the English-speaking academic community and international development organisations) had decisively departed from the prescriptions of the 1950s and 1960s towards a neoclassical view of 'the appropriate' roles of markets and states adopted (Wade, 1990: 8-14).

In an effort to move away from the old 'structuralist' development vision of the 1950s and 1960s, the so-called views of the Washington Consensus in the 1980s and 1990s saw market failures that industrial policy could address was less important than the failure of states. The policy of trade liberalization, the abolition of subsidies and the privatization of both production and state marketing has been widely recommended. As a result, ultraliberalism, with its emphasis on the market mechanism, has become a predominant mode of developmental and political influence (Erdoğdu & Christiansen, 2016: xxiii).

As Chang (2006: 13-14) indicates, "[i]n this revival of the old doctrine of laisses-faire, the early postwar consensus that capitalism has to be 'tamed' in order to be saved from itself … has been overturned, and the virtues of the 'invisible hand' are endlessly praised." As a result, developing countries have faced an unprecedented pressure to integrate into the global economy, reduce state intervention, and the need for a branch of economics specific to development was denied. The application of neoclassical proposals would lead to a reduction in the size of government and a concentration of public attention on a much more limited range of tasks than before. This would mean significant economic liberalization and privatization (Wade, 1990: 8-14). Under new liberalism, publicly owned enterprises privatized, capital controls lifted, and markets deregulated.

Around four decades of liberal developmentalism have yet to really substantiate mainstream hopes that market mechanism is sufficient for economic development, stability, and social equity. Globalization has not raised income levels for most nations. In fact, the opposite happened. There has been widespread disillusion with the experience of market fundamentalist liberal policies since the 1990s. In the words of Justin Yifu Lin, who is the former World Bank Chief Economist, "neo-liberalism threw the baby out with the bathwater, vehemently opposing any role for governments in facilitating structural change".

According to Chang (2005: 128-129), per capita income increased by 3.1 percent between 1960 and 1980, compared with only 1.4 percent a year between 1980 and 2000 in 116 developing and developed countries. By contrast, neoliberal restructuring and privatization have dramatically increased the frequency of banking crises. There were only four bank crises worldwide from 1970 to 1980 (Laeven & Valencia, 2008: 56). However, Racickas and Vasiliauskaite (2012) identified 394 financial crises that occurred worldwide during the period 1970-2007. All these show that the state has a very important role to play. We will see in this volume several chapters that will tackle this issue.

In the first chapter, Savaş Çevik explores the association between democracy and taxation with cross-country data for 135 countries. His study shows that the level of tax revenue is associated with the level of democracy. Moreover, the level of taxation and the composition of public revenue are linked to the democracy level of different countries. Countries which depend on natural resource rents and non-tax revenue are more likely to have less democratic regimes. Among tax types, the broad and visible taxes such as personal income tax, are highly correlated with democracy level while taxes paid by a small number of people such as corporate income tax and invisible taxes.

In the second chapter, Papanastasiou and Papatheodorou highlight social mobility across generations based on the EU welfare regimes. The aim of their study is to assess the extent of social mobility among the four welfare regimes in the EU. They emphasize that the countries of the social-democratic welfare states have developed a mix of universal and family-friendly policies, which is defined with respect to mobility outcomes. On the other hand, they found that south-European countries present a highly familial mode of social reproduction explaining the strong correlation in social mobility outcomes among parents and offspring. Lastly, according to the measure of social mobility that was adopted in this analysis, the conservative-corporatist and the liberal welfare systems exhibit very similar results.

In the third chapter, Aylin Soydan provides an explanatory account of industrialisation/deindustrialisation dynamics of the European Union's peripheral economies in the last couple of decades by considering their relationship with the core. This chapter also intends to contribute to the deindustrialisation literature and to the enlargement debates by providing some insights for understanding the underlying structure of the EU. Soydan indicates that the core and periphery economies of the EU have followed two different trajectories regarding their industrialisation and deindustrialisation processes, along with significant implications of financialization in the last few decades. The current crisis affected the peripheral economies severely and made the disparities among the member economies more evident.

In the fourth chapter, Aristomenis-Christos Papageorgiou examines the link between the concept of technological revolutions and Kondratief's theory of long cycles. The nucleus of these revolutions is formed by certain leading economic sectors that are crucial in the diffusion of radical technological change across the advanced capitalist economies. A simple, but powerful, statistical tool of the logistic growth curve is used in order to show that various variables, related to the technological revolutions from the 1840s up until the 1980s, have indeed followed a rhythm that is extremely close to a Kondratiev-cycle periodization.

In the fifth chapter, Erkan Doğan focuses on the idea of national developmentalism as it was understood by the Turkish left in the 1960s and analyzes the primary features of the development strategy offered by the leading figures and factions of the movement. According to the authoor, the Turkish left of the 1960s endorsed a type of economic nationalism with its emphasis on state-led national development and import-substitution industrialization. The strong emphasis was on industrialization and growing control of the state over the national economy.

In the sixth chapter, Özal Çiçek and Çağatay Edgücan Şahin investigate the privatization policy of sugar factories, which is one of the most debated issues in Turkey recently. It is argued that privatization of sugar factories will likely to cause massive layoffs and retirements along with devastating effects on beet producers and their organization Pankobirlik. At this point, the study discusses an alternative production model under neoliberalism based on the cooperation between cooperatives and worker unions.

In the seventh chapter, Binhan Elif Yılmaz takes museums in Turkey as an example to show how markets fail when there are merit goods. She argues that the market economy will not be successful in the efficient allocation of resources in the existence of merit goods. Yılmaz evaluates the economic and social foundations of public subsidies to increase the consumption of merit goods. This study suggests that the intervention of state subsidies to museums cannot be justified by economic and social reasons.

In the eight chapter, Funda Tunçel addresses taxpayer rights in Turkey. Taxpayers have formal and fiscal obligations that are legally arranged. Nevertheless, the rights of taxpayers are as crucial as their obligations. Protection of the taxpayer rights during the tax audit is the responsibility of tax administration and tax audit personnel. A number of regulations have been made about taxpayer rights in Turkey from year to year. However, legal regulations should be made particularly about taxpayer rights during tax audits and taxpayers should be informed about jurisdiction option when there is a right violation.

References

Chang, H-J. (2005). *Kicking away the ladder*. London: Anthem Press.

Chang, H-J. (2006). *The East Asian Development Experience*. ISBN 9781842771419.

Erdoğdu, M. M. & Christiansen, B. (Eds.) (2016). Preface. In M. Erdoğdu & B. Christiansen (eds.), *Handbook of Research on Comparative Economic Development Perspectives on Europe and the MENA Region* (pp. xxiii-xxxiii), Hershey, PA: IGI Global. DOI: 10.4018/978-1-4666-9548-1.

Laeven, L., & Valencia, F. (2008). Systemic banking crises: A new database. IMF Working Paper WP/08/224. Retrieved June 30, 2018, from https://www.imf.org/external/pubs/ft/wp/20008/wp08224.pdf

Lin, J. Y. (2017). Rethinking Industrial Policy from the Perspective of New Structural Economics. *China Economic Review*, 48, 155-157.

Racickas, E., & Vasiliauskaite, A. (2012). Classification of Financial Crises and their Occurrence Frequency in Global Financial Markets. *Social Research. 4*(29), 32–44.

Shapiro, Helen (1994) Engines of Growth: The State and Transnational Auto Companies in Brazil, Cambridge: Cambridge University Press.

UN (2018). *The World Economic Situation and Prospects 2018*, United Nations: New York.

Wade, Robert (1990) *Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization,* Princeton: Princeton University Press.

Woo, Wing Thye (1990) "The art of economic development: markets, politics, and externalities", *International Organisation*, 44, 3, Summer.

1

THE COMPOSITION OF GOVERNMENT REVENUE AND DEMOCRACY: A CROSS-COUNTRY EXAMINATION

Savaş Çevik[1]

Abstract

The study explores the association between democracy and taxation by relying on the cross-country data over the period of 2011-2016 for 135 countries. The data shows that the level of tax revenue, but not total public revenue, is associated with the level of democracy. Not only the level of taxation but also the composition of public revenue is linked to the democracy level of countries. Countries which depend on non-tax revenue and natural resource rents are more likely to have less democratic regimes. Among tax types, the broad and visible taxes such as personal income tax, are highly correlated with democracy level while taxes paid by small number of people such as corporate income tax and invisible taxes such as consumption tax even they are paying by a large number of citizens are not related to the level of democracy of countries.

Keywords: *taxation, the composition of taxes, democracy, democratic governance, political regimes, fiscal bargaining*

1. Introduction

The financing way of public activities can be viewed as a reflection of the state-society relationship and the political interaction between rulers and people as well as providing the financial tools needed to fulfill the functions of the state. It can be argued that the better governance between the state and society, the effectiveness of public institutions, the creation of accountable governments is related to public financing and the composition of taxation. In recent years, there has been a growing number of studies to reveal the connections between taxation and democracy. Two main perspectives could be identified in the literature. The first argument that comes mostly from political scientist and economic sociologist argues that taxation and tax structure may help to develop democratic governance through fiscal bargaining and an established social contract by making rulers more responsive and accountable to citizens as seen from the experience of the Western democracies. The second argues that political regimes are decisive on the government finance, and thus, a democratic and inclusive governance may increase the voluntary compliance of citizens through creating the effective administrative and participatory policymaking. To put it briefly, the first focuses on the argument "taxation leads to representation", the second on "representation leads to taxation".

The paper attempts to explore the association between democracy and tax levels and the composition of taxes by depending on the cross-country data. The study argues that not only the general level of taxes but also the composition of public revenue would be linked to democratic governance. Rather than taxes paid by the small section of citizens and taxes that invisible to citizens, the taxes paid by large masses and visible taxes are more likely to have democratic and accountable governments. A public financing based on visible/observable revenues (such as taxes among revenues and direct taxes among tax revenues) would be expected to motivate citizens to

1 Associate Professor of Public Finance, Department of Economics, Selçuk University, Turkey, scevik@selcuk.edu.tr

monitor public authorities as well as make public authorities more sensitive to citizens' demands. As the empirical literature has been focused on tax levels at the link of democracy, only a few studies have examined whether the composition of public revenues and tax types are related to democracy.

The following section of the study discusses theoretical and empirical literature to reveal and to establish the possible connections of taxes to democracy. In the third section, it is examined the relationship between public revenue (not only general levels but also composition and types of taxes) and democracy in an exploratory way through one-way ANOVA, Tukey tests and visuals that depends on simple regression, even we do not follow formal modeling or hypothesis tests. Finally, our conclusions are drawn in the final section.

2. Taxation and Democracy: Theoretical and Empirical Framework

Public finance is not only an economic phenomenon but also it reflects and shapes political, social and economic interactions between rulers and citizens and even among citizens. As emphasized by Schumpeter (1991, p,101), taxes are associated with the development of the current form of the state, and it also shapes the state actively. Changes in fiscal methods transform the social and political relations together with probable crises (Musgrave 1992). Therefore, the financing structure of the public sector and taxation could be regarded as a mirror of the power structure in the society and the relationship between the state and the people.

As Margaret Levi (1988) pointed out, "*the history of state revenue production is the history of evolution of the state*" and therefore, the evolution of the modern democracy has been connected with developing the taxing capacity of rulers. Political institutions which shape relative power of segments of the society is strongly connected with how governments are financed. The historical record on the emergence of Western representative democracies, at least, shows that the evolving to modern democratic and accountable governments from monarchs has been possible by creating the taxing capacity. Therefore, taxation was central to building the states with central bureaucratic capacity, representative and democratic governance, and high fiscal capacity to carry out societal goals. The stories of early England's conflicts between King and barons, and between Parliament and the Crown, of the rebellion of American colonies, and of the French Revolution supports the idea that taxation and representative are closely connected each other (Ross, 2004; Moore, 2007). Rulers needed revenue for wars and had to raise the tax, however, they had to become more responsive and more accountable to citizens in how their money was used since they depended on taxes collected from citizens (D'arcy 2012). Thus, high tax capacity, powerful Weberian bureaucracy, and representative democracies have simultaneously emerged. American rebels' famous demand "*no taxation without representation*" can neatly summarize this relationship. Therefore, the political history of Western states suggests that necessities on revenue raising (need for more taxes) helped to build national states and political institutions relied on representative democracy.

Can this historical trajectory explain the current situation of developing countries which tend to be less democratic governance and has a lower level of taxation? Is the direction of relationship to democracy from taxation? What is the transmission mechanism in the relation of democracy and taxation? There is a growing body of literature on this issue especially in the context of development policies for contemporary developing countries. However, the literature seems to be divided into two main directions. One is "taxation leads to democracy" and other is "political structure affects tax structure".

The first aspect which mainly comes from political scientists, sociologist, and economic sociologists focuses on the impact of revenue raising on democracy. Taxation stimulates representation and accountability. The argument "*taxation leads to representation*" is mostly derived from early modern European experiment and to attempt to explain how developing countries will build their strong and democratic states with respect to developmental aims. According to this argument, the revenue-raising shapes the state-society (rulers - people) relationship and the social contract is based on bargaining around tax (Brautigam, 2008, p.1). That is what create the modern industrialized democratic countries. This argument based on the idea of fiscal bargaining between ruler and citizens sometimes called "*fiscal contractualism*". Taxes are "quasi-voluntary" payment in exchange for governmental services (Levi, 1988), and if rulers depend on tax revenue for their priorities rather than revenue controlled by themselves, they will be forced to build a capable administration, to increase the quality of governance, and to lead to citizens participate public policy formulation. From this perspective, taxes can be seen as an exchange for services. Rulers have to bargain with asset holders to extract revenue. Through the revenue-bargaining process, as rulers collect taxes, they must transfer rights to determine policies to the citizens in return for taxes (Timmons, 2010). Based on this literature, it can be said that being more legitimate and more responsive to citizen demands is a precondition for the adequate level of the tax effort. Thus, the rulers could increase tax-extraction capacity by improving the governance structures and governmental/political institutions (Brautigam, 2008; Moore, 2004; Moore, 2007; Moore, 2008; Baskaran&Bigsten 2013; Garcia&Haldenwang, 2016), because citizens who pay taxes will be more motivated for asking for accountability from the administrations and for monitoring public policy formulation. If rulers finance their activities largely from non-tax revenue, they have not to be responsive citizens' demands as well as citizens will not be motivated to ask accountability. Thus, revenue producing policies are decisive on the social contract between rulers and citizens.

The structure of public revenues is to be expected to have an impact on democratic governance in several ways (OECD, 2010; Moore, 2007; Moore 2013):

(1) The experience of being taxed will enable citizens to be more sensitive to public policies, the quality of public services, and the effective use of public resources. Thus, it is expected that decision-makers will be more responsive to these requests as citizens will increase their participation in collective action and political decision making. At the end of this process, it can be expected that the governments would become more transparent, more accountable, and more responsive to the demand of citizens.

(2) Governments that largely based on tax revenues have more incentives to interest in economic growth and increasing citizens' well-being. The governments' sensitivity to the demands of citizens will not develop sufficiently at where public activities are largely derived from non-tax revenues.

(3) If taxes are in the form visible and observable by citizens, they will be more motivated to ask accountability since they will be aware of their burden. Thus, governments become more responsive.

(4) As tax collecting requires effective administrative and bureaucratic tools, their development would, in general, affect the emergence of state capacity.

Although these hypotheses mostly depend on historical evidence, there is a growing empirical literature. For instance, Ross (2004) studied the impact of both the tax-GDP ratio and tax-public spending ratio on democracy and found no evidence to support the hypothesis that higher tax level income leads to democratization. Rather, the price of public services (tax-public spending ratio) had the impact of democracy level. From the Nigeria case, Berger (2009) found that regions where has high fiscal capacity tend to have better governance. Altunbas and Thornton

(2011) found the quality of governance increases as tax level increases. Baskaran and Bigsten (2013) examined the impact of fiscal capacity (tax-GDP ratio) on corruption, bureaucratic quality, and democratic accountability. They found that democracy increases and corruption decreases as fiscal capacity increases. Baskaran (2014) found tax revenues to be having a mild positive effect on democracy by examining the existence of VAT and autonomous revenue authorities. Gur (2014) found that tax level (tax-to-GDP) is positively associated with democracy level.

Research on the impact of non-tax revenue is mostly related to rents or oil revenues in terms of "resource curse hypothesis". Herb (2005) explored the effect of rent revenues on democracy, but not found consistent support on the hypothesis. According to findings by Ross (2001) and Treisman (2007), countries which depend largely on natural resource revenues tend to be less democratic and low quality of government. Some research (e.g. Bermeo, 2011; Collier, 2006) examine the effect of foreign aid on democracy and conclude the negative impact of aids on democracy.

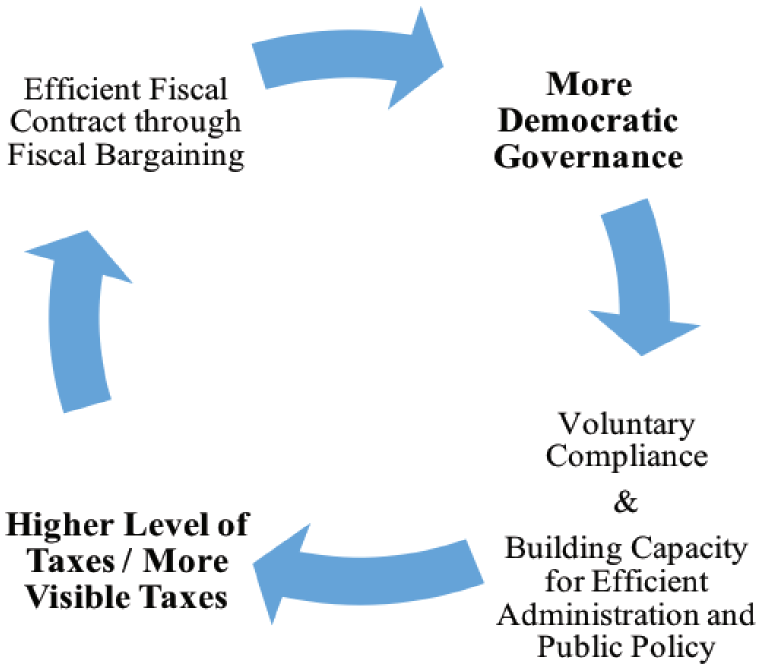
On the other hand, some research focuses on another side of the relationship between taxation and democratization: political regimes and the level of democracy might be decisive on government financing. Median voter model, suggested by Meltzer and Richard (1981), predicts democratization may lead to higher level of tax and expenditure through redistribution since the median voter with low income would demand redistribution. According to Acemoglu and Robinson (2006), democracies induce to increase taxes and redistributions than autocracies since democracies rely on the poor and middle class who favor redistribution, and autocracies rely on the rich who against to transfer their wealth to the poor. Thus, democracies are expected to experiencing tax increases. However, some theoretical studies (e.g. Przeworski, 1990; Olson, 1991) reach an opposite conclusion as democracies tend to have low tax rates than autocracies. Although theoretical predictions are not conclusive, it is clear that political regimes which consist of the broad institutional framework to make the decisions related to resource allocation would affect government financing structure as well as general economic performance (Cheibub, 1998, p. 351).

The effect of political regimes and democracy on taxation might be related to citizen's willingness to pay taxes under different political settings. A body of literature that focuses on tax morale and tax compliance suggests that democratic political governance is inclusive in terms of political decision making. Thus, it affects citizens' perception of the legitimacy of political power and increases their willingness to pay. While the better governance and democracy could encourage citizens to participate in collective actions - like paying taxes - and their tax compliance. Democracies tend to increase "voluntary" compliance with tax laws (Feld and Frey, 2002; Torgler *et al.,* 2010; Bird et al., 2008; Bird et al., 2014).

Most of empirical studies which employ democracy as an independent variable find a positive correlation between tax and democracy. Bird et al. (2008) found the positive impact of better governance (absence of corruption, voice, and accountability) on tax effort, which especially significant in developing countries. Bird et al. (2014) expands results to governance index, political stability, and rule of law. Mutascu (2011) suggests U shape relationship between tax level and democracy. Results present that high level of taxes can be maintained in strongly democratic and strongly autocratic regimes. Türedi and Topal (2016) find a two-way causality between tax level and democracy by depending on the data of 60 developing countries through panel Granger causality test. Castro and Camarillo (2014) find the civil liberties to be having a positive impact on tax level through dynamic panel data analysis on OECD countries.

There are studies contrary to the findings of positive association. Cheibub (1998) find that there is no significant difference between democracies and autocracies after controlling other factors, although tax levels are observed to be higher in democracies than autocracies. Cheibub (1998) concludes that there is no ground for arguing that the dictatorships are less capable of collecting taxes than democracies or vice versa. Results by Timmons (2010) show that the democracy level has no immediate impact on tax levels and even tax types. Profeta et al. (2013) have not found significant correlations of both tax level and tax compositions with democratic institutions and civil liberties after controlling country fixed effects.

Figure-1. The Relationship between Democratic Governance and Tax System



In general terms, the literature suggests a mutual relationship between democratic governance and taxation. As can be presented in Figure-1, the tax system could be expected to influence the governance and the quality of political institutions by creating an effective revenue-bargaining system between citizens and the state, creating incentives for citizens to monitor governmental activities and for public authorities to regard citizens' demand. In a tax system which extracts higher tax revenue and more visible taxes, citizens become more sensitive to governmental decision making and monitor politicians and decision making process, and therefore, government depended on taxes paid by citizens become more responsive and accountable to their citizens' demands. Taxation can create an efficient social contract between rulers and citizens. On the other hand, more democratic and inclusive political governance could encourage citizens to participate in collective actions - like paying taxes – and their tax compliance. If they perceive that the decision-making process is inclusive and fair in the exchange of tax to benefits, and they have a voice in the system, they consent to pay more taxes. Also, a democratic governance might have more chance to establish an efficient public administration and public policy making by building capacity through more tax revenue, and thus, more capable public administration can collect more taxes through both encouraging voluntary compliance and enforcing tax laws.

Are the current level of taxation and tax structure a consequence of political governance? Or Is the current political structure of governance a consequence of tax system? Identifying the direction of relationship requires high-quality data and proper econometric techniques. Prichard et al. (2018) explain the continuing disagreements on the issue by mainly the data problems. Current studies' empirical strategy mostly artificially determines the direction of the relationship.

In any case, the relation of public revenue to political structure could be associated with several characteristics of the public financing system:

(1) the general level of taxation (tax effort; tax revenues as a share of GDP)

(2) the share of revenues in the form of tax within the total public revenue

(3) the share of revenue depending on broad and visible taxes

A higher tax effort (tax-to-GDP ratio), the higher share of revenues in the form of tax within total public revenue and the higher share of revenue depending on broad and visible taxes (taxes which are paid and observable by masses) are expected to be associated more democratic governance. Current literature mostly focuses on tax levels or tax efforts (tax-GDP ratio) in relation to democracy. Empirical evidence on the relationship of the structure of public revenue to democracy is not enough because of mostly the data availability and methodological issues. A few studies (e.g. Timmons, 2010; Profeta, 2013; Prichard et al., 2018) takes into consideration the non-tax revenue and the composition of taxes. Although the public choice literature examines the effect of visibility of public revenues on the size of government, public deficits and public expenditures in the context of '*fiscal illusion*', they do not empirically address the influence of such a revenue structure on the political structure.

In this study, we examine the association between democracy and both tax performance and tax mix through cross-country data in the following sections.

3. Cross-Country Examination of the Relationship Between Public Revenue and Democracy

In this section, we examine cross-country data to explore the structure of public revenue and democracy. We especially interested in if;

- A higher share of taxes as a percentage of GDP, which is used as a measure of tax effort, is associated with a higher level of democracy.
- A higher share of non-tax revenue as a percentage of total public revenue is associated with a lower level of democracy.
- A higher share of broad and visible taxes in the total tax revenue is associated with a higher level of democracy.

Tax and revenue data is drawn from IMF Government Finance Statistics. However, the obtaining a variable which would properly represent the democracy can be controversial in part since there is no consensus on defining and measuring the democracy (Turan, 2017). In literature, three indicators are often taken to be a proxy of a country's democracy level:

- Freedom Rating (as the average political rights indicator and civil liberties indicator) of Freedom House (2018)
- Polity IV data by Center for Systemic Peace of PRC Group (Marshall & Jaggers 2002)
- Democracy Index compiled by the Economist Intelligence Unit (EIU, 2018)

We chose the EIU Democracy Index because it is more comprehensive to capture a country's democracy level, and it's also highly correlated with the other two measurements as can be seen in Table-1. The EIU Democracy Index is based on five categories:

- electoral process and pluralism
- civil liberties
- the functioning of government
- political participation
- political culture

After countries are scored by these dimensions, they can be classified into four regime types by based on their scores: "full democracy"; "flawed democracy"; "hybrid regime"; and "authoritarian regime". We will consider both scores and regime types in the following section.

Table-1. Pearson Correlations between Democracy Measurements (2011-2016)

	Polity IV (Center for Systemic Peace)	Freedom Rating (Freedom House)	Democracy Index (EUI)
Polity IV (Center for Systemic Peace)	1.00		
Freedom Rating (Freedom House)	-0.81***	1.00	
Democracy Index (EUI)	0.81***	-0.91***	1.00
*** *p<0.01*			

We approach the data in an exploratory way without use formal modeling and estimation techniques. Data covers to 2016 from 2011 but in order to cover more countries, we use averages of variables in this period. We mainly visually examine the data and inspect the difference between averages through one-way ANOVA analysis and the post-hoc Tukey tests.

3.1. The Level of Public Revenue and Taxation

We first examine the link of total government revenue and total tax revenue as a share of GDP to the democracy level. Figure-2 demonstrates both indicators by the democracy level. It is noticeable that there is no clear relationship between total government revenue and democracy despite slightly increase by democracy level, whereas total tax revenue-to-GDP increases as democracy level increases.

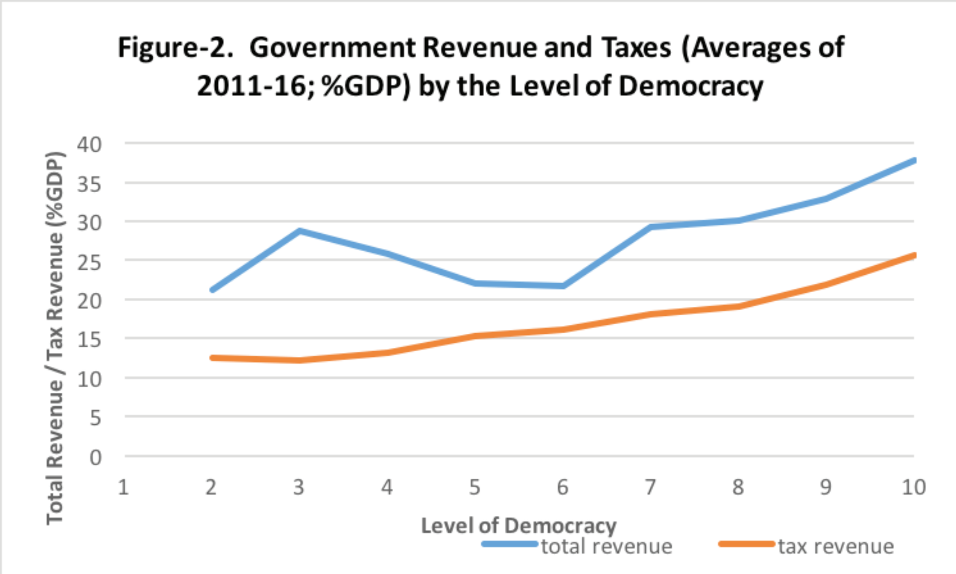


Table-2 shows the means, standard deviations, and frequencies of total government revenue and total tax revenue by regime types. For total government revenue, although the full democracies have a higher level of government revenue, the averages for authoritarian regimes and flawed democracies are also quite similar. Whereas, the share of total tax revenue to GDP is higher more democratic regimes than less democratic ones.

Table-2. Government Revenue and Taxes by Regime Types

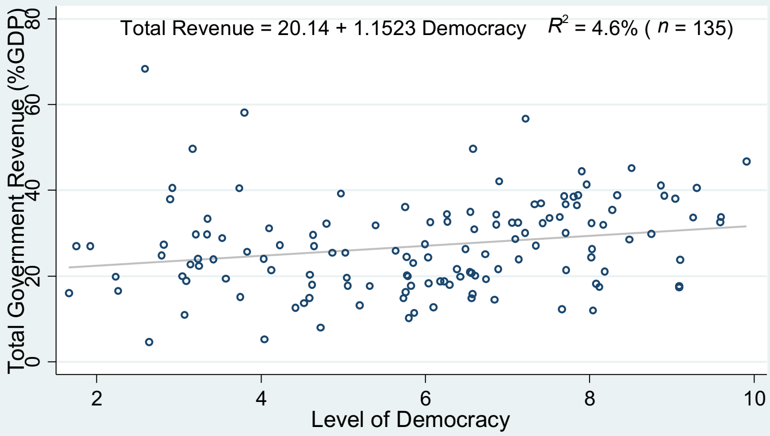
	Total Government Revenue (GDP%)			Total Tax Revenue (GDP%)		
Regime Types	**Mean**	**Std. Dev.**	**Freq.**	**Mean**	**Std. Dev.**	**Freq.**
Authoritarian Regimes	27.94	13.80	28	12.80	7.63	28
Hybrid Regimes	21.24	8.05	34	14.63	5.50	34
Flawed Democracies	28.94	9.89	49	18.77	5.81	49
Full Democracies	33.14	15.32	47	20.16	6.24	47
Total	*28.35*	*12.77*	*158*	*17.24*	*6.81*	*158*

In order to statistically examine differences in total government revenue and total tax revenue by regime types, we conducted a one-way ANOVA to determine if the average level of government revenue and taxes was different among regime types.

For total government revenue, ANOVA revealed statistically significant differences between regime types [$F(3, 154)= 6.35; p:0.0004$]. However, A Tukey post-hoc test showed that the differences significant between only "flawed democracy" vs. "hybrid regimes" (7.69±2.71; p=0.027) and full democracy vs. hybrid regimes (11.89±2.74; p=0.000). There were no statistically significant differences among other categories.

As determined by one-way ANOVA [$F(3, 154)= 11.15; p:0.0000$], the differences between total tax revenue among regime types were statistically significant. A Tukey post-hoc test produced statistically significant differences between categories except "hybrid regimes vs. authoritarian regimes" and "full democracy vs. flawed democracy". It seems that the less democratic regimes have a lower level of tax revenue more than democratic ones.

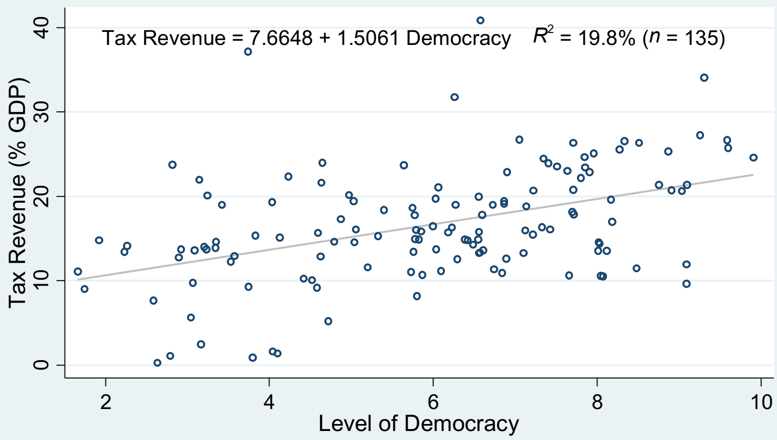
Figure-3. The Level of Government Revenue and Democracy
(Averages 2011-2016)



Data Source: IMF GFS; EUI Democracy Index

We also looked at these relations through scatter-diagrams and simple regressions on country data. Figure-3 shows that there is no a significant correlation between the share of total government revenue to GDP and democracy level of countries (R^2= 0.05) despite a positive fitted-line. On the other hand, as shown by Figure-4, the level of total tax revenue is positively associated with the democracy level (R^2= 0.20).

Figure-4. The Level of Tax Revenue and Democracy
(Averages 2011-2016)



Data Source: IMF GFS; EUI Democracy Index

3.2. The Composition of Public Revenue and Taxation

As discussed in Section-2, not only the level of taxes but also the composition of public financing tools could have related to the quality of political governance. First, tax revenues must encourage democratic governance rather than other revenue like natural resource rents, grants, aids etc. This fact was discussed in the literature on 'resource curse' in detail in the case of the impact of the resource revenue. That is why that Middle East specialist suggest that these countries must collect more taxes to develop the democracy since the autocrats of the region who finance themselves with non-tax revenue can avoid pressures to democratize in the current situation (Ross, 2004).

Second, in order to stimulate the citizens to monitor the government and/or to make the political elites more responsive to citizens will, taxes must be observable by citizens. If a tax is collected in the way which recognized by the citizens, and thus, the citizens do not feel the burden of tax that they paid, we cannot expect that they react against to the tax. For instance, indirect taxes such as value added tax, in most countries (not all), included in the market transactions, and citizens may not be aware of tax, although they had paid. Whereas, direct taxes such as personal income tax, in most countries (again not all), is paid by taxpayers themselves following a declaration of the tax return. In this case, it can be said that personal income tax might be more effective to encourage democratic governance than indirect taxes.

Table-3. Non-Tax Government Revenue and Natural Resource Rents By Regime Types

	Non-Tax Revenue			Natural Resource Rents		
Regime Types	**Mean**	**Std. Dev.**	**Freq.**	**Mean**	**Std. Dev.**	**Freq.**
Authoritarian Regimes	0.44	0.30	28	17.43	13.82	31
Hybrid Regimes	0.24	0.18	34	8.19	10.81	35
Flawed Democracies	0.17	0.10	48	5.04	7.54	49
Full Democracies	0.217	0.20	47	1.54	4.05	44
Total	*0.247*	*0.21*	*157*	*7.18*	*10.69*	*159*

Briefly, it can be said that the taxes rather than non-tax revenue and the broad and visible taxes rather than non-observable taxes would tend to be linked to more democratic governance and thus, to promote the development of democracy.

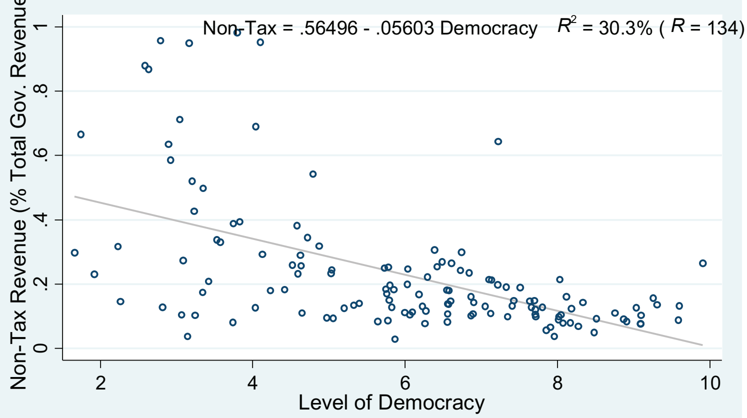
Table-3 shows averages non-tax revenues as a share of total government revenue and natural resource rents as a share of GDP by the democracy level. It is clear that the less democratic regimes have a higher level of non-tax revenue and natural resource rents.

With regard to the statistical significance of differences in averages, ANOVA shows that differences in non-tax revenue (%total government revenue) and total natural resource rents (GDP%) were statistically significant among regime types. As democracy declines, non-tax revenue increases on average [$F(3, 153)= 12.05; p:0.0000$]. In the same way, more democratic regimes tend to have a lower level of natural resource rents on average [$F(3, 155)= 19.32; p:0.0000$]

We also conducted Tukey post-hoc test to examine differences between categories. Accordingly, for non-tax revenue, the differences for "hybrid vs. authoritarian", "flawed democracy vs. authoritarian" and "full democracy vs. authoritarian" were statistically significant. Thus, non-tax revenue was statistically significantly higher in authoritarian regimes compared to other regime types. For natural resource rents, Tukey post-hoc test produced statistically significant differences for "hybrid vs. authoritarian", "flawed democracy vs. authoritarian", "full democracy vs. authoritarian" and "full democracy vs. hybrid regimes". Thus, natural resource rents were statistically significantly higher in authoritarian regimes and hybrid regimes than democracies.

Figure-5 indicates the association between non-tax revenue and democracy. It is noticeable that the non-tax revenue is negatively associated with the democracy level (R^2= 0.30).

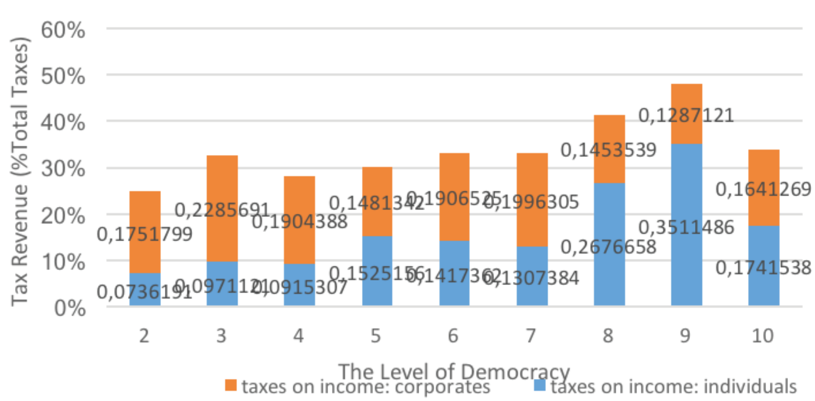
Figure-5. Non-Tax Revenue and Democracy
(Averages 2011-2016)



Data Source: IMF GFS; EUI Democracy Index

Turning now to the link of tax types to democracy, a tax must be paid by a large section of people and visible to taxpayers, in order to encourage democratic governance. Taxes paid by a small number of people or invisible to taxpayers do not serve as a tool in the revenue-bargaining process. Therefore, it can be expected that tax types have not the same impact on democratization.

Figure-6. Income Taxes by the Level of Democracy
(Averages 2011-16)



As can be seen in Figure-6, personal income tax as a mass tax is more associated with democracy level than corporate income tax. Personal income tax is a redistribution tool as well as a mass tax. It has been served as a redistribution tool at managing conflict between elites and citizens to allocate the wealth, and at the gain power of the mass by moving toward democratic constitutional process (Acemoglu & Robinson, 2006; Kiser & Karceski, 2017).

Table-4 shows the results of ANOVA and Tukey test on tax types by democracy level. Total income taxes as a share of total tax revenue is not statistically associated with democracy level. Whereas, the differences at personal income tax (income taxes paid by individuals) by democracy level are statistically significant. Except for two categories, differences between categories are also significant by Tukey test.

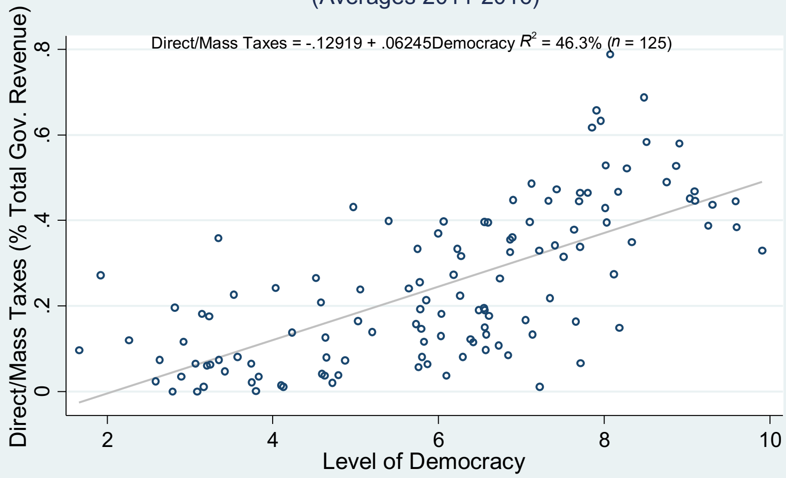
Table-4. The Composition of Taxes and Democracy: One-Way ANOVA and Tukey Tests

	Total Income Taxes	**Taxes on Income: Individuals**	**Taxes on Income: Corporate**	**Taxes on Property**	**Taxes on Goods and Services**	**Taxes on Int. Trade and Transactions**	**Social Contributions (revenue%)**
				ONE-WAY ANOVA			
Authoritarian Regimes	0.33 (0.21)	0.08 (0.08)	0.22 (0.17)	0.005 (0.01)	0.39 (.22)	0.24 (0.21)	0.04 (0.09)
Hybrid Regimes	0.34(0.15)	0.14(0.10)	0.16 (0.10)	0.01 (0.02)	0.51 (0.16)	0.12 (0.10)	0.05 (0.11)
Flawed Democracies	0.38 (0.15)	0.17(0.11)	0.18 (0.13)	0.01 (0.02)	0.50 (0.19)	0.08 (0.12)	0.16 (0.15)
Full Democracies	0.36 (0.19)	0.23 (0.15)	0.12 (0.08)	0.02 (0.03)	0.46 (0.17)	0.14 (0.16)	0.12 (0.16)
	F(3, 154)= 0.59	***F(3, 144)= 8.26****	***F(3, 144)= 3.9****	***F(3, 153)= 5.09***	***F(3, 153)= 2.59**	***F(3, 154)= 6.83****	***F(3, 153)= 6.63****
				TUKEY TESTS			
Hybrid vs Authoritarian	0.006 ± 0.045	0.063 ± 0.032	-0.060± 0.033	0.001 ± 0.006	**0.120 ± 0.047***	**-0.124 ± 0.038*****	0.017± 0.035
Flawed Dem. vs Authoritarian	0.047 ± 0.041	**0.085 ± 0.029****	-0.034 ± 0.030	0.005 ± 0.005	0.102± 0.044	**-0.158± 0.035*****	**0.121 ± 0.032*****
Full Dem. vs Authoritarian	0.025± 0.041	**0.144 ± 0.030*****	**-0.096 ± 0.030*****	**0.017 ± 0.005*****	0.065 ± 0.044	**-0.103 ± 0.036****	**0.084 ± 0.032****
Flawed Dem. vs Hybrid Reg.	0.042 ± 0.039	0.021 ± 0.028	0.025 ± 0.028	0.004 ± 0.005	-0.018 ± 0.041	-0.0338 ± 0.034	**0.104 ± 0.030*****
Full Dem. vs Hybrid Reg.	0.0191 ± 0.039	**0.081 ± 0.028****	-0.036± 0.028	**0.016 ± 0.005*****	-0.055 ± 0.042	0.021± 0.034	0.068 ± 0.030
Full Dem. vs Flawed Dem.	-0.022± 0.036	**0.060 ± 0.025*****	**-0.061 ± 0.025***	**0.012 ± 0.005****	-0.037± 0.038	0.055 ± 0.031	-0.036 ± 0.028

Standard deviations in parentheses. * p<0.1, ** p<0.05, *** p<0.01

For corporate income tax, full democracies have a slightly lower ratio than authoritarian regimes and a slightly higher ratio than flawed democracies. Other categories do not produce significant results. Full democracies have a significantly higher level of property taxes than authoritarian democracies, hybrid regimes, and flawed democracies. For taxes on goods and services, the only significant result is for "hybrid vs. authoritarian regimes". Authoritarian regimes have a significantly higher level of international trade and transaction taxes than hybrid regimes, flawed democracies, and full democracies. Finally, the social security contributions seem to be positively associated with democracy level.

Figure-7. Direct/Mass Taxes and Democracy
(Averages 2011-2016)



Data Source: IMF GFS; EUI Democracy Index

In general, what this suggests that direct taxes paid by individuals and a large section of people are positively related to democracy level of countries. These taxes are personal income tax, social security taxes, property taxes, and taxes on payroll and workforce. Figure-7 presents the correlation between democracy and a sum of these four taxes. There is a clear and significant positive correlation between democracy and direct taxes. The correlation coefficient is 0.46 and the most higher among all tax parameters examined in this study.

4. Conclusion

In recent years, there has been a growing interest in the nexus between democracy and taxation, especially from the perspective of how to develop democracies and to stimulate economic development in underdeveloped countries. In order to study the relationship between democracy and taxation, two perspectives can be drawn from the literature. The first argument that comes mostly from political scientist and economic sociologist argues that taxation and tax structure may help to develop democratic governance through fiscal bargaining and an established social contract by making rulers more responsive and accountable to citizens as seen from the Western democracies experience. The second argues that political regimes are decisive on government finance, and thus, a democratic and inclusive governance may increase the voluntary compliance of citizens and the effective administrative and participatory policymaking. To put it briefly, the first focuses on the argument "taxation leads to representation", the second on "representation leads to taxation".

Empirical findings are somehow controversial mostly because of the lack of proper econometric techniques to overcome causal relations and the lack of proper and reliable data. In any case, the paper presumes a mutual relation between democracy and taxation. Depending on the cross-country data, the paper explores the association between taxation (the level and composition of taxes) and democracy. The data shows that the level of tax revenue, but not total public revenue, is associated with the level of democracy. Not only the level of taxation but also the composition of public revenue is linked to the democracy level of countries. Countries which depend on non-tax revenue and natural resource rents are more likely to have less democratic governments. Among tax types, the broad and visible taxes such as personal income tax, are highly correlated with democracy level while taxes paid by small number of people such as corporate income tax and invisible taxes such as consumption tax even they are paying by a large number of citizens are not related to the level of democracy of countries.

The basic limitation of the study is the possible endogeneity bias. Since we have depended on the cross-sectional data, we have just considered the associations between tax variables and democracy. It is possible that tax structure may also be influenced by democracy. The further studies which can overcome the reverse causality problem will provide a better understanding of the relationship between tax and democracy. This will also contribute to formulating the policies for improving tax capacity and democracy in developing countries.

References

Acemoglu, D. & Robinson, J. A. (2006). *Economic origins of dictatorship and democracy*. New York: Cambridge University Press.

Altunbaş, Y. &Thornton, J. (2011). Does paying taxes improve the quality of governance? Cross-country evidence. *Poverty & Public Policy*, 3(3), 1-17.

Baskaran, T. & Bigsten, A. (2013). *Fiscal capacity and the quality of government in Sub-Saharan Africa. World Development*, 45, 92-107.

Baskaran, T. (2014). Taxation and democratization. *World Development*, 56(4), 287-301.

Berger, D. (2009). Taxes, institutions, and local governance: Evidence from a natural experiment in colonial Nigeria. *Unpublished Manuscript*, https://leitner.yale.edu/sites/default/files/files/resources/PMF-papers/NigeriaPaper.pdf

Bermeo, S. B. (2011). Foreign aid and regime change: A role of donor intent. *World Development*, 39(11), 2021–2031.

Bird, R. M., Martinez-Vazques, J. & Torgler, B. (2008). Tax effort in developing countries and high income countries: The impact of corruption, voice and accountability. *Economic Analysis and Policy*, 38(1), 55-71.

Bird, R. M., Martinez-Vazques, J. & Torgler, B. (2014). Societal institutions and tax effort in developing countries. *Annuals of Economics and Finance*, 15(1), 185-230.

Brautigam, D. A. (2008). Introduction: Taxation and state-building in developing countries. In D. Brautigam vd., (eds), *Taxation and State-Building in Developing Countries*, Cambridge University Press

Castro, A. G. & Camarillo, R. D. (2014), "Determinants of Tax Revenue in OECD Countries over the Period 2001-2011", *Contaduría y Administración*, 59(3), 35-59.

Cheibub, J. A. (1998). Political regimes and the extractive capacity of governments: Taxation in democracies and dictatorships. *World Politics*, 50(3), 349-376.

Collier, P. (2006). Is aid oil? An analysis of whether Africa can absorb more aid. *World Development*, 34(9), 1482–1497.

D'Arcy, M. (2012), *Taxation, democracy and state-building: How does sequencing matter?*. University of Gothenburg Working Paper Series, No. 2012:4.

EIU (2018). *Democracy Index 2017: Free Speech under Attack*, available at https://pages.eiu.com/rs/753-RIQ-438/images/Democracy_Index_2017.pdf [accessed 26 July 2018]

Feld, L. P. & B. S. Frey (2002). Trust breeds trust: How taxpayers are treated. *Economics of Governance*, 3: 87-99.

Freedom House (2018). *Freedom in the World*, available at: https://freedomhouse.org/report-types/freedom-world [accessed 26 July 2018]

Garcia, M. M. & Haldenwang, V. C. (2016). Do democracies tax more? Political regime type and taxation. *Journal of International Development,* 28, 485–506

Gur, N. (2014). Taxation and democracy: An instrumental variable approach. *Applied Economics Letters*, 21(11), 763-766

Herb, M. (2005), No representation without taxation? Rents, development, and democracy, *Comparative Politics*, 37 (3), 297-316

Kiser, E. & Karceski, S. M. (2017). Political economy of taxation. *Annual Review of Political Science*, 20, 75-92.

Levi, M. (1988).*Of Rule and Revenue*, Berkeley: University of California Press

Marshall, M. G., & Jaggers, K. (2002). *Polity IV project: Political regime characteristics and transitions, 1800–2002, dataset users' manual*. Mimeo (University of Maryland).

Meltzer, A. H. & Richard, S. F. (1981). A rational theory of size of government. *The Journal of Political Economy*, 89(5), 914-927.

Moore, M. (2004). The development of political underdevelopment. In G. Harrison (ed.), *Global Encounters: IPE, Development and Global Governance*, London: Palgrave Macmillan.

Moore, M. (2007). *How does taxation affect the quality of governance* (Working Paper 280). IDS, Brighton, UK.

Moore, M. (2008). Between coercion and contact: Competing narratives on taxation and governance". In D. Brautigam, O. Fjeldstad & M Moore (Eds.), *Taxation and State-Building in Developing Countries* (34-63). Cambridge: Cambridge University Press.

Moore, M. (2013). *Obstacles to Increasing Tax Revenue in Low Income Countries* (Working Paper 15). ICTD.

Musgrave, R. A. (1992). Schumpeter's crisis of the tax state. *Journal of Evolutionary Economics*, 2, 89-113

Mutascu, M. (2011). Taxation and democracy. *Journal of Economic Policy Reform*, 14(4): 343-348.

OECD (2010). *Citizen-state relations: Improving governance through tax reforms*. OECD, available at: www.oecd.org.

Olson, M. (1991). Autocracy, democracy, and prosperity. In Richard J. Zeckhauser (Ed.), *Strategy and Choice*, Cambridge: MIT Press

Prichard, W., Salardi, P., & Segal, P. (2018). Taxation, non-tax revenue and democracy: New evidence using cross-country data. *World Development*, 109, 295-312

Profeta, P., Puglisi, R. & Scabrosetti, S. (2013). Does democracy affect taxation and government spending? Evidence from developing countries. *Journal of Comparative Economics*, 41, 684-718.

Przeworski, A. (1990). *The State and the economy under capitalism*. Switzerland: Harwood Academic Publishers, 1990);

Ross, M. L. (2001). Does oil hinder democracy?. *World Politics*, 53(3), 325–361.

Ross, M. L. (2004). Does taxation lead to representation?. *British Journal of Political Sciences*, 34(2), 229-249.

Schumpeter, J. A. (1991). The crisis of the tax state. In R. Swedberg (Ed.), *The economics and sociology of capitalism*. Princeton, New Jersey: Princeton University Press.

Timmons, J. F. (2010). Taxation and representation in recent history. *The Journal of Politics*, 72(1), 191-208.

Torgler, B., Schaffner, M. & Macintyre, A. (2010). Tax compliance, tax morale, and governance quality. In Alm, J., Martinez-Vazquez, J. & Torgler, B. (eds.) *Developing Alternative Frameworks for Explaining Tax Compliance* (pp. 141-173). London and New York: Routledge

Treisman, D. (2007). What have we learned about the causes of corruption from ten years of cross-national empirical research?. *Annual Review of Political Science,* 10, 211–244.

Turan, E. (2017), *Siyaset [Politics]*, Konya: Palet

Turedi, S. & Topal, M. H. (2016). Vergilendirme ve demokrasi arasındaki ilişki: Gelişmekte olan ülkeler için panel nedensellik analizi. *Eskişehir Osmangazi Üniversitesi İİBF Dergisi*, 11(1): 63-86

Appendix. EUI Democracy Scores, The Share of Non-Tax Revenues and The Share of Direct/Mass Taxes (Averages over 2011-2016)

Countries	Democracy Score	Non-Tax Revenue	Direct and Mass Taxes	Countries	Democracy Score	Non-Tax Revenue	Direct and Mass Taxes
Afghanistan	2.59	0.88	0.02	Latvia	7.22	0.20	0.33
Albania	5.77	0.09	0.26	Lesotho	6.58	0.18	0.13
Algeria	3.74	0.08	0.06	Liberia	5.03	0.23	0.17
Angola	3.35	0.50	0.07	Lithuania	7.43	0.15	0.47
Argentina	6.89	0.11	0.36	Luxembourg	8.87	0.09	0.53
Armenia	4.04	0.13	0.24	Macedonia	6.00	0.11	0.37
Australia	9.10	0.10	0.45	Malawi	5.78	0.25	0.19
Austria	8.51	0.09	0.58	Malaysia	6.43	0.25	0.11
Azerbaijan	2.93	0.58	0.12	Mali	5.76	0.17	0.06
Bahrain	2.80	0.96	0.00	Malta	8.34	0.14	0.35
Bangladesh	5.80	0.20	0.08	Mauritius	8.18	0.12	0.15
Belarus	3.35	0.17	0.36	Mexico	6.74	0.30	0.26
Belgium	7.96	0.04	0.63	Moldova	6.27	0.12	0.32
Benin	5.83	0.13	0.12	Mongolia	6.49	0.27	0.19
Bhutan	4.80	0.54	0.04	Morocco	4.23	0.18	0.14
Bosnia	4.98	0.09	0.43	Mozambique	4.64	0.26	0.13
Brazil	7.10	0.21	0.40	Namibia	6.26	0.08	0.22
Bulgaria	6.87	0.16	0.33	Nepal	4.60	0.23	0.04
Burkina Faso	4.13	0.29	0.01	Netherlands	8.91	0.08	0.58
Burundi	3.21	0.52	0.06	New Zealand	9.26	0.16	0.39
Cabo Verde	7.14	0.21	0.13	Norway	9.91	0.26	0.33
Cambodia	4.63	0.29	0.04	Oman	3.17	0.95	0.01
Central Afr. R.	1.66	0.30	0.10	Pakistan	4.52	0.26	0.27
Chile	7.72	0.10	0.07	PNG	6.18	0.17	0.27
China	3.07	0.10	0.06	Paraguay	6.30	0.22	0.08
Colombia	6.61	0.26	0.18	Peru	6.56	0.14	0.19
Congo R	2.90	0.63	0.03	Philippines	6.56	0.11	0.15
Costa Rica	8.02	0.09	0.43	Poland	7.13	0.11	0.49
Cote d'Ivoire	2.26	0.14	0.12	Portugal	7.80	0.13	0.46
Croatia	6.87	0.10	0.35	Romania	6.60	0.15	0.40
Cyprus	7.41	0.13	0.34	Russia	3.53	0.34	0.23
Czech Republic	8.02	0.10	0.53	Rwanda	3.23	0.43	0.18

Denmark	9.31	0.14	0.44	Senegal	6.03	0.20	0.13
Dominican R.	6.57	0.14	0.10	Serbia	6.55	0.08	0.40
Egypt	3.57	0.33	0.08	Sierra Leone	4.59	0.38	0.21
El Salvador	6.55	0.18	0.19	Singapore	6.04	0.25	0.18
Estonia	7.71	0.12	0.46	Slovak R.	7.33	0.19	0.45
Ethiopia	3.75	0.39	0.02	Slovenia	7.70	0.15	0.44
Fiji	4.65	0.11	0.08	South Africa	7.71	0.10	0.34
Finland	9.04	0.13	0.45	Spain	8.12	0.16	0.27
France	7.91	0.06	0.66	Sri Lanka	6.10	0.11	0.04
Georgia	5.64	0.08	0.24	Suriname	6.73	0.24	0.11
Germany	8.48	0.05	0.69	Swaziland	3.15	0.04	0.18
Ghana	6.39	0.31	0.12	Sweden	9.59	0.09	0.44
Greece	7.51	0.19	0.31	Switzerland	9.09	0.08	0.47
Guatemala	5.87	0.03	0.06	Tanzania	5.73	0.25	0.16
Honduras	5.85	0.18	0.21	Thailand	5.79	0.15	0.15
Hungary	6.90	0.14	0.45	Timor-Leste	7.22	0.64	0.01
Iceland	9.60	0.13	0.38	Togo	3.42	0.21	0.05
India	7.66	0.13	0.16	Trinidad and T.	7.06	0.13	0.17
Indonesia	6.84	0.24	0.08	Tunisia	6.07	0.10	0.40
Iraq	4.10	0.95	0.01	Turkey	5.40	0.14	0.40
Ireland	8.75	0.11	0.49	Uganda	5.20	0.12	0.14
Israel	7.64	0.15	0.38	Ukraine	5.75	0.18	0.33
Italy	7.86	0.06	0.62	UAE	2.64	0.87	0.07
Jamaica	7.35	0.10	0.22	UK	8.28	0.07	0.52
Jordan	3.83	0.39	0.03	USA	8.08	0.08	0.79
Kazakhstan	3.09	0.27		Uruguay	8.17	0.08	0.47
Kenya	5.06	0.09	0.24	Uzbekistan	1.92	0.23	0.27
Korea, R.	8.03	0.21	0.40	Vietnam	3.24	0.10	0.06
Kuwait	3.80	0.98	0.00	West Bank/Gaza	4.73	0.34	0.02
Kyrgyz R.	4.87	0.32	0.07	Zambia	6.23	0.13	0.33
				Zimbabwe	2.82	0.13	0.20

2

FAMILIAL PATH-DEPENDENCY IN LIFE ATTAINMENTS BY WELFARE REGIMES IN THE EU

Stefanos Papanastasiou[1] & Christos Papatheodorou[2]

Abstract

This study focuses on social mobility across generations based on the EU welfare regimes. The measure of social mobility adopted in the study is the intergenerational correlation in the capacity to make ends meet or, otherwise, to pay usual necessary expenses. Employing various methodologies and utilizing proper EU-SILC 2011 microdata, the empirical analysis comes to the conclusion that the countries of the social-democratic welfare regime have the lowest intergenerational correlation in the ability to make ends meet, while the south-European countries exhibit the highest one. Based on the same measure, the countries of the conservative-corporatist and the liberal welfare regime place themselves in between with very similar results. The empirical findings suggest that promoting decommodification and defamilialization through universal public policies in cash and in kind is the key to attaining positive mobility outcomes.

Introduction

Intergenerational social mobility passed across two distinct periods following the World War II. The first one was extended until approximately the mid 1970s and was characterized by a rising trend. Under the influence of Keynesian ideas, low and middle strata witnessed an advance in their socioeconomic status compared to their antecedents. It was around 1980 that social mobility went through a reversing process as a result of governance and policy changes in many affluent countries. The prevalence of neoliberal ideas tolerating the rising social inequality brought about a reversal in social mobility advancements (OECD, 2015).

Now, given the extent of income inequality and intergenerational mobility, it could take at least five generations or 150 years for the child of a poor family to reach the average income across the OECD countries. This ranges from just two to three generations in the Nordic countries to nine generations or more in less developed countries. One in three children with a low earning father will also have low earnings, while for most of the other two-thirds upward mobility is limited to the neighboring earnings group (OECD, 2018).

The 2008 world economic crisis was a big setback in the history of social mobility, stimulating though vigorous empirical research, mostly because of the diminishing welfare prospects of the younger vis-a-vis the older generations (OECD, 2018; Eurofound, 2017; Goldthorpe, 2016; Atkinson, 2015; OECD, 2015). In addition, focusing on the younger generations has become great challenge on the grounds of increasing inequality of opportunities in the socioeconomic terrain.

1 Panteion University of Social and Political Sciences, stef.pap@icloud.com
2 Panteion University of Social and Political Sciences, ch.papatheo@gmail.com

The equal opportunity principle gained ground in the official rhetoric, as being in favor of both the Right and the Left. Both sides recognize that the unequal chances undermine both economic growth and social cohesion (Esping-Andersen, 2005). However, the emphasis on the equality of opportunities diverts the attention from the equality of conditions, which is less favored by the New Right and the "Third Way", as it presupposes redistribution through high taxation and high fiscal costs (Breen & Jonsson, 2005; Breen & Goldthorpe, 2001).

From a policy perspective, the recognition of the pronounced impact of the family of origin on the offspring's life chances prioritizes measures to stave off or to mitigate this impact (Eurofound, 2017). As Nolan et al (2011) pointed out, the emphasis on social institutions affecting social mobility was mainly placed on the education system, under the influence of the human capital theory (Becker et al, 2015; Becker & Tomes, 1986; 1979).

However, the human capital theory has not been in consistency with mobility trends and patterns over the last decades. In particular, the argument of rapid regression to the mean between rich and poor families, put forth by Becker and Tomes (1986), is not corroborated in practice (OECD, 2018). The same applies to the importance of education for socioeconomic attainments, as education reforms cannot explain much of the variation of social mobility outcomes in developed countries (Esping-Andersen, 2007). On the contrary, social protection institutions have not adequately been studied, despite that the social protection system is a basic mechanism in formulating social stratification and social mobility patterns (Esping-Andersen, 2014).

The structure of the study is the following: the next section deals with conceptual, theoretical and policy aspects of social mobility. It provides information on the theoretical explanations, the causal mechanisms and the policy background of social mobility. The following section presents the EU-SILC 2011 microdata and the chosen methodologies. It describes the variable of interest, which is the ability to make ends meet, and summarizes the main characteristics of the EU welfare regimes. The last but one section offers an empirical analysis of social mobility across generations in relation to the EU welfare regimes using various methods. This section provides empirical evidence over the intergenerational correlation in the capacity to make ends meet based on the distinct EU welfare regimes. Several methods are utilized, such as crosstabulations, pie charts and odds ratios. The last section is dedicated to summarizing the main empirical findings and concluding by suggesting ways to reduce the path-dependency in life achievements across generations. In particular, the study concludes with the ascertainment that more social mobility is associated with more social protection and less familialism.

Concepts, interpretations and policy implications

Social mobility across generation refers to the correlation in life attainments among parents and offspring. It takes two forms: absolute and relative (Eurofound, 2017; Torche, 2013; Goldthorpe, 2012). The former refers to changes in social stratification brought about by structural socioeconomic changes (e.g., industrialization), whereas the latter is also known as social fluidity and refers to the probability of persons to climb up to a certain social level or stratum compared to their social origin. Social fluidity indicates the societal openness or, in other words, the extent of equality of opportunities among persons from different socioeconomic backgrounds (Goldthorpe, 2000). Economists tend to focus on income or wage as measures of mobility. On the contrary, sociologists place more emphasis on occupational classifications. The empirical data thereof show that social mobility is high in the Nordic countries and Canada and low in the USA and the UK (d' Addio, 2007; Corak, 2006).

From a theoretical point of view, three basic frameworks challenge the explanation of the social mobility patterns both within and across countries: a) the modernization hypothesis (Parsons, 1960), b) the similarity hypothesis (Erikson & Goldthorpe, 1992; Goldthorpe et al, 1982; Featherman et al, 1975) and c) the differentiation hypothesis (Breen, 2005). In addition, social mobility gained in popularity after the Great Gatsby curve put forth by Corak (2011). This hypothesis negatively correlates intergenerational social mobility (elasticity) with income inequality measured by the GINI coefficient in 1985, as income inequality appears to account for a large part of the variability of intergenerational social mobility among developed countries ($R^2 \approx 0{,}75$). Indeed, across generations, earnings mobility prospects tend to be weaker in countries where income inequality is high, and stronger in countries where inequality is low (OECD, 2018).

In this context, Torche (2015) argues that the association between intergenerational social mobility and income inequality is highly likely to be mediated by welfare arrangements (especially those connected with the welfare state). There are only few studies, however, investigating the effect of such arrangements in a direct or indirect manner (Papanastasiou, 2018; Papanastasiou & Papatheodorou, 2017; Papanastasiou et al, 2016; Causa et al, 2009; Causa and Johanson, 2009). Studying causal mechanisms of social mobility has mainly concentrated on the family of origin (Musick & Mare, 2004; Boggess & Corcoran, 1999; Corcoran & Adams, 1997; Mayer, 1997; Corcoran, 1995; Haveman et al, 1991) – while others focus on individual characteristics (Strenze, 2007; Heckman et al, 2006; Heckman & Carneiro, 2003; Saunders, 2002; 1997; 1996; Heckman & Rubinstein, 2001). But given that individual characteristics are less relevant to cross-country comparisons of social mobility (Breen & Goldthorpe, 2001; 1999; Fisher et al, 1996), the main focus is on the transmission of socioeconomic disadvantages within the family.

Thus, the main determinant of downward mobility has been recognized as the income shortage among poor families. In this context, the human capital approach is the most influential by assigning the greatest importance to the lack of parental investments in the children's human capital (i.e., education) as an explanation for the intergenerational reproduction of inequalities (Becker et al, 2015; Becker & Tomes, 1986; 1979). At a political level, this approach has been very attractive because it is compatible with the Pareto's principle, hence a large amount of the anti-poverty funds has been channeled to education, training, lifelong learning, and so on, policies. In the EU, the main strategy of social investment is also governed by the human capital approach (Bouget et al, 2015; European Commission, 2013).

Data and methodology

This study examines the cross-country differences over intergenerational social mobility patterns in the EU. Estimating these differences is a great challenge given the plethora of methodological instruments, on the one hand, and the scarcity of proper microdata especially for the purposes of a comparative analysis, on the other. Thus, the study employs the 2011 EU-SILC ad-hoc module with the aim to offer comparable estimates of social mobility between member states representing different welfare regimes.

This module encompasses retrospective information on the family background of the respondents when they were 14-16 years of age. The variable PT200 refers to the (financial) difficulty of making ends meet for the family of origin of the respondents, when they were around 14 years of age. The objective is to assess the interviewee's response over the level of difficulty experienced by the household in which the respondents were living when they were around 14 years old in making ends meet.

This variable is defined as incapacity in paying usual necessary expenses and comprises the following categories: 1) with great difficulty, 2) with difficulty, 3) with some difficulty, 4) fairly easily, 5) easily, 6) very easily. For the purposes of this analysis, the variable ability to make ends meet was merged into two categories. The categories 1 to 3 were grouped under the title "with difficulty" and the categories 4 to 6 were grouped under the title "with easiness".

The countries under investigation are the old member states except for Luxembourg, which is considered an outlier due to the extremely small population and the high living standards. The chosen 14 EU countries are classified in four groups following the methodology adopted by Papatheodorou and Petmesidou (2005; 2004), which is based on the well-known and broadly used Esping-Andersen's typology as well as the relevant debate on the welfare state of the south European countries (Ferrera, 1996; Leibfried, 1993). The main characteristics of each welfare state can be summarized as follows (Papatheodorou & Dafermos, 2010; Papatheodorou et al, 2008):

- The liberal welfare state has mainly been developed in the Anglo-Saxon countries, it intervenes only when the market or the family fail and offers meager and targeted provisions based on means-testing.
- The social-democratic welfare state has mainly been developed in the Nordic countries, it has an extensive role and offers universal provisions based on social citizenship.
- The conservative-corporatist welfare state characterizes the continental countries, it has an extended role but the entitlement to social protection relies upon the occupational status.
- The welfare state of the south European countries is characterized by limited functions, with the family and kin networks playing major role in social provision. Moreover, there is overprotection over the risk of old age, wide clientelist relationships and polarization (insiders/outsiders).

Empirical analysis and estimates

The crosstabulation is a basic technique for examining the relationship between the two categorical variables of interest. As shown in Table 1, there is a statistically significant association between fathers and offspring in terms of socioeconomic attainments across welfare regimes according to the Chi-square tests. The association is also corroborated by the correlation analysis between the two variables. This analysis shows that the correlation between father's with offspring's attainments is small in the countries of the social-democratic welfare state. In contrast, the same correlation is higher in the countries of southern Europe. Based on the same criterion, the countries of the conservative-corporatist and the liberal welfare regime place themselves in-between.

Table 1: Crosstabulation of the ability to make ends meet (fathers & offspring)

Social-democratic

		Ability to make ends meet (fathers)	
		With difficulty	With easiness
Ability to make ends meet (offspring)	With difficulty	41.58	58.42
	With easiness	28.35	71.65
Correlation		0.166	
chi2		227.5 (Pr=0.000)	

Conservative-Corporatist

		Ability to make ends meet (fathers)	
		With difficulty	With easiness
Ability to make ends meet (offspring)	With difficulty	46.87	53.13
	With easiness	29.07	70.93
Correlation		0.181	
chi2		1200 (Pr=0.000)	

Liberal

		Ability to make ends meet (fathers)	
		With difficulty	With easiness
Ability to make ends meet (offspring)	With difficulty	56.65	43.35
	With easiness	37.93	62.07
Correlation		0.187	
LR chi2		354 (Pr=0.000)	

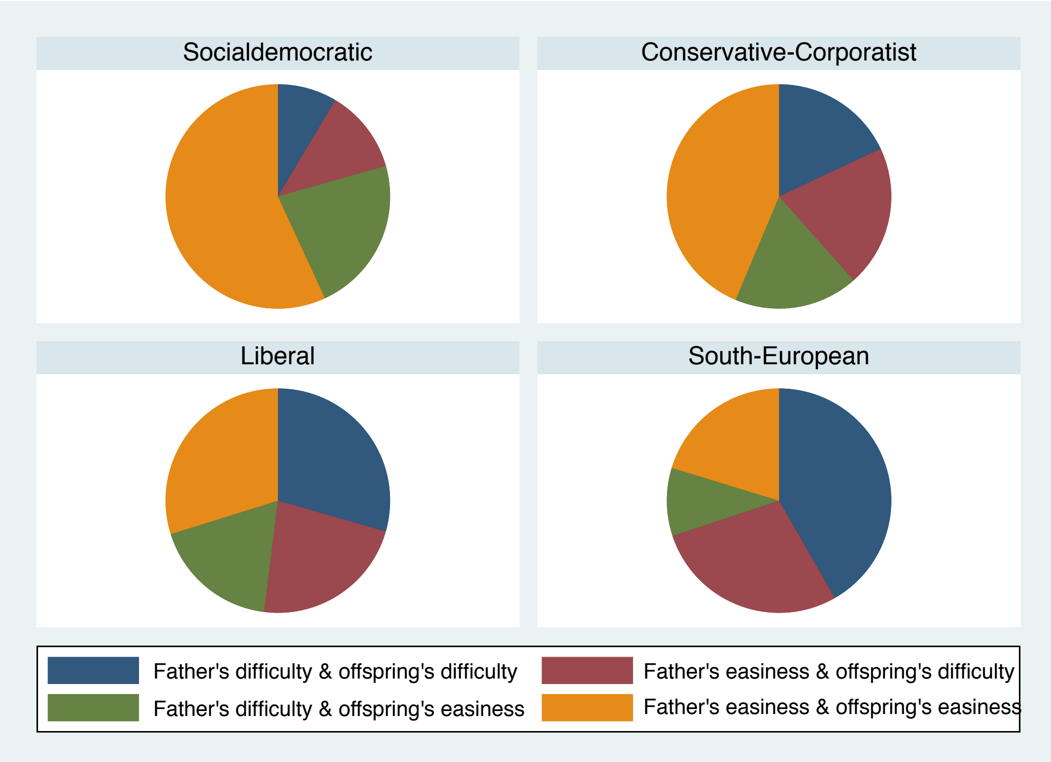
South-European

		Ability to make ends meet (fathers)	
		With difficulty	With easiness
Ability to make ends meet (offspring)	With difficulty	59.70	40.30
	With easiness	32.61	67.39
Correlation		0.249	
chi2		3200 (Pr=0.000)	

Source: Elaboration of EU-SILC 2011 microdata

Another method of displaying the EU-SILC 2011 data on the ability to make ends meet is through a pie or circle chart, which is split into slices and offers a straightforward way to illustrate numerical proportions. As shown in Figure 1, it is evident that path-dependent trajectories in the ability to pay usual necessary expenses among fathers and offspring exist in all regime types. However, there is a clear escalation among the welfare regimes, as the social-democratic type exhibits the lowest intergenerational transmission in the incapacity to make ends meet and the south-European type displays the highest one, while the conservative-corporatist and the liberal regime types occupy intermediate positions.

Figure 1: *The proportion in terms of the ability to make ends meet across generations*



Source: Elaboration of EU-SILC 2011 microdata

Furthermore, the odds ratio is used as a measure of the intergenerational association in the capacity to pay usual necessary expenses. The odds ratio gives an indication of the strength of the association between the two variables. When it comes to logistic regression, the regression coefficient is the estimated change in the log odds of the mobility outcome per unit increase in the value of the parental background. Table 2 presents the odds ratios for the four welfare regimes as derived from the corresponding logistic regression models. The lowest odds ratio is displayed by the social-democratic welfare regime and the highest by the south-European welfare state. The conservative-corporatist and the liberal welfare regimes appear to have almost identical odds ratios.

Table 2: *Logistic regressions on the ability to make ends meet between fathers and offspring*

Welfare regime	Odds ratio
Social-democratic	1.80 (0.70
Conservative-Corporatist	2.15 (0.48)
Liberal	2.14 (0.86)
South-European	3.06 (0.61)

Note: The table contains weighted values. Robust standard errors in parenthesis.
Source: Elaboration of EU-SILC 2011 microdata

Overall, the empirical analysis of the correlation in the ability to make ends meet among fathers and offspring demonstrates the efficacy of the social-democratic welfare state in promoting social mobility. Indeed, the microdata analysis is indicative of the efficiency of the social-democratic welfare state in boosting social mobility. This has mainly happened by tackling poverty-related problems through universal policies and inhibiting familialism by defamililiazing welfare responsibilities of the dependent members. In contrast, the welfare states that have loosely promoted either decommodification or defamilialization exhibit a stronger relationship in the capacity to make ends meet across generations (e.g. south-European). Thus, these empirical estimates offer a strong indication over the efficacy of the social-democratic welfare state in intercepting the path-dependency in life attainments across generations.

Concluding remarks

The aim of this study was to assess the extent of social mobility among the four welfare regimes in the EU. The measure of social mobility chosen in this study was the intergenerational association in the capacity to make ends meet or, otherwise, to pay usual necessary expenses. Based on this measure, social mobility is high in the countries of the social-democratic welfare regime, in between in the countries of the conservative-corporatist and the liberal welfare regime and low in the south-European countries. The particular position of each welfare regime in terms of social mobility is ascribed to the extent of decommodification and defamilialization that each representative country has promoted.

Thus, judging by the efficacy of the social-democratic welfare state, a suitable manner for promoting intergenerational social mobility is through public policies in cash or in kind with the aim to achieve a family-to-state transfer of welfare responsibilities and expenses. It is characteristic that the countries of the social-democratic welfare regime have developed a mix of universal and family-friendly policies which is defining in terms of improved mobility outcomes. On the other extreme, the south-European countries present a highly familial mode of social reproduction explaining the strong correlation in social mobility outcomes among parents and offspring. Finally, according to the measure of social mobility that was adopted in this analysis, the conservative-corporatist and the liberal welfare regimes exhibit very similar results because of the low-to-moderate degrees of decommodification and defamilialization characterizing each one of them.

References

Atkinson, A. (2015). Inequality: What can be done?. Cambridge: Harvard University Press.

Becker, G. & Tomes, N. (1979). An equilibrium theory of the distribution of income and intergenerational mobility. *Journal of Political Economy*, 87(6), 1153-89.

Becker, G. & Tomes, N. (1986). Human capital and the rise and fall of families. *Journal of Labor Economics*, 4, 1-39.

Boggess, S. & Corcoran, M. (1999). Cycles of disadvantage?. In: Boggess, S., Corcoran, M. & Jenkins, S. (Eds.): Cycles of disadvantage?. Wellington: Institute of Policy Studies.

Bouget, D., Frazer, H., Marlier, E., Sabato, S. & Vanhercke, B. (2015). *Social investment in Europe: A study of national policies*. Brussels: European Commission.

Breen, R. (2005). Explaining cross-national variation in youth unemployment market and institutional factors. *European Sociological Review*, 21(2), 125–134.

Breen, R. & Goldthorpe, J. (2001). Class, mobility and merit: The experience of two British birth cohorts. *European Sociological Review*, 17(2), 81-101.

Breen, R. & Goldthorpe, J. (1999). Class inequality and meritocracy: a critique of Saunders and an alternative analysis. *British Journal of Sociology*, 50(1), 1-27.

Breen, R. & Jonsson, J. (2005). Inequality of opportunity in comparative perspective: Recent research on educational attainment and social mobility. *Annual Review of Sociology*, 31, 223-243.

Corcoran, M. (1995) Rags to rags: Poverty and mobility in the United States. Annual Review of Sociology, 21, 237-267.

Corcoran, M. & Adams, T. (1995). Family and neighbourhood welfare dependency and son's labour supply. *Journal of Family and Economic Issues*, 16 (2), 239-264.

Causa, O. & Johanson, A. (2009). *Intergenerational social mobility*. OECD Working Paper No 48. Paris: OECD.

Causa, O., Dantan, S. & Johanson, A. (2009). *Intergenerational social mobility in European OECD countries*. OECD Working Paper No 50. Paris: OECD.

Corak, M. (2006). *Do poor children become poor adults? Lessons from a cross country comparison of generational earnings mobility*. Discussion Paper No. 1993. Bonn: IZA.

Corak, M. (2011). *Inequality from generation to generation: The United States in comparison*. Ottawa: University of Ottawa.

d' Addio, A. (2007). *Intergenerational transmission of disadvantage: Mobility or immobility across generations? A review of the evidence for OECD countries*. OECD Social, Employment and Migration Working Papers No. 52. Paris: OECD.

Erikson, R. & Goldthorpe, J. (2002). Intergenerational inequality: A sociological perspective. *Journal of Economic Perspectives*, 16(3), 31-44.

Erikson, R. & Goldthorpe, J. (1992). *The constant flux: A study of class mobility in industrial societies*. Oxford: Clarendon Press.

Esping-Andersen, G. (2014). Welfare regimes and social stratification, *Journal of European Social Policy*, 25(1), 124-134.

Esping-Andersen, G. (2007). Investing in children and their life chances. Paper prepared for the Foundation Carolina International Workshop 'Welfare State and Competitivity'. Madrid.

Esping-Andersen, G. (2005). Social inheritance and equal opportunities policies, In: Delorenzi, S., Reed, J. & Robinson, P. (eds.): *Maintaining momentum, promoting social mobility and life chances from early years to adulthood* (pp. 10-30). London: Institute for Public Policy Research,.

Esping-Andersen, G. (1990). *The three worlds of welfare capitalism.* Oxford: Policy Press.

Eurofound. (2017). Social mobility in the EU. Luxembourg: Publications Office of the European Union.

European Commission. (2013). *Toward social investment for growth and cohesion – including implementing the European Social Fund 2014–2020*, COM (2013) 83 final, Brussels.

Ferrera, M. (1996). The 'Southern Model' of welfare in social Europe. *Journal of European Social Policy*, 6, 17-37.

Fischer, C., Hout, M., Jankowski, M., Lucas, S., Swidler, A. & Voss, K., (1996), *Inequality by design*, Princeton: Princeton University Press.

Goldthorpe, J. (2016). Social class mobility in modern Britain: Changing structure, constant process. *Journal of the British Academy*, 4, 89–111.

Goldthorpe, J. (2012). *Understanding – and misunderstanding – social mobility in Britain: The entry of the economists, the confusion of politicians and the limits of educational policy*. Oxford: Oxford University.

Goldthorpe, J. (2000). *On sociology: Numbers, narratives and the integration of research and theory*. Oxford: Oxford University Press.

Haveman, R., Wolfe, B. & Spalding, J. (1991). Childhood events and circumstances influencing high school completion. *Demography*, 28, 133-157.

Heckman, J., Stixrud, J. & Urzua, S. (2006). The effects of cognitive and non-cognitive abilities on labor market outcomes and social behaviour. NBER Working Papers 12006. National Bureau of Economic Research Inc. Retrieved from: http://www.nber.org/papers/w12006.pdf.

Heckman, J. & Rubinstein, Y. (2001). The importance of non-cognitive skills: Lessons from the GED testing program. *American Economic Review*, 91(2), 145-149.

Heckman, J. & Lochner, L. (2000). Rethinking myths about education and training: Understanding the sources of skill formation in a modern economy. In: Danziger, S. & Waldfogel, J. (Eds.): *Securing the future: Investing in children from birth to college*, (pp.47-83). New York: Russell Sage Foundation.

Featherman, D., Jones, F. & Hauser, R. (1975). Assumptions of social mobility research in the US: The case of occupational status. *Social Science Research*, 4, 329–60.

Leibfried, S. (1993). Towards a European welfare state? On integrating poverty regimes into the European Community, In: Jones, C. (Ed.): *New perspectives on the welfare state in Europe*, (pp. ???). London & New York: Routledge.

Mayer, S. (1997). *What money can' t buy: Family income and children' s life chances*. Cambridge: Harvard University Press.

Musick, K. & Mare, R. (2004). Family structure, intergenerational mobility, and the reproduction of poverty: evidence for increasing polarization? *Demography*, 41(4), 629-48.

Nolan, B., Esping-Andersen, G., Whelan, C., Maitre, B. & Wagner, S. (2010). *The role of social institutions in intergenerational mobility*, UCD Geary Institute Discussion Paper Series. University College Dublin. Geary Institute.

OECD. (2018). *A broken social elevator? How to promote social mobility*. Paris: OECD Publishing.

OECD. (2015). *In it together: Why less inequality benefits all*, Paris: OECD Publishing.

Papanastasiou, S. (2018). *Intergenerational social mobility and welfare state types in Europe*. Athens: Gutenberg-Dardanos.

Papanastasiou, S. & Papatheodorou, C. (2018). Causal pathways of intergenerational poverty transmission in selected EU countries. *Social Cohesion and Development*, 12(1), 5-19.

Papanastasiou, S., Papatheodorou, C. & Petmesidou, M. (2016). Child poverty and intergenerational transmission in the EU: What is the impact of social protection, policies and institutions?. In: Petmesidou, M., Delamonica, E., Papatheodorou, C. & Aldrie, H-L (eds): *Child poverty, youth (un) employment and social inclusion*, CROP International poverty studies, Vol. 1, (pp. 67-89). Stuttgart: Ibidem/ Verlag Press.

Papatheodorou, C. & Petmesidou, M. (2005). Inequality, redistribution and welfare regimes: Comparing Greece to other EU countries. In: Argeitis G. (ed.): *Economic changes and social contradictions in Greece: The challenges in the beginning of the 21st century*, (pp. 213-254). Athens: Typothito - G. Dardanos. (in Greek).

Papatheodorou, C. & Petmesidou, M. (2004). Inequality, poverty and redistribution through social transfers: Greece in comparative perspective. In: Petmesidou M. & Pa- patheodorou C. (eds.): *Poverty and social exclusion*, (pp. 307-366). Athens: Exantas. (in Greek).

Papatheodorou, C. & Dafermos, Y. (2010). Structure and trends in economic inequality and poverty in Greece and the EU, 1995-2008. Observatory on Economic and Social Developments, Labour Institute, Greek General Confederation of Labour, Athens: INE-GSEE.

Papatheodorou, C., Dafermos, Y., Danchev, S. & Marsellou, E. (2008). Economic inequality and poverty in Greece: Comparative analysis and intertemporal trends. Observatory on Economic and Social Developments, Labour Institute, Greek General Confederation of Labour, Athens: INE-GSEE & UADPhil-Econ (in Greek).

Parsons, T. (1960). *Structure and process in modern societies*, Illinois: Free Press.

Saunders, P. (2002). Reflections on the meritocracy debate in Britain: A response to Richard Breen and John Goldthorpe. *British Journal of Sociology*, 53, 559-574.

Saunders, P. (1997). Social mobility in Britain: An empirical evaluation of two competing theories. *Sociology*, 31, 261-288.

Saunders, P. (1996). *Unequal but fair? A study of class barriers in Britain*. London: IEA.

Strenze, T. (2007). Intelligence and socioeconomic success: A meta-analytic review of longitudinal research. *Intelligence*, 35, 401-426.

Torche, F. (2013). *How do we characteristically measure and analyze intergenerational mobility?*. New York: Stanford Center on Poverty and Inequality.

Torche, F. (2015). Intergenerational mobility and equality of opportunity. European Journal of Sociology, 56(3), 343-371.

3

DEINDUSTRIALISATION DYNAMICS IN THE PERIPHERAL EUROPEAN UNION

Aylin Soydan[1]

Abstract

The European Union always witnessed imbalances and uneven development trajectories across the member economies. However, the eruption of the current crisis revived the debate on the so-called core-periphery divide within the Union. Besides its implications for the crisis, the core-periphery formation has been discussed in terms of development routes of the advanced and less industrialised economies and their interdependence.

This study aims to provide an explanatory account of industrialisation /deindustrialisation dynamics of the Union's peripheral economies in the last couple of decades by considering their relationship with the core. It also intends to contribute to the deindustrialisation literature, and to the enlargement debates by providing some insights for understanding the underlying structure of the EU.

Key Words: *Deindustrialisation, European integration, European peripheries, core-periphery formation*

Introduction

When the global crisis hit hard in 2008, some of the European Union economies got affected severely. Although development across the EU had always been uneven, the disparities among the core and peripheral economies became more evident with the outbreak of the crisis. During the crisis debates, 'structural' issues of the so-called peripheral economies have been underlined, and those economies have been blamed for the undesirable outcomes of the crisis. On the other hand, a number of studies pointed to the core-periphery structure in the Union and interdependence of the member economies as the underlying cause of the crisis.

The core-periphery formation within the European Union has evolved through a number of enlargement rounds since the 1980s. This structure stemmed from different development levels of the members, and the gap between the core and the periphery has been reinforced by these differences. One critical aspect of the developmental dynamics and interdependence in the Union has been related to the industrialisation /deindustrialisation processes experienced by the member economies.

The crisis had more destructive impacts on the less industrialised economies of the Union, requiring a closer examination of their development trajectories, more specifically their deindustrialisation experiences, in relation with the core. This study attempts to provide an explanatory account of deindustrialisation process in the peripheral economies of the Union in the last couple of decades. By doing so, it intends to make a contribution to the deindustrialisation literature, particularly to the less developed economies' case, which has been studied to a lesser extent. The study also aims to provide some insights for understanding the formation of the EU from the core-

1 Istanbul Okan University, aylinsoydan@yahoo.co.uk, aylin.soydan@okan.edu.tr

periphery perspective as well as for the policy making and enlargement debates. However, it does not intend to present a detailed analysis of the deindustrialisation dynamics in the individual EU economies; likewise, political and social implications of deindustrialisation process are not examined.

Deindustrialisation in the Less Developed /Late Industrialised Economies

Although the concept sometimes appears to be used intuitively, *deindustrialisation* is widely referred as declining share of industry, particularly manufacturing, in total employment and/or production of the advanced capitalist economies in the past fifty years (Palma, 2005; Akarçay Gürbüz, 2011; Tregenna, 2014; Rodrik, 2015).[2] The scale and speed of changes in the structure of employment and industrial production in those economies led to lively debates on the causes and consequences of deindustrialisation. The argument was first developed for the advanced economies, but it has also become an issue of concern for developing /late industrialised economies.[3]

Most of the work on economic development and structural transformation assumes somewhat linear economic and social evolution, which is expected to be followed by all economies during their development trajectories. In the conventional view, development, as a goal as well as a process, is associated with industrialisation, economic growth being a key developmental feature. Industry, more specifically manufacturing, is considered as the crucial driver of economic production and growth. Hence, despite some positive views taking deindustrialisation as a phase of 'successful' economic development, a possible route of deindustrialisation has often led to serious concerns. It is argued that deindustrialisation is likely to cause substantial adverse effects on growth and employment in the longer run, with further economic and social costs.

A number of arguments have been offered to explain deindustrialisation in the advanced economies (e.g. Rowthorn & Ramaswamy, 1997, 1998; Rowthorn & Coutts, 2004; Dasgupta & Singh, 2006; Palma, 2008; Tregenna, 2009, 2014; Akarçay Gürbüz, 2011; Rodrik, 2016). The deindustrialisation trend in these economies has often been illustrated by the inverse-U shaped relationship between manufacturing employment and per capita income (Dasgupta & Singh, 2006; Rodrik, 2016). According to this perception, deindustrialisation simply occurs as a decline in the share of manufacturing employment when economies reach a certain level of per capita income.

Among others, one widely acknowledged view in the related studies refers to the technological factors, emphasising differences in productivity growth rates across sectors. Accordingly, productivity growth in manufacturing is relatively high, and hence, resources are expected to be allocated to services, leading to employment deindustrialisation. In the positive interpretation of deindustrialisation, the decline in manufacturing employment accompanied by a rising share of manufacturing output in GDP can be interpreted as the normal and desirable result of an

2 Lissoni (1996) distinguishes two views of deindustrialisation, a macroeconomic and a geographic one. The first one refers to a process of tertiarisation, whereas the latter describes changes in local areas, mainly as the form of plant closures and layoffs. The author argues that macroeconomic arguments of deindustrialisation have common roots in "Kaldor's suggested association between productivity slowdown, relative decline of manufacturing (as measured by its GNP and employment shares, compared to those of services), and sluggish growth of GNP (Kaldor, 1966)"(p.2).
This study mainly refers to the macroeconomic debate of deindustrialisation.

3 In the literature there are a number of alternative terms to indicate the relative positions of the economies that experienced a lower level of economic development compared to the so-called 'developed' or 'advanced' economies. These economies are called 'developing', 'less developed', 'under developed', 'latecomer', 'periphery /semi-periphery', 'late industrialised', 'newly industrialised', 'emerging', 'low/ middle income', 'intermediate', and so on, whereas in the European context they are mostly referred as 'periphery' or 'semi-periphery'. In this study to denote the group of countries that entered the industrialisation phase at a later period, the terms 'late industrialised', and sometimes 'less developed' or 'developing' are used in general, and 'periphery' in the European context.

increasing manufacturing productivity. Mature economies switch their employment to specialised service sectors as a 'regular' phase through their development trajectory, and hence, no policy suggestions would be needed in this `successful' case, though very rare.

From a broader perspective, deindustrialisation is defined as a decrease in the absolute size of industry or declining share of manufacturing in total employment and/or in GDP. The contraction of manufacturing, measured by its falling share in total output as well as in employment, can lead to negative experiences. When the productivity growth in services cannot compensate for a declining manufacturing production, low economic growth may occur, accompanied by displacement of workers from industrial jobs to lower paid services and unemployment.

One supply-side view of deindustrialisation emphasises outsourcing of some service products in manufacturing, which results in a relative increase in the size of production of services and some kind of shift in employment. The demand-based arguments address different demand elasticities across sectors; accordingly, demand is expected to move towards services as a result of increasing income.

Another group of opinions give emphasis to the international factors, such as international division of labour and the nature of trade between north and south, for the deindustrialisation tendency. It is argued that while southern countries tend to produce labour-intensive goods, northern countries specialise in high-technology products and services requiring advanced skills, hence leading to contraction of manufacturing in the latter. The role of transnational corporations (TNCs) in the (re)organisation of industrial production worldwide is underlined in the related work. Development of new technologies in the 1980s, and changes in economic policies, e.g. from Keynesianism to monetarism, are also expressed for their impact on the deindustrialisation process.

Although the deindustrialisation literature has mostly focused on the industrialised advanced economies with high per capita incomes, a more confusing and worrying pattern of deindustrialisation has been pointed out in the late industrialised /developing countries (Pieper, 2000; UNCTAD, 2003; Weller, 2004; Dasgupta & Singh, 2006; Palma, 2008; Tregenna, 2009; Akarçay Gürbüz, 2011; Rodrik, 2016). The process in these economies has sometimes been called as the *'premature' deindustrialisation* to stress the differences with the more advanced case (Palma, 2008; Rodrik, 2016). Accordingly, with some exceptions, industrialisation experience of these economies was already slower, and in most of them contraction of manufacturing occurred at lower levels of income (per capita) compared to the levels at which the advanced economies' deindustrialisation began. It is also argued that some of the developing economies started turning into service economies even without a proper experience of industrialisation.

The share of manufacturing in output and employment in the advanced capitalist economies had reached their peaks in the 1950s-1970s and started declining afterwards. In the same period less developed economies were still showing signs of industrial development in terms of increasing, though restricted, role of manufacturing. Many of these late industrialised /developing economies had employed import-substituting industrialisation models in the 1960s and 1970s and had achieved success to a certain extent. However, most of them implemented drastic measures towards export-led growth from the 1980s and entered the deindustrialisation process before having reached the levels of industrial activity and employment of the advanced economies. Liberalisation of international trade and financial sector along with export-oriented strategies had implications for deindustrialisation in those economies with declines in the shares of manufacturing both in employment and value added. While advanced economies have higher productivity levels and produce more technological products, developing economies without a strong comparative advantage in manufacturing have become net importers of manufacturing, reversing a long process of import substitution. Therefore, these economies have 'imported' deindustrialisation as a result of failure in achieving technological progress.

While the organisation of industrial production and forms of employment were changing, the world economy witnessed the expansion of the size and significance of financial markets and financial institutions, a process often called as *financialisation*.[4] Financialisation first emerged in the advanced economies, but it has become a global phenomenon comprising late industrialised /developing economies through financial liberalisation.

This transformation has had direct and indirect effects on industrial production both in advanced and late industrialised economies, reinforcing deindustrialisation tendency. In the course of financialisation, non-financial companies have increasingly been involved in financial procedures and activities. As a result of increasing transfers of internal funds to financial markets, shortening planning horizons and rising uncertainty, productive investments have declined. Furthermore, financial liberalisation has led to substantial capital flows towards the late industrialised /developing economies, which in turn, have resulted in expanding speculative financial transactions and declining physical investments due to lower rates of return compared to financial assets. In addition to its overall negative impact on capital accumulation, financialisation has caused macroeconomic instabilities in most of these economies.

Changing Nature of the Core-Periphery Formation in the EU

One main goal of the EU has been the long-term convergence of the standards of all member economies. Despite a reasonable progress achieved in terms of integration, this goal seems to have failed given the disparities within the Union. There has always been some hierarchical division among the members as the 'core' and 'periphery', confronting with the strategic goal of convergence, but this structure has been reinforced with the participation of new members, which mostly became a part of the periphery.[5] Two enlargement rounds seem to have been critical in the creation of disparities across the Union: The first one was the accession of Greece, Spain and Portugal in the 1980s, and the second round comprised the participation of a large group of eastern European economies in the 2000s.[6]

---

4 *Financialisation,* basically the shift in gravity of economic activity from production to finance, is one of the relatively new concepts used to identify the profound transformation over the last decades. . As a popular definition in the literature refers, in very general terms, "financialisation means the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies" (Epstein, 2005). For some selected references on financialisation, see e.g. Dumenil and Levy (2004), Crotty (2005), Epstein (2005), Krippner (2005), Foster (2007), Palley (2007), Orhangazi (2008), Stockhammer (2008), Goldstein (2009), Lapavitsas (2011).

5 The terms 'core' and 'periphery' were developed by the dependency theory, and later by the world economic systems theory, to distinguish the relative positions and roles of developing and developed countries in the world economy. In general, the 'core' refers to the economies which have a more advanced industrial production and also have some control power over the periphery, whereas the 'periphery' indicates a group of economies that are less developed according to some economic and social indicators. The core and periphery categories may have different connotations in the European context than their use in the dependency view or similar approaches; for example some peripheral EU economies may be called as semi-peripheral when the world economy is considered. On the other hand, the Latin American dependency paradigm had impact on European researcher. Weissenbacher (2018) reviews the 'European Dependency School', which analyses the significance of the core-periphery relations in European integration from this perspective.
In this study, we use the terms rather loosely in order to imply some kind of hierarchy among the EU economies without a specific reference to any of the related theories.

6 By 'eastern European' economies we refer to the so-called 'transition' economies of the former Eastern Bloc that are located in the east, south east, central, and north parts of Europe.

The highly industrialised countries of the core have been the centre of economic and social dynamism, and characterised by innovation, concentration and accumulation of capital and investment. The periphery has involved less industrialised /developing economies of the EU with lower levels of capital accumulation and technological progress along with weaker economic and social characteristics. The core in the EU has generally been more recognisable despite some signs of fragmentation, whereas the countries comprising periphery have changed over the decades. Conventionally, Ireland and southern Eurozone economies, i.e. Greece, Ireland, Portugal, and Spain - GIPS, were seen as forming the periphery, sometimes with the inclusion of Italy. The accession of the eastern European countries changed the composition of the peripheral EU, leading to a division as the 'southern' and 'eastern', or the 'old' and 'new' peripheries.[7]

Following the disintegration process that the Eastern Bloc went through in the 1990s, the western European capital started to expand more aggressively towards the region. Meanwhile, the accession negotiations between the EU and eastern European economies also started. The financial sector of the core almost completely took over the banking system in Eastern Europe and gained a major position there. On the other hand, foreign direct investment in manufacturing showed a more selective and divergent pattern. Direct investments targeted some of these economies, which became closely integrated to the industrial production in the core, and to the German export sector more specifically (Becker et al., 2016).

The recent crisis changed the interdependence and power relations within the Union besides its impact on individual economies. The eruption of the crisis made the rift among the members more evident, and the core-periphery divide has been addressed in the debates over the causes and implications of the crisis in the EU. Very often peripheral economies have been blamed as having institutional flaws, lack of fiscal discipline, inefficient economic policies, and lack of structural reforms for the underlying causes of the unpleasant outcomes of the crisis. However, in a number of studies the severe impact of the crisis on the peripheral economies has been referred as the consequence of the structural imbalances and interdependence among the economies with different productive capabilities, not of the periphery's mistakes (e.g. Lapavitsas et al., 2010; Schmidt, 2010; Uxo et al., 2011; Nikolovska & Mamucevska, 2015).

It is argued that the crisis should be understood from the perspective of two growth models that generated different macroeconomic performances in the core and the periphery. The core countries were vulnerable to secular stagnation due to low domestic demand and followed an export-led growth model, while the growth strategy in the periphery was based on the expansion of domestic demand, mainly consumption, which was financed by the growth of public and private debts. These strategies were mutually connected; that is the growth performance in the core economies corresponded to the demand in the periphery, making them, especially Germany, net exporters, whereas the periphery needed financial funds from the core in order to maintain the current account deficits (Uxo et al., 2011; Nikolovska & Mamucevska, 2015).[8]

---

7 Besides these, the peripheral economies of the EU are sometimes categorised into three groups: The 'inner periphery' comprises the countries that are within the Eurozone whereas the 'outer periphery' refers to the countries that are within the Union but outside the Eurozone (Bartlett & Prica, 2016). The third group comprising the countries that are outside both the EU and Eurozone, but still linked to the Eurozone through the euroisation of their economy, is called the 'super periphery' by Sokol (2001).

8 The development model of the core countries can be represented by the export-oriented growth strategy of the German economy, which can be seen as the core of the 'core'. The neo-mercantilist policy led to low growth of the labour costs and helped Germany increase the economy's competitiveness in the global market. Changes in the income distribution by reducing labour costs have decreased the private consumption in the German economy.
As Becker and Jäger (2012) argue, these export regimes have benefited from the fact that the peripheral economies within the Eurozone have had no monetary policy instruments available to protect their productive sectors and to avoid the accumulation of

Along with the transformation in industrial production and international trade, financialisation of the European economy also emerged as a response to the inclination towards stagnation in the core; the provision of consumer credit stimulated demand and helped temporarily overcome under-consumption tendencies in those economies. The phenomenon of financialisation spread to the periphery as well. The creation of the Monetary Union,[9] financial liberalisation and deregulation created the conditions for easy mobilisation of financial funds from the core to the periphery, and these funds served as means of financing their increased public and private consumption. As a result, the peripheral economies experienced economic growth based on capital inflows, leading to high public and private debts. In the 2000s, the process of financialisation stimulated an artificial economic boom in the periphery with high current account deficits and placed these economies in a highly vulnerable position during the recession period. These current account deficits in the periphery corresponded to the German current account surpluses and growth of financial claims (Becker & Jäger, 2012). Hence, as a result of these mutually related growth strategies accompanied by financialisation, the capital has been accumulated in the core, whereas the periphery has built up deficits and debt, reinforcing the divergence further.

Despite the differences in terms of degree of influence and timing, all the peripheral economies got affected by the crisis. The ones outside the Eurozone were hit by the sharp decline in capital inflows in 2008, earlier than the peripheral Eurozone economies. The mainly export-oriented peripheral economies that had a relatively low external private debt performed better, as they could benefit from the depreciation of their currencies, whereas the financialised economies outside the Eurozone were the most vulnerable part of the European periphery (Becker & Jäger, 2012). The 'old' southern periphery did not get severely affected via the credit channel until the beginning of 2010, and the impact of declining exports on their economic performance was less obvious than the export-oriented economies (Becker & Jäger, 2012). Although the old peripheral economies had different degrees of debt and current account deficits, these imbalances made them structurally dependent on capital inflows and vulnerable to speculative attacks.

Following the eruption of the crisis, similar rescue packages were implemented in most of the peripheral economies without considering their specific circumstances. The financial sector was at the focus of the programmes comprising austerity measures, such as very restrictive fiscal policy, wage cuts, and reduced social spending. These measures put extra burden on the peripheral economies.

Has Deindustrialisation Been Similar Across the Peripheries?

In the European context, the peripheral economies' industrialisation and deindustrialisation experiences should be discussed by considering their relationship with the core. Despite considerable increases in manufacturing, industrialisation in the post-war period was a relatively slow and shallow process in the periphery. There were significant differences in the productive structures of the European economies, and more particularly, while the core restructured its industrial formation following the 1970s' crisis, the periphery did not accommodate to the new circumstances. The divergence between the two group has maintained and the periphery has presented an economic development and growth trajectory under the shadow of the more advanced economies.[10]

public and private external debts. Furthermore, from the German perspective the overall goal of the monetary union was to prevent peripheral countries from using devaluation as a means of competitiveness.

9 The Monetary Union has supported export-oriented growth of the core and had a stabilising effect in these economies, whereas the overall impact on the periphery has been rather destabilising.

10 For example, in their study on the Greek deindustrialisation experience Louri and Pepelasis Minoglou (2001) argue that the peak of the industrialisation phase in Greece came late and the boom was short and rather hesitant. The deindustrialisation of Greece was also timid; moreover, it started before industrialisation was completed (Louri & Pepelasis Miroglou, 2002).

The dynamics and scope of deindustrialisation processes have presented different characteristics across the EU, as the industrialisation paths. The core countries of the Union had already witnessed some deindustrialisation when the (old) periphery entered the deindustrialisation phase in the 1980s. Membership to the EU reduced industrial policy options and hindered industrial development of the peripheral economies. Liberalisation of external trade following the accession led to a first wave of deindustrialisation. The deindustrialisation tendency coincided with a rising share of low technology sectors in the old periphery (Louri & Pepelasis Minoglou, 2001). Joining the Eurozone further consolidated the weaknesses of the productive sectors by weakening their competitiveness (Becker & Jäger, 2012; Becker, 2013). The focus of capital moved towards real estate, tourism and other service activities. In the 2000s 'investment' in the southern periphery mostly realised through the expansion of the construction sector. The deindustrialisation process has accompanied by financialisation of the periphery mainly through the capital flows from the core, as underlined previously. The capital flows were a direct consequence of the structural imbalances among the core and peripheral economies of the Eurozone. Financialisation of the peripheral economies has reinforced the deindustrialisation tendency by transferring financial funds from productive investments towards speculative activities and consumption, leading to substantial increases in public and private debts along with.[11]

The eastern periphery experienced sharp declines in their industrial production and employment following the disintegration process of the former regimes in the early 1990s. The production crisis, which was a deindustrialisation process in absolute terms, was deteriorated with the speed of privatisation in these economies. Furthermore, the early periods of the transformation worsened their technological capabilities. As a result, industrial production became significantly low compared to the 1989 level, and then started to increase again from the mid-1990s. However, by 2008 only some of these economies achieved an industrial output higher than the level in 1989.[12]

The eastern European economies followed different routes throughout their disintegration, and then, during EU accession procedures, which resulted in different production and employment structures. Their relationship with the European core has determined their development trajectories. One group of the economies (the Visegrad countries and Slovenia) have implemented an export-oriented growth model with a partial financialisation, whereas financialisation has dominated the growth model in the second group from the early 1990s, accompanied by a strong deindustrialisation (Becker & Jäger, 2012; Becker et al., 2016).

When the western European capital started an eastward expansion in the late 1990s, industrial investments clearly proceeded to the Visegrad countries rather than the Baltic or south eastern countries. The relocation strategies of the core's manufacturing companies coincided with the urge for attracting FDI in the Visegrad economies. The industrial policy of these economies were limited to compete for industrial FDI through low wages, low taxation, specific incentives and infrastructure provision. The German industrial sector played a significant role in the involvement of the eastern periphery. Germany moved some manufacturing processes to the eastern European countries due to cost advantages. With the participation of some of these economies into the German production chains a new central European manufacturing system emerged.

11 The Appendix provide some indicators regarding the deindustrialisation dynamics of the old periphery since the 1990s. According to these, the decrease in the shares of manufacturing in output and employment becomes more evident from the second half of the 2000s.

12 Some indicators regarding the deindustrialisation dynamics of the eastern periphery since the 1990s are given in the Appendix. The eastern peripheral economies indicate different structures, i.e. the shares of manufacturing in the more export-oriented economies appear to be rather stable throughout the period, whereas the other economies have relative declines suggesting stronger deindustrialisation.

Despite the increases in manufacturing output, these developments led to a dependent 'export industrialisation' experience in these eastern European economies, highly reliant on foreign investment. Although more complex industrial patterns emerged through FDI, production processes have often remained shallow, the specialisation of export industries has tended to be narrowly concentrated in a few sectors, mainly car production (Becker et al., 2016). Furthermore, the research and development activities have not been relocated to these economies, and due to the dominance of transnational companies, technological diffusion has been weak. In the export-oriented countries, manufacturing has presented a dual structure with a relatively efficient, and generally foreign-owned, export-oriented sector, and a mostly inward-oriented 'national' sector that has fallen behind (Kulikova, 2012).

The eastern periphery has also received large capital inflows. Financialisation in these economies has been linked to the banking system of the core, and mainly driven by the credit growth, particularly credits to private households nurturing real estate booms and sustaining domestic demand. (Becker et al., 2016). The capital inflows have not been used to finance productive activities to a great extent. (Becker & Jäger, 2012).

Conclusion

The so-called core-periphery divide in the Union emerged with the accession of the south European economies in the 1980s. The formation of the Eurozone reinforced this uneven economic development further. With the involvement of the eastern European economies the disparities in the Union have intensified, leading to different layers and forms of dependency among the economies.

The core and periphery economies of the EU have followed different trajectories regarding their industrialisation and deindustrialisation processes, along with significant implications of financialisation in the last few decades. The core of the Union experienced deindustrialisation relatively early, whereas the old peripheral economies' deindustrialisation started following their accession to the EU in the 1980s, and has deepened since then. The service sector's shares in employment and GDP in comparison with manufacturing have increased during the last few decades. These economies have also lost an important part of their limited industrial production to the eastern periphery from the 2000s.

The eastern periphery's deindustrialisation experience has had a different and diverse route. Following the disintegration of the former regimes, these economies witnessed a sharp decline in their industrial production and employment, which can be referred as an absolute deindustrialisation process. Starting in the second half of the 1990s their industrial production partly recovered. The expansion of the western European capital towards the region began in the late 1990s and intensified by their accession to the EU, leading to changes in industrial and financial sectors.

The eastern European economies have followed two different development trajectories which have had implications for their industrialisation /deindustrialisation processes since the 1990s. The first group comprising the Visegrad economies and Slovenia (and certain parts of Romania) has experienced an export-oriented industrialisation and growth model with a more limited financialisation dimension. Although these economies benefited from FDI, this reindustrialisation process has been dependent on the restructuring of the core's industrial production, rather than their own dynamics. Moreover, the industrial foundations have been intensified only in some specific export sectors linked to the core's production chains, and the technological innovation processes have been under the control of the core. There also appeared some kind of duality in the peripheral industrial production, i.e. more developed export-oriented sectors and less technological, inward-looking sectors. Furthermore, the extent of profit transfers by the companies from the core has been considerable, deteriorating domestic capital accumulation.

The second group involving the Baltic and south eastern European economies has undergone a growth route mainly based on financialisation. Deindustrialisation process had started earlier in these economies, and the reindustrialisation process after the transition and EU accession has been very weak compared to the first group.

The current crisis affected the peripheral economies severely and made the disparities among the member economies more evident. The severity of the crisis led to return of the notion of industrial policy within the European Union, which has been reflected by the official EU/ EC documents.[13]

Changing economic and financial environment across the world can lead to new trajectories of economic development, and may have implications for sustainable development and economic convergence within the European Union. More specifically, the possible effects of the new and critical technological transformation, which is called Industrie or Industry 4.0, the Fourth Industrial Revolution, and so on, makes deindustrialisation debate more interesting. There are serious challenges and it may be early to speculate on the implications of this transformation. However, if the obstacles can be overcome, Industry 4.0 will transform the industrial production across the Europe, possibly reversing the deindustrialisation tendencies. This will definitely have implications for the core-periphery structure in the Union. On the other hand, given the structural differences, the new technologies risk remaining concentrated in the more advanced economies, which may result in reindustrialisation of the core, and hence, further divergence and disintegration.

References

Akarçay Gürbüz, A. (2011). Comparing trajectories of structural change. *Cambridge Journal of Economics*, 35(6), 1061–1085.

Bartlett, W. & Prica, I. (2016). Interdependence between core and peripheries of the European Economy: Secular Stagnation and Growth in the Western Balkans. *LEQS- LSE 'Europe in Question' Discussion Paper Series*, No.104.

Becker, J . (2013). The periphery in the present international crisis: Uneven development, uneven impact and different responses. *Spectrum: Journal of Global Studies*, 5 (1), 21-41.

Becker, J. & Jäger, J. (2012). Integration in crisis: A regulationist perspective on the interaction of European varieties of capitalism. *Competition & Change*, 16(3), 169–187.

Becker, J., Jäger, J., & Weissenbacher, R. (2015). Uneven and dependent development in Europe: The crisis and its implications. In J. Jäger and E. Springler (Eds) *Asymmetric Crisis in Europe and Possible Futures. Critical Political Economy and Post-Keynesian Perspectives* (81–97). London: Routledge.

Becker, J., Ćetković, P., & Weissenbacher, R. (2016) Financialization, dependent export industrialization, and deindustrialization in eastern Europe". In G. Cozzi, S. Newman & J. Toporowski (Eds), *Finance and Industrial Policy: Beyond Financial Regulation in Europe*. Oxford: Oxford University Press.

13 For example, the European Commission sets a target for the share of industrial production as 20 per cent by 2020 in "EU Industrial Policy". https://ec.europa.eu/growth/industry/policy_en

Bellamy Foster, J. (2007). The financialization of capitalism. *Monthly Review,* 58(11), 1-12.

Crotty, J. (2005). The neoliberal paradox: The impact of destructive product market competition and 'modern' financial markets on nonfinancial corporation performance in the neoliberal era. In G.A. Epstein (ed.), *Financialization and the World Economy* (77-110). Massachusetts: Edward Elgar.

Dasgupta, S. & Singh, A. (2006), Manufacturing, Services and Premature Deindustrialization in Developing Countries**.** *United Nations University Research Paper,* No.49.

Dumenil, G. & Levy, D. (2004). The real and financial components of profitability (United States, 1952-2000). *Review of Radical Political Economics,* 36(1), 82-100.

Epstein, G.A. (2005). Introduction. In G.A. Epstein (ed.), *Financialization and the World Economy* (3-16). Cheltenham, Massachusetts: Edward Elgar.

European Commission (n.d.). *EU Industrial Policy*. Retrieved from

https://ec.europa.eu/growth/industry/policy_en

Foster, J.B. (2007). The Financialization of Capitalism. *Monthly Review,* 58(11).

Goldstein, J.P. (2009). Introduction: The Political Economy of Financialization. *Review of Radical Political Economics,* 41(4), 453-457.

Kaldor, N. (1966). Causes of the slow rate of economic growth in the United Kingdom. In N. Kaldor (1978) *Collected Economic Essays*, Vol.5, London: Duckworth.

Krippner, G. (2005). The financialization of the American economy. *Socio-Economic Review*, 3(2), 173-208.

Kulikova, N. (2012). European integration and experience in catching-up development of CEE countries – New EU members: Lessons for emerging markets. In: M. Antevski & D. Mitrović (eds.) *Western Balkans: From Stabilisation to Integration* (9-30). Belgrade: Institute for International Politics and Economics.

Lapavitsas, C. (2009). Financialised capitalism: Crisis and financial expropriation. *Research on Money and Finance Discussion Papers*, No.1.

Lapavitsas, C. (2011). Theorizing financialization. *Work, Employment and Society*, 25(4), 611-626.

Lapavitsas, C., Kaltenbrunner, A., Lindo, D., Michell, J., Painceira, J.P., Pires, E., Powell, J., Stenfors, A. & Teles, N. (2010) Eurozone crisis: Beggar thyself and thy neighbour. *Journal of Balkan and Near Eastern Studies,* 12(4), 321-373.

Lissoni F. (1996). Deindustrialisation in Lombardy: An empirical assessment. *CESPRI Working Paper,* No.88.

Louri, H. & Pepelasis Miroglou, I. (2001). A quantitative exploration on the determinants of (de-industrialisation: The case of Greece. *International Review of Applied Economics,* 15(4), 397-410.

Louri, H. & Pepelasis Miroglou, I. (2002). A hesitant evolution: industrialisation and de-industrialisation in Greece over the long run. *Journal of European Economic Studies*, 31(2), 321-348.

Nikolovska, N. & Mamucevska, D. (2015). Current crisis in the EU in the light of the contradictions of the core - periphery development model. *Review of Innovation and Competitiveness,* 1(1), 45-62.

Orhangazi, O. (2008). *Financialization and the US Economy*. Cheltenham, Massachusetts: Edward Elgar.

Palley, T. (2007). Financialization: What it is and why it matters. *The Levy Economics Institute Working Paper,* No.525.

Palma, J.G. (2008). Deindustrialisation, premature deindustrialisation, and the Dutch disease. In L.E. Blume and S.N. Durlauf (eds.), *The New Palgrave: A Dictionary of Economics*, 2nd ed. (401-410). Basingstoke: Palgrave Macmillan.

Pieper, U. (2000). Deindustrialisation and the social and economic sustainability nexus in developing countries: Cross-country evidence on productivity and employment. *The Journal of Development Studies*, 36(4), 66-99.

Rodrik, D. (2016). Premature deindustrialization. *Journal of Economic Growth*, 21(1), 1-33.

Rowthorn, R. & K. Coutts (2004). De-industrialization and the balance of payments in advanced economies. *UNCTAD/OSG/DP*, No.170.

Rowthorn, R. & R. Ramaswamy (1997). Deindustrialization: Causes and implications. *IMF Working Paper,* No.97/42.

Rowthorn, R. & R. Ramaswamy (1998). Growth, trade, and deindustrialization. *IMF Working Paper*, No.98/60.

Schmidt, I. (2011). European capitalism: Varieties of crisis. *Alternate Routes*, 22, 71-86.

Sokol, M. (2001) Central and Eastern Europe a Decade After the Fall of State-socialism: Regional Dimensions of Transition Processes. *Regional Studies*, 35(7), 645-655.

Stockhammer, E. (2008). Some stylized facts on the finance-dominated accumulation regime. *Competition and Change*, 12(2), 184-202.

Tregenna, F. (2009). Characterising deindustrialisation: An analysis of changes in manufacturing employment and output internationally. *Cambridge Journal of Economics*, 33(3): 433-466.

UNCTAD (2003), *Trade and Development Report***.** Geneva: UNCTAD.

Uxó, J., Paúl, J., & Febrero, E. (2011). Current Account Imbalances in the Monetary Union and the Great Recession: Causes and Policies. *Panoeconomicus, 58*(5), 571-592.

Weissenbacher, R. (2018). Peripheral integration and disintegration in Europe: the 'European dependency School' revisited. *Journal of Contemporary European Studies*, 26(1), 81-98.

Weller, J. (2004). Tertiary sector employment in Latin America: between modernity and survival. *CEPAL Review***,** 84, 157-174.

Appendix : Selected Indicators of Deindustrialisation in the EU (1990-2017)

Table A1. GDP Growth (Annual, %)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Austria	4.3	3.4	2.1	0.5	2.4	2.7	2.3	2.1	3.6	3.6	3.4	1.3	1.7	0.9	2.7	2.2	3.5	3.7	1.5	-3.8	1.8	2.9	0.7	0.0	0.8	1.1	1.5	3.0
Belgium	3.1	1.8	1.5	-1.0	3.2	2.4	1.6	3.7	2.0	3.6	3.6	0.8	1.8	0.8	3.6	2.1	2.5	3.4	0.8	-2.3	2.7	1.8	0.2	0.2	1.3	1.4	1.4	1.7
Denmark	1.5	1.4	2.0	0.0	5.3	3.0	2.9	3.3	2.2	2.9	3.7	0.8	0.5	0.4	2.7	2.3	3.9	0.9	-0.5	-4.9	1.9	1.3	0.2	0.9	1.6	1.6	2.0	2.2
Finland	0.7	-5.9	-3.3	-0.7	3.9	4.2	3.7	6.3	5.4	4.4	5.6	2.6	1.7	2.0	3.9	2.8	4.1	5.2	0.7	-8.3	3.0	2.6	-1.4	-0.8	-0.6	0.1	2.1	2.6
France	2.9	1.0	1.6	-0.6	2.3	2.1	1.4	2.3	3.6	3.4	3.9	2.0	1.1	0.8	2.8	1.6	2.4	2.4	0.2	-2.9	2.0	2.1	0.2	0.6	0.9	1.1	1.2	1.8
Germany	5.3	5.1	1.9	-1.0	2.5	1.7	0.8	1.8	2.0	2.0	3.0	1.7	0.0	-0.7	1.2	0.7	3.7	3.3	1.1	-5.6	4.1	3.7	0.5	0.5	1.9	1.7	1.9	2.2
Luxembourg	5.3	8.6	1.8	4.2	3.8	1.4	1.4	5.7	6.0	8.5	8.2	2.5	3.8	1.6	3.6	3.2	5.2	8.4	-1.3	-4.4	4.9	2.5	-0.4	3.7	5.8	2.9	3.1	2.3
Netherlands	4.2	2.4	1.7	1.3	3.0	3.1	3.6	4.3	4.5	5.1	4.2	2.1	0.1	0.3	2.0	2.2	3.5	3.7	1.7	-3.8	1.4	1.7	-1.1	-0.2	1.4	2.3	2.2	3.2
Sweden	0.8	-1.1	-1.2	-2.1	4.1	4.0	1.5	2.9	4.2	4.5	4.7	1.6	2.1	2.4	4.3	2.8	4.7	3.4	-0.6	-5.2	6.0	2.7	-0.3	1.2	2.6	4.5	3.2	2.3
United Kingdom	0.7	-1.1	0.4	2.5	3.9	2.5	2.5	4.0	3.1	3.2	3.7	2.5	2.5	3.3	2.4	3.1	2.5	2.4	-0.5	-4.2	1.7	1.5	1.5	2.1	3.1	2.3	1.9	1.8
Italy	2.0	1.5	0.8	-0.9	2.2	2.9	1.3	1.8	1.6	1.6	3.7	1.8	0.2	0.2	1.6	0.9	2.0	1.5	-1.1	-5.5	1.7	0.6	-2.8	-1.7	0.1	1.0	0.9	1.5
Greece	0.0	3.1	0.7	-1.6	2.0	2.1	2.9	4.5	3.9	3.1	3.9	4.1	3.9	5.8	5.1	0.6	5.7	3.3	-0.3	-4.3	-5.5	-9.1	-7.3	-3.2	0.7	-0.3	-0.2	1.4
Ireland	8.5	1.9	3.3	2.7	5.8	9.6	7.8	10.3	8.5	10.6	9.6	5.8	6.3	3.1	6.7	6.0	5.5	5.2	-3.9	-4.6	1.8	3.0	0.0	1.6	8.3	25.6	5.1	7.8
Portugal	4.0	4.4	1.1	-2.0	1.0	4.3	3.5	4.4	4.8	3.9	3.8	1.9	0.8	-0.9	1.8	0.8	1.6	2.5	0.2	-3.0	1.9	-1.8	-4.0	-1.1	0.9	1.8	1.6	2.7
Spain	3.8	2.5	0.9	-1.0	2.4	2.8	2.7	3.7	4.3	4.5	5.3	4.0	2.9	3.2	3.2	3.7	4.2	3.8	1.1	-3.6	0.0	-1.0	-2.9	-1.7	1.4	3.4	3.3	3.1
Malta	6.3	6.3	4.7	4.5	5.7	6.3	3.8	5.3	5.1	4.7	6.8	0.6	3.0	2.5	0.4	3.8	1.8	4.0	3.3	-2.5	3.5	1.3	2.7	4.6	8.1	9.6	5.2	6.4
Cyprus	7.4	0.7	9.4	0.7	5.9	8.5	1.3	2.6	5.2	4.8	5.7	3.6	3.4	2.5	4.6	3.7	4.5	4.8	3.9	-1.8	1.3	0.3	-3.1	-5.9	-1.4	2.0	3.4	3.9
Czech Republic		-11.6	-0.5	0.1	2.9	6.2	4.2	-0.6	-0.3	1.4	4.3	2.9	1.7	3.6	4.9	6.5	6.9	5.6	2.7	-4.8	2.3	1.8	-0.8	-0.5	2.7	5.3	2.6	4.3
Slovak Republic				1.9	6.2	5.8	6.8	6.1	4.0	-0.2	1.2	3.3	4.5	5.4	5.3	6.8	8.5	10.8	5.6	-5.4	5.0	2.8	1.7	1.5	2.8	3.9	3.3	3.4
Slovenia							3.5	5.1	3.3	5.3	4.2	2.9	3.8	2.8	4.4	4.0	5.7	6.9	3.3	-7.8	1.2	0.6	-2.7	-1.1	3.0	2.3	3.1	5.0
Poland		-7.0	2.5	3.7	5.3	7.0	6.1	6.5	4.6	4.6	4.6	1.2	2.0	3.6	5.1	3.5	6.2	7.0	4.2	2.8	3.6	5.0	1.6	1.4	3.3	3.8	2.9	4.6
Croatia							5.9	6.6	1.9	-0.9	3.8	3.4	5.2	5.6	4.1	4.2	4.8	5.2	2.1	-7.4	-1.4	-0.3	-2.2	-0.6	-0.1	2.3	3.2	2.8
Estonia							5.3	11.8	4.1	-0.9	10.6	6.3	6.1	7.4	6.3	9.4	10.3	7.7	-5.4	-14.7	2.3	7.6	4.3	1.9	2.9	1.7	2.1	4.9
Latvia							2.4	9.0	6.5	2.6	5.4	6.5	7.1	8.4	8.3	10.7	11.9	10.0	-3.5	-14.4	-3.9	6.4	4.0	2.4	1.9	3.0	2.2	4.5
Lithuania							5.1	8.3	7.5	-1.1	3.8	6.5	6.8	10.5	6.6	7.7	7.4	11.1	2.6	-14.8	1.6	6.0	3.8	3.5	3.5	2.0	2.3	3.8
Bulgaria	-9.1	-8.4	-7.3	-1.5	1.8	2.9	0.7	-1.1	3.5	-6.0	4.9	3.8	5.9	5.2	6.4	7.1	6.9	7.3	6.0	-3.6	1.3	1.9	0.0	0.9	1.3	3.6	3.9	3.6
Hungary			-3.1	-0.6	2.9	1.5	0.0	3.3	4.2	3.2	4.2	3.8	4.5	3.8	5.0	4.4	3.9	0.4	0.9	-6.6	0.7	1.7	-1.6	2.1	4.2	3.4	2.2	4.0
Romania		-12.9	-8.8	1.5	3.9	7.1	3.9	-4.8	-2.1	-0.4	2.4	5.6	5.2	5.5	8.4	4.2	8.1	6.9	8.3	-5.9	-2.8	2.0	1.2	3.5	3.1	4.0	4.8	6.9
Euro area	3.6	2.7	1.4	-0.7	2.5	2.5	1.7	2.7	3.0	3.0	3.9	2.2	1.0	0.7	2.3	1.7	3.2	3.1	0.4	-4.5	2.1	1.6	-0.9	-0.2	1.3	2.1	1.8	2.4
European Union	3.0	1.4	1.1	-0.1	2.8	2.7	2.0	2.9	3.0	3.0	3.9	2.2	1.4	1.3	2.6	2.1	3.3	3.1	0.5	-4.3	2.1	1.7	-0.4	0.3	1.7	2.3	2.0	2.4
Albania	-9.6	-29.6	-7.2	9.6	8.3	13.3	9.1	-10.8	9.0	13.5	6.7	7.9	4.2	5.8	5.7	5.7	5.4	5.9	3.8	3.4	3.7	2.6	1.4	1.0	1.8	2.2	3.4	3.8
Montenegro									4.9	-9.4	3.1	1.1	1.9	2.5	4.4	4.2	8.6	6.8	7.2	-5.8	2.7	3.2	-2.7	3.5	1.8	3.4	2.9	4.3
Serbia							2.4	7.2	2.4	-12.1	7.8	5.0	7.1	4.4	9.0	5.5	4.9	5.9	5.4	-3.1	0.6	1.4	-1.0	2.6	-1.8	0.8	2.8	1.9
Macedonia, FYR		-6.2	-6.6	-7.5	-1.8	-1.1	1.2	1.4	3.4	4.3	4.5	-3.1	1.5	2.2	4.7	4.7	5.1	6.5	5.5	-0.4	3.4	2.3	-0.5	2.9	3.6	3.8	2.9	0.0
Turkey	9.3	0.7	5.0	7.7	-4.7	7.9	7.4	7.6	2.3	-3.4	6.6	-6.0	6.4	5.6	9.6	9.0	7.1	5.0	0.8	-4.7	8.5	11.1	4.8	8.5	5.2	6.1	3.2	7.4

Source: World Bank

Table A2. Manufacturing Value Added (% of GDP)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Austria	19.6	19.2	18.5	17.5	17.4	17.9	17.6	17.8	17.7	17.9	18.2	18.3	17.7	17.5	17.3	17.4	17.8	18.2	17.4	16.4	16.5	16.6	16.7	16.5	16.6	16.6	16.2	16.5
Belgium						18.4	18.2	18.5	18.2	17.4	17.5	17.0	16.8	16.1	16.0	15.8	15.2	15.1	14.2	12.8	13.2	12.8	12.6	12.5	12.6	12.8	12.7	12.5
Denmark	14.9	14.6	14.8	14.3	14.4	14.7	14.2	14.6	14.5	14.3	14.1	14.0	13.9	13.2	12.7	12.0	12.1	12.0	11.7	11.1	10.9	11.0	11.4	11.8	11.9	12.4	13.3	12.8
Finland	19.5	17.1	18.1	19.8	21.0	22.2	21.4	21.7	22.9	22.8	24.2	23.6	22.9	22.0	21.6	21.3	21.8	22.2	20.8	16.7	17.1	16.3	14.5	14.6	14.6	14.8	14.5	14.9
France	16.2	15.9	15.6	15.1	14.7	14.9	14.5	14.7	14.7	14.4	14.5	14.0	13.6	13.1	12.7	12.2	11.7	11.6	11.1	10.6	10.3	10.4	10.4	10.4	10.3	10.4	10.3	10.1
Germany		24.9	23.5	21.4	20.9	20.6	20.1	20.3	20.5	20.1	20.7	20.5	20.0	20.1	20.3	20.3	20.9	21.1	20.2	17.9	20.0	20.6	20.4	20.2	20.6	20.8	20.6	20.7
Luxembourg						11.6	10.3	10.7	10.9	9.5	9.6	9.1	8.6	8.8	8.4	7.9	7.1	8.1	7.0	4.8	5.2	4.9	4.8	4.9	5.0	4.9	5.1	5.1
Netherlands	16.9	16.2	15.8	15.6	15.4	15.6	15.0	14.5	14.3	13.9	13.7	13.3	12.7	12.4	12.5	12.6	12.1	12.2	11.6	10.5	10.6	10.9	10.7	10.2	10.3	10.7	10.9	10.8
Sweden	18.4	16.7	15.9	16.3	17.8	19.9	19.3	19.7	20.0	19.8	20.3	19.3	18.8	18.4	18.3	18.1	18.1	18.1	16.8	15.2	16.3	16.1	15.2	14.9	14.6	13.7	13.5	13.6
United Kingdom	16.7	16.3	16.1	15.7	16.4	15.6	15.4	15.3	14.5	13.6	13.1	12.2	11.5	10.8	10.2	10.0	9.5	9.1	9.1	8.7	8.9	8.9	8.8	9.0	8.9	9.0	9.0	9.2
Italy	19.9	19.0	18.5	18.3	18.6	18.9	18.5	18.3	18.3	17.7	17.5	17.1	16.8	16.1	15.9	15.5	15.6	15.9	15.4	13.7	14.2	14.2	13.8	13.8	13.9	14.4	14.7	14.7
Greece						11.0	10.1	9.1	9.0	9.5	9.5	9.9	9.8	9.2	8.7	8.6	8.5	8.5	8.5	7.6	7.2	7.8	8.0	8.4	8.4	8.3	8.6	8.9
Ireland						20.7	20.4	21.8	23.3	23.6	23.1	25.3	26.7	23.4	21.1	19.6	18.6	17.9	17.5	20.3	19.5	21.4	20.4	19.8	19.7	34.3	32.1	
Portugal						15.9	16.6	16.5	16.0	15.6	15.0	14.7	14.2	13.5	13.0	12.6	12.3	12.2	11.9	11.1	11.6	11.3	11.4	11.6	11.8	12.2	12.2	12.4
Spain						16.3	16.4	16.6	16.6	16.3	16.2	15.8	15.4	14.9	14.5	14.1	13.9	13.5	13.3	12.3	12.2	12.4	12.1	12.3	12.5	12.9	12.9	13.1
Malta	21.9	21.3	20.1	19.6	19.8	18.5	18.2	17.4	17.8	17.3	19.1	15.7	15.3	15.5	13.2	12.7	12.1	12.3	13.4	11.2	11.4	11.5	11.0	9.5	8.8	7.8	7.5	
Cyprus	14.2	14.2	13.4	12.8	12.1	9.5	9.4	9.3	8.9	8.6	8.1	7.7	7.7	7.3	7.2	6.8	6.1	5.7	5.5	5.4	5.1	4.6	4.1	3.8	4.1	4.3	4.4	
Czech Republic				21.0	21.2	21.5	22.5	23.5	23.1	22.8	23.6	23.9	22.5	22.0	23.0	23.0	23.6	23.5	22.2	20.7	21.2	22.1	22.2	22.2	24.2	24.1	24.4	24.3
Slovak Republic						23.1	22.0	20.2	20.5	18.7	21.4	22.5	20.2	20.6	21.1	20.9	21.2	21.0	20.2	16.1	18.9	19.1	19.0	18.4	19.7	19.8	20.4	20.1
Slovenia						21.7	21.8	22.3	22.3	22.0	21.8	22.0	21.6	21.8	21.5	20.7	20.6	20.4	19.2	17.1	17.6	18.2	18.7	19.2	19.8	20.0	20.1	20.7
Poland						19.4	18.4	17.7	17.4	16.9	16.1	14.6	14.4	15.6	16.6	16.1	16.5	16.5	16.3	16.5	15.6	15.9	16.3	15.9	16.8	17.6	18.1	
Croatia						17.1	15.5	15.7	14.8	14.7	14.8	14.7	14.4	13.9	13.8	13.2	12.9	12.9	12.9	12.5	12.1	12.4	12.3	11.9	12.4	12.6	12.7	12.6
Estonia						17.4	16.4	16.8	15.0	14.5	15.5	16.1	15.8	15.8	15.0	14.7	14.5	14.0	13.8	12.3	13.7	14.5	13.9	13.6	14.1	13.8	13.5	13.3
Latvia						17.7	17.2	18.3	14.9	13.6	13.7	13.7	13.6	12.5	12.4	11.5	10.7	10.1	9.7	9.8	12.0	11.8	11.7	11.2	10.9	10.5	10.7	11.0
Lithuania						16.7	16.2	16.0	15.7	15.1	16.8	17.2	16.3	16.7	18.2	18.2	17.6	15.9	15.7	15.1	16.9	18.3	18.7	17.6	17.4	17.4	17.0	17.6
Bulgaria										11.7	12.1	13.0	13.5	13.8	12.6	13.6	13.4	14.0	12.3	12.8	11.7	13.7	13.7	12.6	13.2	13.6	14.5	
Hungary						18.1	18.1	19.8	20.1	19.5	19.1	19.2	18.5	18.5	18.7	18.9	19.6	19.0	18.2	17.1	18.2	18.6	18.7	18.9	19.5	20.5	19.9	19.9
Romania		31.7	30.0	26.6	28.7	23.7	25.4	23.8	21.2	19.3	19.8	21.8	21.8	20.3	20.9	21.0	20.8	21.1	22.1	21.1	22.9	24.8	19.8	20.3	20.9	19.6	20.2	
Euro area		20.0	19.2	18.3	18.1	17.8	17.4	17.5	17.5	17.2	17.3	17.1	16.6	16.2	16.1	15.8	15.8	15.9	15.3	13.8	14.5	14.7	14.5	14.4	14.5	15.0	15.0	14.7
European Union		19.2	18.6	17.8	17.8	17.6	17.3	17.3	17.2	16.8	16.8	16.4	16.0	15.5	15.4	15.1	15.1	15.0	14.5	13.3	13.9	14.1	13.9	13.8	13.9	14.3	14.3	14.0
Albania							8.5	7.5	6.2	6.1	6.4	6.0	5.7	7.3	8.3	8.9	9.3	7.6	5.0	5.2	5.5	5.7	4.6	5.1	5.3	5.7	5.7	5.9
Montenegro											9.3	11.6	10.4	8.8	8.7	8.2	7.8	5.1	5.1	4.5	4.6	5.0	4.1	4.0	3.9	4.1	3.8	3.4
Serbia						23.4	20.9	18.5	19.0	19.1	23.6	22.6	18.4	16.9	15.0	14.4	13.8	13.9	14.0	14.0	13.6	14.1	15.1	16.1	15.7	15.6	15.6	
Macedonia, FYR	31.5	24.4	29.4	25.1	19.9	19.6	19.5	18.9	18.1	17.6	9.0	9.0	8.4	8.9	7.7	9.7	10.2	10.2	9.8	8.8	9.9	11.4	10.2	9.9	11.0	11.8	12.2	11.8
Turkey	22.0	22.2	21.6	20.8	22.1	22.6	21.1	21.6	22.3	20.1	18.8	17.8	16.9	17.1	16.9	16.9	17.1	16.8	16.3	15.2	15.1	16.5	15.9	16.2	16.8	16.7	16.6	17.5

Source: World Bank

Table A3. Services Value Added (% of GDP)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Austria	56.1	56.4	57.3	58.4	58.2	58.9	58.7	58.5	58.9	58.7	59.3	59.5	60.3	60.4	60.3	60.6	60.7	60.3	61.0	62.2	62.3	62.3	62.0	62.3	62.7	63.1	63.3	62.8
Belgium						62.8	62.7	62.1	62.7	63.5	63.3	64.4	64.9	65.7	65.6	66.1	66.1	66.1	67.1	68.5	67.9	68.3	68.6	68.9	69.1	69.0	68.9	68.8
Denmark	60.9	61.6	61.8	63.1	62.5	61.6	61.0	60.8	60.7	60.7	60.3	60.9	61.5	62.2	62.0	61.6	60.9	61.5	62.3	65.4	65.4	64.7	64.3	65.2	65.6	66.3	65.5	65.9
Finland	52.3	55.7	56.7	56.1	55.1	54.3	55.1	54.3	53.5	53.7	52.9	54.3	54.9	55.1	55.7	55.8	54.9	54.6	56.2	59.5	58.9	59.2	60.6	60.2	60.7	60.7	60.4	60.1
France	62.0	62.8	63.6	64.8	65.0	64.8	65.1	65.4	65.5	65.9	66.3	66.9	67.4	68.1	68.2	68.5	68.7	69.0	69.7	70.8	70.7	70.2	70.3	70.3	70.3	70.2	70.3	70.2
Germany		56.3	57.3	59.1	59.1	59.9	60.8	61.2	61.3	61.5	61.4	62.1	63.0	63.1	63.1	63.2	62.5	61.8	62.1	64.1	62.2	61.6	61.6	62.0	61.9	62.0	62.1	61.9
Luxembourg						70.4	72.3	71.2	70.2	72.0	72.1	72.8	73.1	72.9	72.7	73.8	75.8	74.2	76.0	77.8	78.3	78.3	78.3	78.1	77.6	79.0	78.6	78.9
Netherlands	61.5	62.2	63.1	63.8	63.8	63.1	63.3	64.0	64.7	65.4	65.3	64.8	65.9	66.3	66.4	66.0	65.7	66.1	66.1	67.7	68.3	68.5	68.9	69.1	70.0	70.1	70.2	70.4
Sweden	56.8	57.3	59.2	59.4	58.6	57.6	59.0	59.2	59.1	59.7	59.9	60.2	60.5	60.8	60.5	60.9	60.4	60.1	61.1	62.9	61.1	61.8	63.3	64.1	64.6	65.7	65.6	65.2
United Kingdom	67.3	67.5	68.5	69.4	69.4	64.4	64.7	65.2	66.0	66.7	66.4	67.7	68.2	69.0	69.6	69.8	69.8	70.2	70.8	72.5	71.4	70.6	70.8	70.5	70.7	70.8	70.6	70.1
Italy	60.2	60.5	60.9	61.6	61.6	61.1	61.8	61.8	61.7	62.1	62.7	63.5	63.8	64.6	64.5	64.9	64.2	64.1	64.8	66.7	66.3	66.2	66.4	66.6	66.9	66.7	66.4	66.3
Greece						64.0	65.1	66.0	66.4	64.8	65.2	64.5	64.8	64.2	65.6	67.7	65.4	67.2	69.9	71.3	71.6	71.2	70.8	70.8	70.8	70.8	69.5	68.9
Ireland						55.4	55.6	55.3	55.5	54.9	54.9	52.8	51.7	54.7	55.4	56.4	56.7	59.0	62.4	63.4	66.0	64.4	64.7	65.6	65.2	53.6	55.3	
Portugal						58.5	57.8	58.5	58.6	59.0	60.1	60.6	61.3	62.2	62.7	63.1	63.0	63.6	64.8	66.8	66.2	66.4	66.5	67.0	66.5	65.6	65.6	65.2
Spain						60.2	59.7	59.4	59.3	59.0	59.1	59.5	59.8	59.7	59.9	59.7	59.9	61.1	63.0	65.7	65.4	66.7	67.4	67.5	67.5	66.8	66.9	66.4
Malta	37.0	37.5	41.1	42.9	42.0	60.5	62.1	61.8	62.5	62.6	60.5	62.8	62.0	62.2	63.6	64.5	65.5	66.9	67.3	68.1	68.7	68.8	71.0	71.8	72.7	71.4	72.0	
Cyprus						66.4	67.0	68.7	69.3	70.2	69.8	69.3	68.4	67.4	66.8	66.7	67.0	66.1	66.4	70.0	71.3	73.9	75.4	76.9	76.5	76.3	75.7	
Czech Republic				50.6	50.9	51.5	50.3	51.6	52.6	53.5	54.1	53.9	55.6	56.4	54.1	54.1	54.1	54.0	54.6	55.5	55.6	54.7	54.4	54.3	53.7	53.8	53.9	54.2
Slovak Republic						51.7	51.4	54.6	53.9	55.3	53.2	54.6	55.1	54.2	53.5	53.5	52.1	52.4	52.6	56.9	56.3	55.4	55.8	57.3	55.2	55.7	55.6	55.9
Slovenia						52.4	52.4	52.6	52.0	52.4	53.9	54.5	54.4	55.1	55.1	55.6	55.6	55.0	56.0	58.4	58.7	58.1	57.5	57.0	56.1	56.3	56.8	56.4
Poland						49.1	50.6	52.2	53.6	54.4	56.8	58.2	58.8	58.0	56.2	56.1	55.9	55.3	55.7	56.6	56.2	55.2	56.2	57.3	56.6	56.2	56.3	58.3
Croatia						50.4	52.6	52.0	52.6	53.8	53.5	53.8	54.4	55.2	54.6	55.8	56.0	57.1	57.3	58.1	58.7	59.0	58.4	58.4	58.8	58.6	58.8	58.5
Estonia						55.0	56.4	56.5	58.3	62.1	60.2	59.6	59.6	59.5	59.6	59.1	58.3	57.7	60.4	61.3	60.2	58.7	59.1	59.5	59.1	59.8	60.5	60.4
Latvia						54.1	55.4	55.7	58.5	60.5	61.2	62.6	62.8	64.2	63.9	64.7	64.3	63.8	65.2	65.6	64.2	64.4	64.2	64.4	65.0	64.6	65.0	64.4
Lithuania						51.3	51.9	51.3	52.7	55.2	57.0	57.1	57.9	57.4	56.7	56.6	56.4	56.7	57.3	62.6	60.8	58.6	58.6	59.8	59.5	59.9	61.2	60.3
Bulgaria	35.2	35.7	39.1	45.3	44.7	50.6	59.1	49.0	53.5	53.3	54.1	53.5	55.3	53.9	54.1	53.6	52.9	54.1	53.3	56.2	59.0	57.2	57.0	57.8	58.7	58.2	57.8	58.3
Hungary						51.9	52.7	52.3	52.2	53.0	53.5	54.5	56.0	56.0	54.7	55.5	56.3	56.0	56.6	56.9	56.4	55.7	54.9	55.3	54.6	53.6	55.0	54.9
Romania	24.2	32.6	35.9	32.7	29.7	40.0	39.6	39.7	43.3	46.3	48.9	44.9	45.5	46.6	45.6	48.1	48.1	49.4	46.5	47.8	46.2	42.9	50.5	50.4	52.2	53.8	55.4	56.2
Euro area		59.5	60.3	61.5	61.5	61.3	61.7	61.9	62.0	62.2	62.4	62.9	63.5	63.9	64.0	64.2	63.9	64.0	64.8	66.6	66.0	65.8	66.0	66.2	66.3	66.0	66.0	66.0
European Union		60.5	61.4	62.3	62.2	60.8	61.3	61.5	61.8	62.2	62.4	63.0	63.6	64.0	64.0	64.2	64.0	64.1	64.8	66.6	65.9	65.6	65.9	66.1	66.2	66.0	66.0	66.0
Albania	15.9	18.0	25.0	22.5	24.6	21.7	44.2	47.9	50.1	53.0	50.4	51.4	50.1	46.3	46.2	46.9	46.3	47.2	44.7	45.3	44.0	44.3	45.0	44.6	45.8	46.3	46.7	47.3
Montenegro											58.2	57.4	57.1	56.2	56.9	57.6	55.8	55.3	55.2	57.4	58.6	60.6	61.5	58.6	58.6	60.3	59.4	54.5
Serbia						41.1	42.4	45.3	45.5	44.8	42.9	42.0	45.2	46.3	47.0	49.0	49.2	51.2	51.3	51.7	51.2	50.4	50.9	49.7	50.4	50.0	50.1	50.0
Macedonia, FYR	41.6	42.5	39.2	47.4	47.2	48.0	48.4	45.3	45.7	46.8	52.8	54.4	52.9	52.4	54.2	55.8	56.3	56.7	55.1	57.1	55.1	55.1	56.3	54.8	53.8	53.8	53.1	54.2
Turkey	48.1	49.7	50.1	50.7	48.9	48.6	49.4	51.4	48.5	52.3	52.6	54.7	53.4	52.9	52.8	52.8	53.2	54.6	55.3	57.0	54.3	52.8	53.7	53.2	53.7	53.3	53.8	53.3

Source: World Bank

Table A4. Employment in Industry (% of Total Employment)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Austria		37.1	35.8	35.3	32.5	32.1	30.3	29.6	29.6	29.8	30.0	29.4	28.9	28.9	26.7	27.6	28.2	27.3	26.2	25.0	24.9	26.0	26.1	25.9	25.8	25.8	25.6	25.6
Belgium		31.3	30.6	28.4	28.0	27.5	27.1	26.5	26.4	26.7	26.3	25.5	25.8	24.9	24.9	24.7	24.7	24.4	24.7	23.5	23.4	23.2	21.8	21.7	21.4	21.4	21.3	21.3
Denmark		27.0	27.1	26.1	26.5	27.1	26.4	26.2	26.5	26.9	25.3	25.4	23.5	23.1	23.7	23.9	23.3	23.5	23.1	20.3	19.6	19.9	19.7	19.5	19.3	19.3	18.6	18.8
Finland		28.8	27.5	26.7	26.3	27.6	27.1	27.4	28.3	27.7	28.0	27.1	27.1	26.7	26.1	25.8	25.7	25.7	25.1	23.9	23.3	23.0	22.8	22.8	21.9	21.7	22.2	22.3
France		29.1	29.4	27.5	26.8	26.9	26.5	26.6	26.3	26.3	26.3	26.0	25.4	24.1	24.2	23.8	23.8	23.3	23.3	22.7	22.3	22.2	21.8	21.3	20.6	20.4	20.3	20.4
Germany		40.9	39.0	37.8	36.9	36.0	35.3	34.7	34.4	33.8	33.5	32.8	32.4	31.4	31.3	29.8	29.7	29.9	29.3	28.8	28.3	28.2	28.2	27.8	28.1	27.7	27.4	27.3
Luxembourg		30.3	28.6	26.4	27.0	25.3	22.9	23.3	21.6	22.0	20.8	21.4	20.1	19.3	18.9	17.3	16.7	16.9	15.3	12.9	13.3	13.4	12.7	12.0	11.0	12.5	12.1	11.9
Netherlands		25.0	24.7	24.1	23.3	23.4	23.2	22.9	22.8	22.3	21.6	21.6	21.0	19.9	20.1	20.5	20.2	19.3	18.7	18.0	17.6	17.2	17.2	16.5	16.2	16.4	16.5	16.5
Sweden		24.7	23.6	23.0	23.6	24.7	25.7	26.0	25.7	25.2	24.6	22.4	23.2	22.7	22.7	22.1	21.9	21.7	21.3	20.2	19.9	19.9	19.6	19.2	18.6	18.3	18.2	18.1
United Kingdom		31.3	29.9	29.4	27.8	27.4	27.4	26.9	26.7	25.8	25.2	24.6	23.9	23.3	22.3	22.2	22.1	22.2	22.0	19.6	19.2	19.2	19.1	18.9	19.0	18.7	18.5	18.4
Italy		35.0	34.6	34.1	33.8	33.7	33.3	32.6	32.7	32.4	31.8	31.7	31.6	31.8	30.8	30.7	30.1	30.1	29.8	29.2	28.6	28.3	27.6	27.0	26.9	26.6	26.1	26.3
Greece		25.6	25.1	24.2	23.6	23.2	22.9	22.5	23.2	23.0	22.6	23.1	22.8	22.5	22.5	22.4	22.0	22.4	22.2	21.1	19.6	17.7	16.5	15.6	15.0	14.9	15.2	15.3
Ireland		28.0	28.1	27.1	27.8	27.8	27.3	28.6	29.0	28.7	29.0	29.2	28.0	27.9	27.6	27.7	27.8	27.3	24.9	21.4	19.5	18.9	18.3	18.2	18.2	19.1	19.6	19.2
Portugal		30.1	32.4	32.9	32.5	32.2	31.3	31.0	35.1	34.7	34.8	33.4	33.3	32.7	31.1	30.4	30.3	30.2	29.0	27.8	27.3	26.9	25.1	23.7	23.9	24.3	24.5	24.8
Spain		33.4	32.8	31.0	30.3	30.2	29.5	29.9	30.5	30.7	30.8	31.5	31.0	30.7	30.2	29.6	29.4	29.1	27.8	24.6	23.0	21.8	20.7	19.8	19.5	19.9	19.6	19.5
Malta		40.0	37.8	36.8	37.1	33.8	32.8	32.0	31.6	31.1	32.7	30.9	31.5	29.9	29.4	29.8	28.3	26.3	25.6	25.0	25.5	24.5	22.3	21.8	20.9	19.8	19.8	19.4
Cyprus		29.7	29.0	28.3	27.7	26.1	25.9	25.7	24.7	24.3	23.8	23.7	23.2	22.9	23.4	24.0	22.6	22.5	23.0	21.8	20.4	20.9	20.2	17.6	16.5	16.2	17.0	17.0
Czech Republic		47.8	45.5	43.5	42.7	42.3	42.0	41.6	41.5	40.6	39.9	40.5	40.1	39.7	39.4	39.5	40.0	40.2	40.5	38.6	38.0	38.5	38.1	37.5	38.0	38.0	38.1	37.9
Slovak Republic		50.1	41.2	38.8	39.7	38.9	39.5	39.3	39.4	38.5	37.3	37.6	38.4	38.1	39.2	38.8	38.8	39.4	40.1	37.9	37.1	37.5	37.5	35.8	35.4	36.1	36.5	36.3
Slovenia		46.9	45.7	44.2	42.4	43.1	42.0	40.5	39.5	37.8	37.7	38.6	38.8	37.1	36.3	37.1	35.5	35.2	35.1	33.2	32.6	31.7	31.0	31.0	30.9	32.0	33.2	32.6
Poland		37.4	34.9	34.3	32.0	32.0	31.7	32.2	32.1	31.3	31.1	30.5	28.6	28.6	28.8	29.2	30.0	30.7	31.9	31.1	30.3	30.7	30.4	30.5	30.5	30.5	31.4	31.3
Croatia		36.3	34.7	35.7	33.8	30.1	29.1	29.5	29.8	30.6	28.9	30.0	29.8	30.3	29.6	28.6	29.3	30.6	30.9	29.0	27.5	28.0	27.9	27.6	27.0	26.7	27.0	27.0
Estonia		37.0	36.0	33.3	32.5	34.2	33.7	33.4	33.0	31.6	35.0	33.8	29.8	30.7	34.0	34.1	33.5	35.1	35.3	31.4	30.3	32.4	31.1	30.3	30.1	30.7	29.7	29.9
Latvia		34.1	32.3	29.4	28.3	28.0	27.2	25.8	27.1	25.8	26.8	26.3	25.5	27.1	26.9	26.5	27.4	28.6	29.4	24.3	23.1	22.9	23.5	23.9	23.8	23.6	24.1	24.0
Lithuania		36.9	34.7	33.8	31.4	29.4	28.2	28.5	29.1	27.1	26.8	26.6	27.4	27.2	28.2	29.1	29.6	30.5	30.5	26.8	24.6	24.6	25.1	25.5	24.7	25.1	25.1	25.0
Bulgaria		38.1	38.5	36.1	34.1	34.2	31.0	32.1	32.7	33.3	32.8	32.8	32.7	32.1	32.9	34.2	34.5	35.5	36.4	35.2	33.0	31.5	31.3	30.2	30.1	29.9	29.8	29.3
Hungary		35.4	35.1	33.8	33.0	32.6	33.2	33.2	35.0	34.4	33.8	34.4	34.1	33.4	32.9	32.5	32.3	32.5	32.2	31.2	30.7	30.8	29.8	29.9	30.5	30.3	30.4	30.2
Romania		35.1	32.8	31.4	32.9	31.0	31.5	30.3	28.8	27.1	25.8	25.8	29.6	29.1	31.1	30.5	30.7	31.4	31.6	30.0	28.3	28.6	28.2	28.3	28.9	28.5	29.9	29.1
Euro area		34.7	33.7	32.5	31.8	31.4	30.8	30.5	30.6	30.3	30.0	29.8	29.4	28.7	28.4	27.9	27.7	27.6	27.1	25.9	25.2	24.9	24.5	24.0	23.8	23.7	23.5	23.5
European Union		34.5	33.4	32.3	31.4	31.0	30.6	30.3	30.3	29.8	29.4	29.1	28.8	28.2	28.0	27.6	27.5	27.6	27.3	26.0	25.2	25.1	24.7	24.3	24.2	24.1	24.0	24.0
Albania		16.6	14.2	14.1	14.8	15.3	14.8	16.1	14.7	14.7	16.0	16.9	17.6	18.8	19.3	19.9	20.5	18.7	20.8	19.9	19.4	18.9	16.5	17.2	17.5	18.6	18.5	18.6
Montenegro		24.1	25.3	27.0	26.1	26.1	24.9	24.2	24.1	24.5	24.0	25.5	24.5	23.4	21.2	19.2	18.8	17.5	21.5	19.8	19.0	19.0	17.4	18.1	17.5	17.6	18.0	18.0
Serbia		26.5	27.7	28.5	27.7	29.1	28.4	26.7	27.0	27.2	28.7	29.4	28.2	27.8	26.9	27.6	29.3	29.5	26.2	26.1	22.3	26.8	26.5	25.9	24.7	24.5	24.4	24.4
Macedonia, FYR		44.7	46.4	44.5	41.1	41.2	40.7	41.0	40.4	39.6	33.5	33.5	33.3	33.9	33.4	32.4	32.6	31.3	30.5	29.5	29.6	30.0	29.9	30.4	30.4	30.5	30.3	29.8
Turkey		20.2	21.6	22.6	22.6	22.3	22.9	24.1	23.6	22.8	24.0	22.7	23.0	22.7	24.9	26.3	26.8	26.7	26.8	25.3	26.2	26.5	26.0	26.4	27.9	27.2	26.8	26.8

Source: World Bank

Table A5. Employment in Services (% of Total Employment)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Austria		55.5	57.1	57.8	60.3	60.6	62.3	63.5	64.0	64.0	63.9	64.8	65.4	65.6	68.4	67.2	66.6	67.1	68.5	69.7	69.9	69.0	69.2	69.5	69.4	69.7	70.1	70.1
Belgium		66.0	66.5	69.0	69.4	69.9	70.4	71.1	71.3	71.4	71.9	73.1	72.4	73.4	72.8	73.3	73.4	73.7	73.8	75.0	75.3	75.5	77.1	76.9	77.4	77.4	77.5	77.4
Denmark		67.3	67.8	68.8	68.4	68.5	69.7	70.0	69.8	69.8	71.0	71.1	73.3	73.6	73.0	72.9	73.6	73.5	74.4	77.1	78.0	77.7	77.7	78.0	78.3	78.2	78.8	78.6
Finland		62.3	63.5	64.4	64.9	64.6	65.0	64.8	64.6	65.9	65.8	67.1	67.3	68.0	68.9	69.4	69.6	69.7	70.3	71.4	72.3	72.8	73.1	73.0	73.8	74.1	74.0	73.8
France		65.5	64.7	67.0	68.0	68.2	68.7	68.8	69.3	69.5	69.6	69.9	70.5	71.6	71.9	72.6	72.5	73.2	74.0	74.4	74.8	74.9	75.3	75.6	76.6	76.9	76.8	76.8
Germany		55.0	57.3	58.6	59.8	60.8	61.8	62.4	62.8	63.3	63.8	64.6	65.1	66.2	66.4	67.8	68.1	67.8	68.9	69.5	70.0	70.1	70.2	70.8	70.5	70.9	71.3	71.5
Luxembourg		66.2	65.1	70.4	69.9	70.9	74.4	74.3	75.5	76.1	76.8	77.0	77.9	78.0	79.2	81.0	81.5	81.2	83.1	85.7	85.6	85.4	86.0	86.4	87.6	86.4	86.9	87.1
Netherlands		70.6	71.4	71.8	72.7	72.8	73.1	73.4	73.8	74.5	75.1	75.3	76.1	77.0	76.6	76.1	76.5	77.7	78.6	79.2	79.3	80.0	80.1	81.4	81.5	81.2	81.3	81.3
Sweden		72.1	73.2	73.5	73.0	72.1	71.3	71.1	71.7	72.3	73.0	75.4	74.7	75.2	75.2	75.9	75.9	76.1	76.5	77.7	78.0	78.1	78.3	78.8	79.4	79.7	79.9	80.0
United Kingdom		66.4	67.9	68.6	70.1	70.5	70.6	71.3	71.6	72.6	73.3	74.0	74.7	75.4	76.4	76.4	76.6	76.4	76.9	79.3	79.6	79.6	79.7	80.1	79.8	80.2	80.4	80.5
Italy		56.5	57.4	58.8	59.3	59.8	60.5	61.5	61.5	62.2	63.0	63.1	63.5	63.5	65.0	65.1	65.7	65.9	66.5	67.1	67.6	68.0	68.7	69.4	69.5	69.6	70.0	69.8
Greece		52.2	53.0	54.5	55.6	56.4	56.8	57.7	58.9	59.6	60.0	61.1	62.0	62.4	65.2	65.4	66.3	66.2	66.6	67.2	68.0	70.0	70.5	70.7	71.5	72.2	72.4	72.6
Ireland		58.0	58.2	59.7	59.6	60.2	61.4	60.5	61.9	62.6	63.1	63.6	64.9	65.5	66.0	66.3	66.5	67.2	69.7	73.7	75.9	76.6	77.0	76.1	76.1	75.3	74.8	75.5
Portugal		52.6	56.1	55.6	55.8	56.3	56.5	55.7	51.1	52.6	52.5	53.5	54.0	54.4	56.6	57.6	57.8	57.9	59.6	60.7	61.5	62.9	64.0	66.1	67.5	68.1	68.6	68.3
Spain		56.2	57.5	59.2	60.3	60.8	62.2	62.0	61.8	62.1	62.5	62.0	63.0	63.6	64.3	65.1	65.8	66.4	68.1	71.3	72.8	74.1	75.1	76.0	76.3	76.0	76.2	76.4
Malta		56.9	59.2	60.3	60.1	63.6	64.7	65.6	66.2	66.8	65.2	66.7	66.1	67.7	68.3	68.1	69.6	71.9	72.6	73.5	73.1	74.3	76.7	76.9	77.7	78.6	78.9	79.3
Cyprus		63.7	64.9	65.7	66.6	68.5	68.8	69.3	70.4	71.0	70.8	71.5	71.6	71.9	71.5	71.2	73.1	73.1	72.7	74.2	75.8	75.3	76.9	79.3	79.1	79.8	79.3	79.4
Czech Republic		45.0	47.0	48.7	50.4	51.1	51.8	52.6	52.9	54.1	54.8	54.6	55.0	55.8	56.3	56.5	56.3	56.2	56.3	58.3	58.9	58.6	58.8	59.5	59.2	59.0	59.0	59.3
Slovak Republic		40.2	48.5	50.6	50.1	51.9	51.6	51.5	52.3	54.2	56.1	56.3	55.4	55.9	55.7	56.4	56.8	56.4	55.9	58.5	59.7	59.4	59.2	60.9	61.1	60.7	60.6	60.8
Slovenia		43.2	43.8	45.1	46.0	46.4	47.8	47.4	48.4	51.4	52.7	51.4	51.6	54.4	53.9	53.8	54.9	54.9	56.3	57.7	58.6	59.7	60.6	60.5	59.4	60.9	61.8	62.5
Poland		39.1	41.0	41.5	44.0	45.4	46.2	47.5	48.7	50.6	50.3	50.4	52.0	53.0	53.2	53.4	54.2	54.5	54.1	55.6	56.6	56.4	57.0	57.5	58.0	57.9	58.0	58.1
Croatia		45.0	43.2	42.3	44.1	49.3	51.0	52.7	53.5	52.8	56.6	54.4	54.6	52.9	53.4	54.1	56.4	57.0	56.3	57.7	58.3	57.5	59.8	61.6	63.5	64.1	65.4	65.4
Estonia		43.7	45.9	50.8	53.4	55.6	56.6	56.9	57.7	59.8	58.6	59.9	63.6	63.1	61.0	60.7	61.4	60.1	60.8	64.5	65.5	63.2	64.4	65.5	66.0	65.4	66.4	66.2
Latvia		47.8	48.3	51.3	52.4	53.9	55.5	52.6	53.9	56.8	58.3	58.3	58.2	58.7	59.8	61.5	61.2	61.2	62.6	66.9	68.3	68.2	68.2	68.0	68.6	68.4	68.2	68.5
Lithuania		45.8	47.2	45.4	47.3	48.3	49.7	50.8	51.4	52.9	54.0	55.8	54.0	54.1	55.5	56.7	56.6	58.1	61.4	64.2	66.6	67.0	66.1	66.1	66.1	65.9	66.9	67.2
Bulgaria		45.8	46.8	49.9	51.5	50.9	54.8	50.9	52.9	52.2	54.0	57.5	56.6	56.7	56.3	56.8	57.4	57.0	56.1	57.7	60.2	61.8	62.2	63.2	62.9	63.2	63.5	64.5
Hungary		53.2	53.6	57.1	58.3	59.4	58.5	59.0	57.3	58.7	59.8	59.4	59.7	61.2	61.8	62.7	62.9	62.9	63.5	64.2	64.8	64.3	65.1	65.3	64.8	64.8	64.5	64.8
Romania		28.7	27.8	27.9	28.1	28.7	30.5	28.8	29.3	28.9	29.0	29.7	32.7	33.2	36.4	37.3	38.7	39.1	39.7	40.9	40.7	42.2	42.1	42.5	42.7	46.0	47.0	48.0
Euro area		57.9	59.2	60.7	61.6	62.2	63.1	63.4	63.6	64.2	64.7	65.1	65.6	66.4	67.0	67.7	68.0	68.3	69.3	70.5	71.1	71.6	72.0	72.6	72.9	73.0	73.3	73.3
European Union		55.7	56.8	58.0	59.1	59.8	60.6	60.9	61.3	62.0	62.7	63.2	64.2	64.9	65.7	66.3	66.6	66.8	67.6	68.9	69.6	69.9	70.4	70.9	71.1	71.4	71.7	71.8
Albania		15.5	14.3	13.9	14.1	14.5	18.6	19.3	20.1	21.9	22.5	23.1	23.7	23.7	24.8	26.2	27.2	33.4	31.9	36.0	36.7	35.7	36.0	38.0	39.6	40.0	40.9	41.1
Montenegro		67.4	64.8	60.4	59.4	59.9	60.9	64.9	65.5	65.2	65.0	64.4	65.7	67.3	69.8	72.1	72.8	73.8	70.9	73.9	74.8	75.5	77.0	77.4	76.0	74.7	74.4	74.3
Serbia		49.0	45.5	41.3	39.6	39.6	40.5	42.8	44.6	43.4	42.0	42.2	46.0	47.9	49.0	49.1	50.2	49.7	48.7	50.1	55.0	52.0	52.6	52.9	55.5	56.1	57.0	56.6
Macedonia, FYR		36.3	33.6	36.0	37.7	37.1	37.4	37.2	37.5	38.6	43.3	43.4	42.8	44.0	49.7	48.1	47.2	50.4	50.1	51.2	51.1	51.3	52.8	50.9	51.2	51.6	53.1	53.8
Turkey		32.0	33.8	35.2	33.8	34.3	34.3	35.1	35.9	35.8	40.0	39.7	42.1	43.4	46.0	48.0	49.2	49.8	49.5	51.8	50.1	49.4	50.4	50.7	51.1	52.4	53.7	53.8

Source: World Bank

4

EMPIRICAL LINKS BETWEEN KONDRATIEV CYCLES AND TECHNOLOGICAL REVOLUTIONS

Aris Papageorgiou[1]

Abstract

The phenomenon of Kondratiev cycles, from the onset of the Industrial Revolution in the 1780s until the ICT revolution in the late 20th century, has been connected with a succession of distinct technological revolutions that characterize the upswing phases of these cycles. The nucleus of these revolutions is formed by certain leading economic sectors that are crucial in the diffusion of radical technological change across the whole spectrum of an advanced capitalist economy. This study utilizes the simple, but powerful, statistical tool of the logistic growth curve to show that various variables, which are related to the technological revolutions that have defined the economic history of capitalism from the 1840s up until the 1980s, have indeed followed a rhythm that is extremely close to a Kondratiev-cycle periodization.

Keywords: Long Cycles, Technological Revolutions, Logistic Growth, Kondratiev

Introduction

Long cycles, also known as 'Kondratiev cycles', are long-term fluctuations that embrace various important facets of economic activity such as prices, production volume and profitability. They have an approximate duration of forty to fifty years and consist of two phases, an upswing and a downswing, each of approximately equal duration. Foremost among the pioneers of long-cycle analysis was the Russian economist Nikolai Kondratiev who produced a number of works on the subject during the 1920s that culminated in his crucial paper titled 'Long Cycles of Economic Conjuncture' which was published in 1926 (Kondratiev, 1998).

In this paper we attempt to examine the link between the concept of technological revolutions and long cycles. In Section 2 we present a particular price index that will assist us in periodizing long cycles; in Section 3 we conduct a brief discussion of some milestones in the literature that support a link between the Kondratiev cycle and technological revolutions; in Section 4 we present our empirical findings and finally in Section 5 we conclude.

The Normalized Price Index

The main variable that indicated the existence not only of long cycles, but of cycles in general, for economists prior to World War II was the price level. It should be noted that despite the fact that people in advanced capitalist countries became accustomed, after WWII, to live under conditions of a more or less continuously rising price level, this is a relatively recent development in the history of capitalism. Thus, for a period extending from the beginning of the Industrial Revolution in the late 18th century up until the late 1930s, capitalism was characterized by the alternation of long periods of inflation with long periods of deflation. Furthermore, economists of the

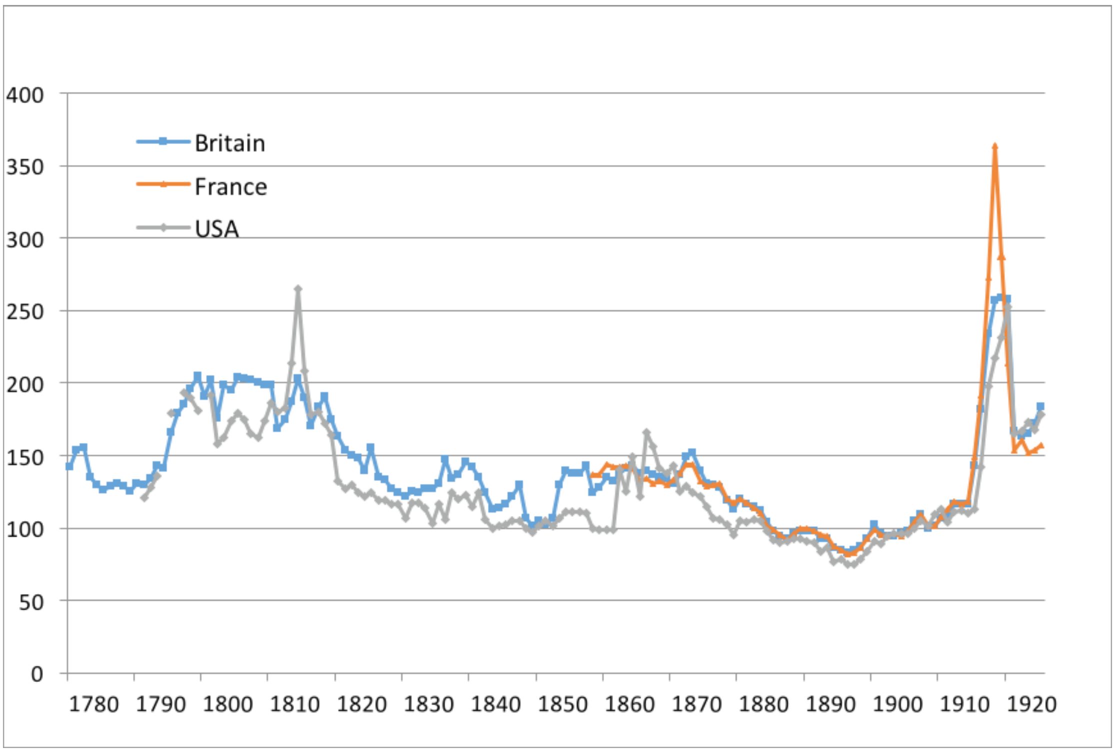
1 University of Macedonia, email: arapag@uom.edu.gr

prewar period associated rising prices with rising profit margins and economic prosperity, while falling prices were connected with low or falling profit margins and economic stagnation (Hobsbawm, 1999, pp. 53-54).

Thus, it should come as no surprise that the variable that indicated to Kondratiev the possible existence of long fluctuations in economic activity was the (wholesale) price level. Kondratiev's interest on long cycles was first stimulated when he observed that the wholesale price level of advanced capitalist economies had presented long cyclic fluctuations from the 1780s, when the Industrial Revolution was ignited, up until the 1920s. He then proceeded to search for long cycles in other variables as well, based on the periodicity derived from his wholesale price series.

Figure 1 replicates the famous graph that Kondratiev presented to his Soviet colleagues in the Institute of Economic Conjuncture in Moscow, of which he was a director, in 1926 when he defended his proposition concerning long cycles (Kondratiev, 1998, p. 159). The graph depicts the wholesale price levels of Britain and the USA and from 1858 onwards the wholesale price level of France. One can see the long fluctuations in the price levels of all three countries that seem to move, more or less, in a synchronized fashion. The first long cycle begins in the late 1780s, reaching an upper plateau during the mid-1810s; the second cycle commences sometime in the mid to late 1840s and lasts until the mid-1890s with a peak in the early 1870s, while the third long cycle starts in the mid 1890s and has a peak at some time following the end of WWI. Then a downswing sets in that goes up until 1925 in the graph (which is the last year of Kondratiev's data), but that actually lasted until the late 1930s.

Figure 1: Wholesale Price Indexes (1780-1925)



It would seem that this long cyclicality of the price level disappeared after the end of WWII, since the advanced capitalist economies of the postwar period have witnessed an almost uninterrupted rise in their price levels, i.e. continuous inflation instead of a periodic alternation of inflationary and deflationary periods as had been the case hitherto. However, Anwar Shaikh has shown that there exists a particular price index that continues to display long fluctuations (Shaikh, 2016, pp. 62-65). This is the wholesale price index *divided* (normalized) by the price of gold. We shall call the price index thus derived, the 'normalized price index'. Figure 2 depicts this normalized price index for the United Kingdom and the United States over a very long period ranging from 1791 to 2015. Looking at Figure 2 we not only see the 'reproduction' of the long cycle for the pre-WWII period but also, strikingly enough, the *emergence* of the long cycle for the post-WWII period as well. There is a turning point in the first (postwar) normalized-price cycle (fourth long cycle) for both countries that takes place in the latter half of the 1960s and the downswing continues up until the early 1980s. Then a second price cycle (fifth long cycle) emerges with a turning point in the early years of the 21st century and a downswing movement ever since.

Looking at Figure 2, we can also locate the Great Depressions in the history of capitalism, occurring during the long downswings of this normalized price cycle. We can see for instance the Great Depression of the late 19th century which is recognized by many eminent economic historians to have occurred during the downswing of the second long cycle (Hobsbawm, 1989, pp. 34-46; Freeman & Louça, 2001, pp. 212-215), the Great Depression of the 1930s taking place during the downswing of the third long cycle and the same holds true for the Great Stagflation of the 1970s and early 1980s that took place during the downswing of the fourth long cycle. Also it is clearly visible from the graph that the first Great Recession of the 20th century that began in 2007-2008 occurred during the downswing of the fifth cycle (which has not run its course yet).

The reasoning behind these fluctuations is that as soon as the economic system starts facing problems (mainly in profitability growth) the demand for gold starts to increase with the result that the normalized index starts a downward course. Figure 2 indicates that gold continues to constitute that money form which is the most secure store of value under capitalism. It is evident then that gold has played an important role throughout the history of capitalism, even after the abandonment of the gold standard and also even after the abandonment of the Bretton Woods Agreements which anchored the currency of the leading capitalist economy, namely the dollar, to gold. However, one should be careful not to attribute to the normalized price index that we have presented any causal effect regarding the long cycle. The normalized index is just an indicator of the phase of the long cycle not an explanation for it. In Table 1 we present a tentative periodization of long cycles (based on the normalized price index), which will assist us in the empirical section in locating the time periods for which we will test the fitting of logistic curves.

Figure 2: Wholesale Price Index and Gold Price Index, USA & Britain (1791-2016)[2]

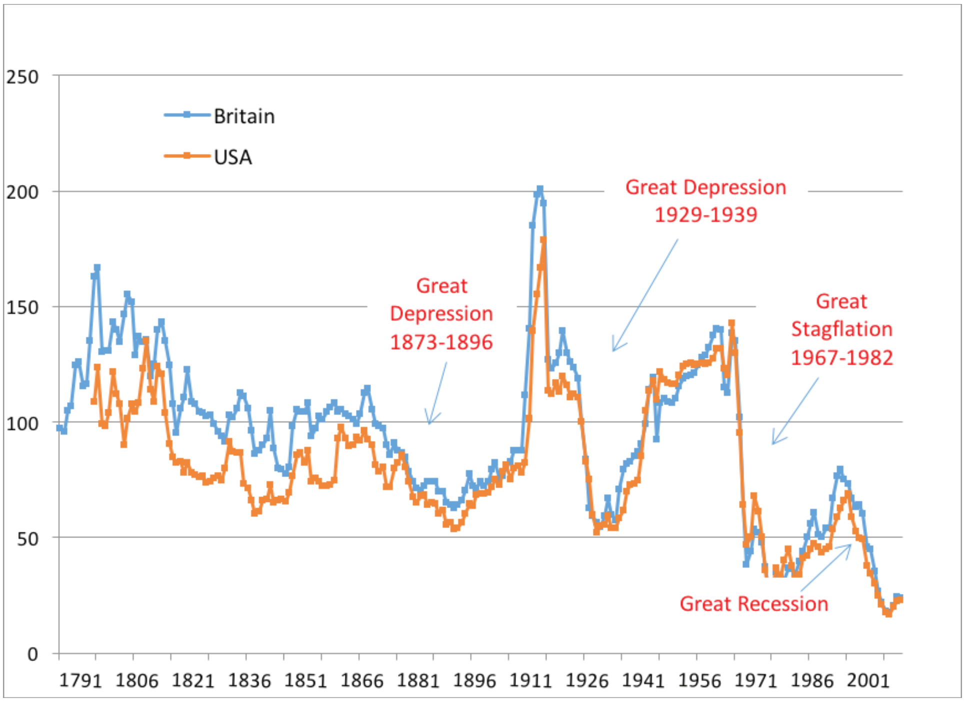


Table 1: Periodization of Long Cycles in the Normalized Index

	USA	Britain
1st Long Cycle	**1791-1843/1851**	
Upper Turning Point	1814	1809
Lower Turning Point	1843/1848	1851
2nd Long Cycle	**1843/1851-1896**	
Upper Turning Point	1872	1873
Lower Turning Point	1896	1896
3rd Long Cycle	**1896-1934/1938**	
Upper Turning Point	1920	1919
Lower Turning Point	1934/1938	1935/1938
4th Long Cycle	**1934/1938-1980/1983**	
Upper Turning Point	1967/1970	1966/1967
Lower Turning Point	1980/1983	1980/1983
5th Long Cycle	**1980/1983-202;**	
Upper Turning Point	2001	1999
Lower Turning Point	-	-

2 Sources: Wholesale Price Index - Jastram (2009, Tables AE1 and AE2), Price Index Of Gold - Officer & Williamson (2016)

Technological Revolutions and Long Cycles

We proceed now to the issue of the relationship between radical technological change and long cycles. Kondratiev argued that the introduction of significant technological innovations during the downswing phase of the long cycle constituted a stylized fact of the economic history of capitalism. To corroborate his view he presented rather extended lists of significant industrial innovations that were introduced during the downswing phase of each long cycle and which contributed to the transition to the upswing phase of the next long cycle (Kondratiev, 1998, pp. 38-41).

It is interesting to note here that Marx, in the section on the Falling Rate of Profit in Volume III of Capital, also discusses long cyclical fluctuations in the mass of profits as a result of the influence of the tendency of the rate of profit to fall (Marx, 1981, pp. 359-360).[3] He then points out that, during the downswing phase of the cycle, competition between capitals intensifies and that this process takes place through the introduction of significant technological innovations which help to devalue capital and thus lead to an increase in the profit rate (Marx, 1981, pp. 363-364). According to Marx, the devaluation of capital is the most important factor in the transition from stagnation to a new cyclical upswing.

Joseph Schumpeter was the most avid supporter of Kondratiev's work in the West (to the point of giving the name 'Kondratiev cycle' to this type of long fluctuation) and also a very careful reader of Marx, at least in issues of technological change. It should come as no surprise then that, in his monumental *Business Cycles*, Schumpeter expanded on the aforementioned views by Marx and Kondratiev. As is well known, the notion of swarms of innovations (and of their effects on the economy) forms the touchstone of Schumpeter's theory of cyclical fluctuations. According to Schumpeter, Kondratiev cycles are caused by the introduction of swarms of *radical* technological innovations. These particular swarms enter the economy during the downswing of a long cycle and their wide diffusion across the economy takes place during the upswing of the next long cycle. Thus, each long cycle is associated with a technological revolution initiated by these swarms of basic innovations (Schumpeter, 1939, Volume I, pp. 254-255).

The immediate postwar decades witnessed a decline in the interest of economists on (serious) cyclical fluctuations, since capitalism had entered the greatest boom of its history and any past 'anomalies' in its working mechanism seemed to be a thing of the past due to successful Keynesian management policies. However, by the end of the 1970s it was clear to many observers that the long period of postwar prosperity had given its place to a long period of economic stagnation, known also as the Great Stagflation. This alternation of long cyclical phases did not fail to stimulate again the interest of economists on long cycles, especially economists of a neo-Schumpeterian hue (e.g. Mensch 1979; Dosi 1984). Special attention was given to the connection between technological revolution and the long cycle. In this regard the work by Carlota Perez stands out. Her analysis is concerned with the leading economic sectors that ignite the technological revolutions which characterize the rising phases of Kondratiev cycles.[4] Moreover, Perez identifies a type of commodity that constitutes a 'basic input' in every technological revolution. The basic input of each successive technological revolution has the following characteristics: first, a low (or falling) relative cost; second a practically unlimited supply potential (at least for the duration of the technological revolution); and third, it is used by the leading sectors and can be readily diffused in many other economic sectors as well (Freeman & Perez, 1988, p. 252).

3 For an empirical investigation on the occurrence of long cycles in the mass of profits of the US economy as well as on the issue of the countercyclical introduction of basic innovations in the capitalist economic system see Papageorgiou and Tsoulfidis (2017).

4 Perez (2002) offers the most comprehensive presentation of this author's views.

Closely connected to the work of Perez is the very important book by Freeman & Louça about the link between technological revolutions and the Kondratiev cycle (Freeman & Louça, 2001). This work constitutes a very illuminating techno-economic history of capitalism structured around the notion of Kondratiev cycles, although the authors prefer the term 'Kondratiev wave' rather than Kondratiev (or long) 'cycle'. The authors examine each 'Kondratiev wave' in terms of the leading sectors, the basic inputs and the institutional superstructure that characterize it, though they do not test their material with any statistical method. Each upswing of the 'Kondratiev wave' is characterized by the strong performance of certain leading sectors and by the wide diffusion, across the economic organism, of some 'basic inputs' (in the Perezian sense). The rising phase of each 'Kondratiev wave' then constitutes essentially a period of diffusion of a technological revolution across the economy. Eventually, the 'techno-economic paradigm' that characterized the upswing exhausts its potential (in terms of profitability and productivity growth) and the downward phase of the 'Kondratiev wave' sets in. It is during this phase that, parallel to the structural crisis which stems from the stagnation of the profitability performance of the existing techno-economic paradigm, the economy witnesses the beginnings of the installation of a new paradigm. This takes place via the introduction of basic industrial innovations that will lead to the emergence of new leading sectors which will eventually steer the economy towards the upswing of the next cycle and a new technological revolution.

In Table 2 we present a summary of the arguments by Freeman & Louça. In the following section we will test for the existence of long cycles by fitting logistic curves to variables related to the leading sectors and basic inputs of the second, third and fourth Kondratiev cycles, as these are depicted in Table 2; the series examined will concern mainly (but not exclusively) the leading world power of each cycle. It is also noteworthy that although Freeman & Louça were not acquainted with the normalized price index, their periodization is quite close to the one derived by this index.

Table 2: Long Cycles and Technological Revolutions (Freeman & Louça, 2001)

	Title	**Upswing Phase**	**Downswing Phase**	**Leading Economic Sectors**	**Basic Inputs**	**Leading World Power**
British Industrial Revolution	The Age of Cotton, Iron, and Water Power	1780s -1815	1815 - 1845	Textiles (Cotton)	Iron	Britain
2nd Kondratiev Cycle	The Age of Iron Railways, Steam Power and Mechanization	1840s – 1870s	1870s - mid-1890s	Railways	Coal, Iron	Britain
3rd Kondratiev Cycle	The Age of Steel, Heavy Engineering, and Electrification	Mid-1890s - 1914	1920s - 1930s	Electricity	Steel	USA
4th Kondratiev Cycle	The Age of Oil, Automobiles, and Mass Production	1940s - 1960s	1970s - 1980s	Automobile	Oil	USA
5th Kondratiev Cycle	The Age of Information and Communication Technology	1980s -		Computers	Electronic Chip	USA

Empirical Results

Our econometric tool for empirical purposes, as already mentioned, will be the logistic curve. The logistic curve is given by the equation

$$Y(t) = \frac{K}{1 + e^{-(at+b)}} \qquad (1)$$

Where K, α and b are the three (positive) parameters of the logistic function and t is time, the independent variable of the logistic function. K is the (upper) asymptote of the curve, α is known in the relevant literature as the 'growth rate parameter' and b is a parameter that is related to the position of the curve with regard to time, *i.e.* the horizontal axis.

By taking the second derivative with respect to time of equation (1) and setting it equal to zero we find that the inflection point occurs at $t_m = -\boldsymbol{b/a}$. Substituting this t value in (1) we get $\boldsymbol{Y = K/2}$. Thus the midpoint and the inflection point coincide. Substituting t_m for b in equation (1) we get then the expression:

$$Y(t) = \frac{K}{1 + e^{-a(t-t_m)}} \qquad (2)$$

So, before the $(-b/\alpha, K/2)$ point the logistic curve is characterized by increasing growth rates and past that point by decreasing growth rates. This implies that a possibly successful fit of a logistic curve to a particular variable, characterizes concurrently not only the trend of this variable but also the cyclicality of its growth rates.

Equation (2) can be transformed into a more meaningful expression (for details see Marchetti, 1991, p. 13; Grubler, 1990, pp. 14-15):

$$Y(t) = \frac{K}{1 + e^{-4.39(t-t_m)/\Delta t}} \qquad (3)$$

Where Δt stands for the time period (for example in years) that the fitted variable needs in order to grow from 10% to 90% of its asymptote value. We have thus expressed the logistic growth process with the following three parameters: K which is the upper asymptote of the process, t_m which is the point in time at which the process reaches 50% of its completion and simultaneously achieves its maximum growth rate, and Δt which expresses the speed of the process.

Figure 3a depicts an ideal logistic curve while Figure 3b depicts the growth rates of the variable to which the logistic is fit. The point in time, t_m, where the logistic curve reaches its inflection (and mid-) point coincides with the point in time where the growth-rate curve reaches its maximum point.

Figure 3a: Logistic Growth Curve

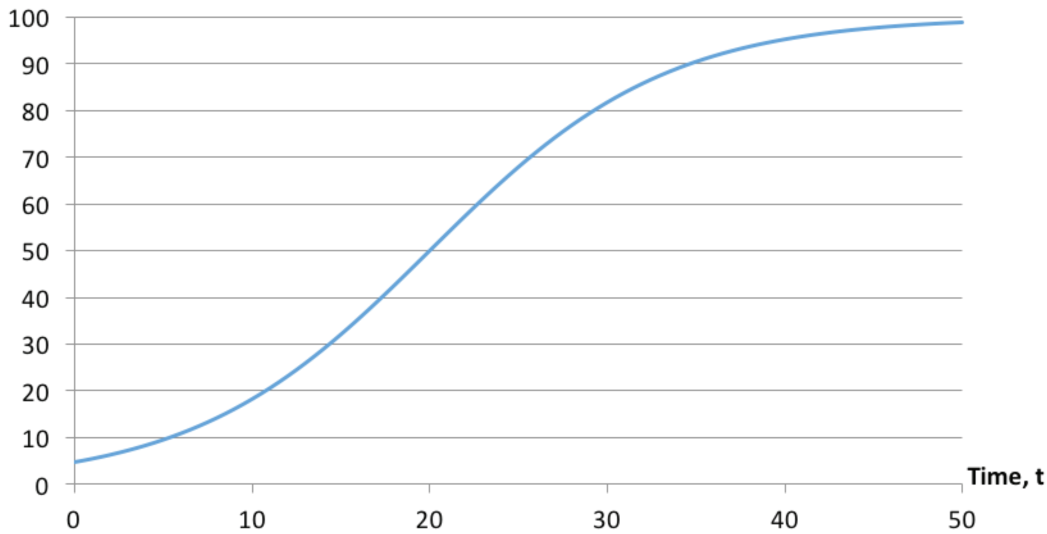
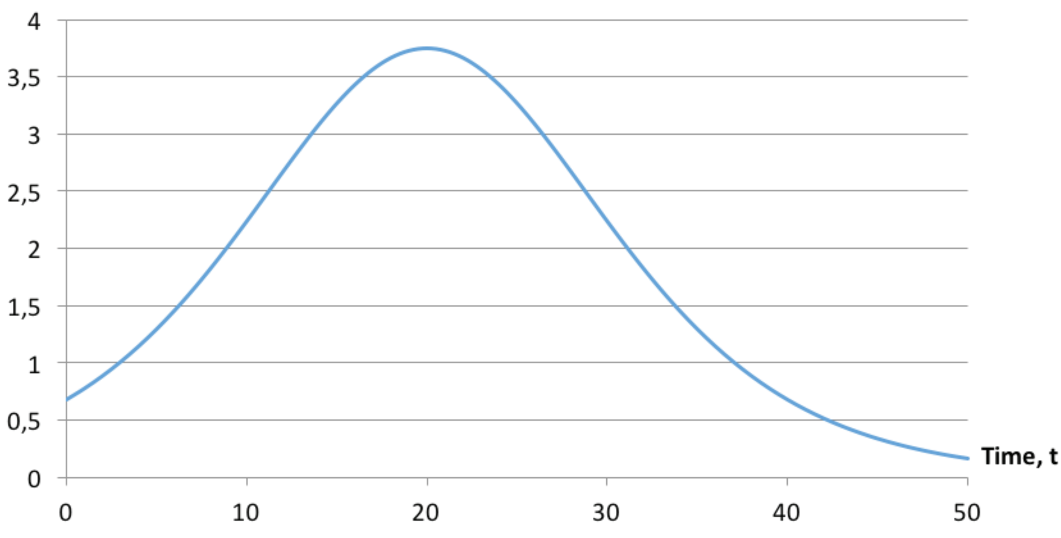


Figure 3b: Growth Rate of the Logistic Curve



In our analysis we will use three forms of the logistic curve. When the variable under examination commences its historical course in the beginning of the long cycle that we wish to test for, we use the simple logistic curve with three parameters, that is given by equation (3). But in those cases where the variables under examination have already undergone a significant development (before the start of the long cycle) we use the four-parameter logistic curve that includes also a lower asymptote *A* (Furuya *et al.*, 2015). The formula of this logistic curve is:

$$Y(t) = A + \frac{K\text{-}A}{1+ e^{(-4.39)^*(t-t_m)/\Delta t}} \tag{4}$$

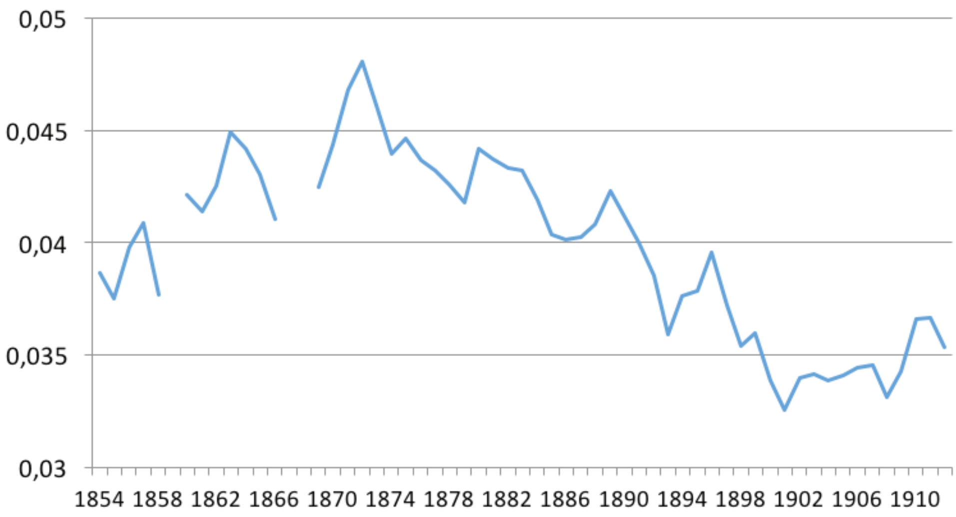
Furthermore, in those cases where the lower asymptote A is found to be not statistically significant we treat it as a constant by substituting in its place the initial value of our time series; we then estimate the remaining three parameters. This third form of the logistic curve is given by the formula:

$$Y(t) = \text{Initial Value} + \frac{K\text{-Initial Value}}{1+ e^{(-4.39)^*(t-t_m)/\Delta t}} \tag{5}$$

Finally, we should note that the periodization that we will use, when fitting logistic curves in order to test for the existence of Kondratiev cycles, is based on the long-cycle periodization that one can deduce from the price index that is normalized by gold (see Table 1).

We start then our empirical analysis with the second Kondratiev cycle. The Great Depression of the last quarter of the 19th century did not fail to influence the performance of the leading sector of the second Kondratiev cycle, i.e. railways. Figure 4 depicts a time series for the 'rate of profit' of Britain's railways for a period ranging from 1854 to 1913, that is from the beginning of the second Kondratiev cycle up until the eve of WWI. The series displays a maximum in 1872 and from then onwards it shows a downward trend for the whole downswing of the second cycle. From 1900 onwards a slight upward trend sets in, as one would expect, since the rising phase of the third long cycle began at around that time, although the railways were no longer a leading sector during this cycle. Investments in railways during the 1870s and 1880s resulted in falling rates of return, a situation that was aggravated by the increasing intensity of competition between the railway companies, under the conditions of the Great Depression (Irving 1978, p. 53).

Figure 4: 'Rate of Profit' of British Railways, 1854-1913[5]



Source: Mitchell (1988, pp. 543-547)

5 The nominator of this 'rate of profit' is equal to the (nominal) total revenues minus the total working expenses of the railway companies. The denominator is equal to the (nominal) sum of share capital and loan capital that was invested in railways

In Table 3 we present six time series that apply to facets of the railway-related economic activity, for the leading capitalist economy of the period, i.e. Britain. The first three variables represent physical magnitudes while the next three variables represent value magnitudes. Furthermore, three time series are *directly* related to the transport of commodities and consequently, given that the railways may be regarded as the 'circulation system' of the whole economic organism of Britain, these time series may also serve as indicators of the pulse beat of the overall economic activity in this country. The other three variables (length of lines, total revenues and profits) are directly related to railways and indirectly to the rest of the economy. The logistic fits are statistically significant and the inflection point in all six logistic curves lies in the time region around the turning point of the normalized prices, which is 1873. The results of Table 3 offer a serious indication that the period from the early 1850s up until the mid-1890s was characterized by long cyclicality with an upper turning point in the early 1870s. Moreover, this cyclicality affected not only the main economic sector of the period but the whole economy.

Table 3: Railways and the Second Long Cycle, Britain - Logistic Curve Estimations*[6]

Variables[7]	**2nd Long Cycle**	**K (asymptote)**	**t_m (inflection point)**	**Δt (10%-90%)**	**R^2**
(1) Freight of commodities, mil. miles	1852-1895	146.437 (53.018)	1871.69 (3419.821)	33.52 (19.873)	0.988
(2) Freight loaded, mil. tons	1856-1893	312.722 (37.054)	1874.789 (2699.403)	30.05 (15.18)	0.985
(3) Length of line, klm.	1850-1896	28445.75 (101.882)	1867.56 (4548.692)	30.38 (22.129)	0.99
(4) Commodities, Revenue, £ mil. (1873)	1850-1895	62.82 (47.775)	1873.752 (3226.497)	34.22 (21.066)	0.99
(5) Total Revenue, £ mil. (1873)	1850-1893	119.267 (38.166)	1874.779 (2690.858)	34.61 (19.768)	0.99
(6) Profits, £ mil. (1873)	1854-1895	54.032 (34.062)	1874.448 (2218.144)	32.76 (13.121)	0.976

**All six estimations were performed with the logistic curve of the form* $Y(t) = \text{Initial Value} + \frac{K\text{-Initial Value}}{1+e^{(-4.39)*(t-t_m)/\Delta t}}$. *In all estimations the obtained t-statistics indicate zero p-values for the three parameters (K, t_m, Δt).*

6 Sources: (1) & (2): Mitchell (1988, pp. 545-6); (3): Mitchell (2013a, Table F1); (4): Nominal revenues (from sales of commodities) were obtained from Mitchell (1988, pp. 545-6). Price deflator: For the 1856-1895 period we used the price index for British railways in Feinstein (1972, T136); for the 1850-1855 period we used the wholesale price index in Jastram (2009); (5) Nominal total revenues were obtained from Mitchell (1988, pp. 545-6), except for the value for the year 1868 which is not included in Mitchell and which we obtained from Arnold & McCartney (2005, p. 50). Price deflator: For the 1856-1893 period we used the price index for British railways in Feinstein (1972, T136); for the 1850-1855 period we used the wholesale price index in Jastram (2009); (6) Nominal profits were obtained from Mitchell (1988, pp. 545-6). Price deflator: For the 1856-1895 period we used the price index for British railways in Feinstein (1972, T136); for the 1854-1855 period we used the wholesale price index in Jastram (2009).

7 Variable (1) is the million miles traveled by freights of commodities on Britain's railways; variable (2) is the millions of tons of these commodities; variable (3) represents the total kilometers of railway line in use, for every year of the period covered by the second long cycle; variables (4) and (5) are the real revenues (base year 1873) which the railway companies earned from freights of commodities and from commodities plus passenger tickets, respectively; variable (6) is equal to variable (5) minus the working expenses of the railway companies.

In Table 4, we present logistic estimations on series related to the basic inputs of the second long cycle, that is iron and coal, for the British economy. The series we examine are the production of pig iron, the production of coal and the exports of iron. Regarding the last series, we should bear in mind that a large share of iron exports represents foreign demand for railway material; in fact, the percentage of Britain's iron production that was absorbed by the world demand for railway infrastructure amounted to about 39% for the 1844-1851 period and 24% for the 1852-1869 period (Gourvish, 1980, p. 24). Like the railway time series, the three time series of Table 4 have very good logistic fits with inflection points that are relative close to 1873 for the two iron series and exactly at 1873 for coal production.

Table 4: Coal, Iron and the Second Long Cycle, Britain - Logistic Curve Estimations*[8]

Variables	**2nd Long Cycle**	**A (lower asymptote)**	**K (upper asymptote)**	**t_m (inflection point)**	**Δt (10%-90%)**	**R^2**
(1) Pig Iron, thousands of tons (7-year MA)	1850-1896	1951.523 (6.652)	8071.480 (73.999)	1865.899 (2317.267)	32.4 (10.527)	0.988
(2) Iron, exports - thousands of tons (7-year MA)	1850-1896	992.999 (3.269)	3485.933 (20.979)	1868.045 (924.463)	22.50 (2.75)	0.8
(3) Coal, mil. tons	1850-1895	-	194.39 (38.089)	1873.124 (2102.477)	38.77 (15.281)	0.981

**Series (1) and (2) are expressed in 7-year moving averages. The estimations for these series were performed with the four-parameter logistic $Y(t) = A + \frac{K\text{-}A}{1+e^{(-4.39)*(t-t_m)/\Delta t}}$. The estimation for series (3) was performed with the logistic curve of the form $Y(t) = \text{Initial Value} + \frac{K\text{-Initial Value}}{1+e^{(-4.39)*(t-t_m)/\Delta t}}$. The values of t-statistics are in parentheses and all indicate zero p-values.*

In Table 5 we present the fits of the logistic curves to two series connected with the electrical energy sector, which was the leading sector of the third Kondratiev cycle. The series are: (a) the production of electric energy (expressed in gigawatt hours) by electric utilities in the USA and (b) the value of electrical equipment (expressed in 7-year moving averages of 1913 million dollars) that was used for industrial or commercial purposes in the USA. Furthermore, one of the basic uses of electricity during the period of the third long cycle concerned the production of aluminum by the process of electrolysis, while the same period witnessed the diffusion of the telephone as a basic means of communication. We thus also present in Table 5 the results of logistic fits to the production of aluminum in USA and France, which are the two countries for which the relevant aluminum series start earlier in time, and for the number of telephone devices in use in the USA. All five series display their greatest growth rates in the time region around the upper turning point of the third long cycle of the normalized price index and falling growth rates during the 1920s and 1930s, a period that also includes the Great Depression that erupted in 1929 and continued well into the 1930s.

8 Sources: (1) Mitchell (2013a, Table D8); (2) Mitchell & Deane (1962, pp. 146-7); (3) Mitchell (1988, pp. 247-8)

Table 5: Electricity and the Third Long Cycle, USA - Logistic Curve Estimations*[9]

Variable	3rd Long Cycle	K (asymptote)	t_m (inflection point)	Δt (10%-90%)	R^2
Output of Electric Energy (GWh)	1899-1935	126075.37 (17.921)	1920.61 (2156.205)	25.22 (8.967)	0.97
Value of Electrical Equipment, million $1913, 7-year MA	1892-1937	498.342 (13.009)	1916.31 (1193.494)	28.032 (5.617)	0.87

**The estimations for the two series were performed with the simple three-parameter logistic* $Y(t) = \frac{K}{1+e^{(-4.39)*(t-t_m)/\Delta t}}$ *. The values of t-statistics are in parentheses and all indicate zero p-values.*

Table 6: Production of Aluminum and Number of Telephone Devices - Logistic Curve Estimations*[10]

Production of Aluminum (thousand tons, 7-year MA)	**3rd Long Cycle**	K (asymptote)	t_m (inflection point)	Δt (10%-90%)	R^2
USA (1)	1899-1935	118.064 (28.043)	1917.929 (3310.74)	19.847 (10.315)	0.971
France (2)	1895-1935	26.159 (11.979)	1919.714 (1154.347)	32.538 (8.168)	0.948
Number of Telephones in use (USA, thousands) (3)	1896-1938	19502 (42.803)	1913.743 (3263.616)	28.109 (15.28)	0.979

**Series (1) and (2) are expressed in 7-year moving averages. The estimations for all three series were performed with the simple three-parameter logistic* $Y(t) = \frac{K}{1+e^{(-4.39)*(t-t_m)/\Delta t}}$ *. The values of t-statistics are in parentheses and all indicate zero p-values.*

In Table 7 we present the results of the logistic fits to two series connected to the basic input of the third Kondratiev cycle, that is steel. The series that we examine are the production volume of steel for the USA and for the world, from 1880 until the mid-1930s. The maximum growth rates in steel production occurred for both the American and world economies during the upswing of the long cycle. We should point out that the steel series are the only series presented here, whereby the inflection point of the logistic curves occurs relatively early, when compared to the upper turning point of the normalized index. The reason for this is that a replacement of iron rails by steel

9 Sources: Production of Electric Energy - All values are taken from Mitchell (2013b, D22) except for some years that were missing from Mitchell's series and were taken from other sources. Specifically, the values for the years 1899 and 1909 are from Kendrick (1961, p. 590) and for the years 1913 to 1916 and 1918, 1919 from Gould (1942, p. 131)
Electrical Equipment: The values of the series '[Current] Value of Electrical Equipment' are from Carter *et al.* (2006, Table Dd477, p. 650) for the period 1892 to 1937, except for the years 1934 and 1936 for which no values are given. For these years we used the growth rates derived from the series for Net Capital Stock for Electrical Equipment (in current prices) of the Bureau of Economic Analysis (2015b, Table 2.1, line 17), and this series was also used for the extension of the previous (Carter *et al.*) series to include the years 1938 to 1940. In order to express the resulting series in real terms, we divided it by the price index for capital goods in Carter *et al.* (2006, Table Dd492, p. 651); the price index series was extended to include the years 1938 to 1940 by means of the USA wholesale price index in Jastram (2009).

10 Sources - Aluminum Production: Mitchell (2013a, Table D10) and (2013b, Table D10).
Number of Telephones in Use: Mitchell (2013b, Table F9).

rails took place at increasing growth rates in the world economy during the 1880s, a decade belonging to the downswing of the second long cycle; thus, the logistic process for the steel series started quite a bit before the onset of the third long cycle and consequently the inflection point was bound to occur earlier than in the other series which we examined for this particular cycle.

Table 7: Steel Production (million tons) in the World and the USA - Logistic Curve Estimations*[11]

Variables[12]	**K (asymptote)**	**t_m (inflection point)**	**Δt (10%-90%)**	**R^2**
World (1880-1935), 7-year MA	94.2 (40.914)	1906.6 (2765.995)	38.0 (17.273)	0.98
USA (1880 - 1934) 7-year MA	40.6 (36.741)	1905.8 (2841.606)	25.9 (10.863)	0.96

**The estimations for all three series were performed with the simple three-parameter logistic* $Y(t) = \frac{K}{1+ e^{(-4.39)*(t-t_m)/\Delta t}}$ *. The values of t-statistics are in parentheses and all indicate zero p-values.*

Table 8 contains the estimations for a series of variables that are related to the automobile sector which was the leading sector of the fourth Kondratiev cycle. The results are in agreement with the predictions of long cycle theory. The world production of automobiles, the total production by the Japanese automobile giant Toyota, the value of output in the US automobile industry, and the US intercity traffic of passengers and commodities display maximum growth rates at years that are close to the peak of the normalized index.

11 Sources: USA (Mitchell 2013b, Table D9); World: Steel Statistical Yearbook (1993, p. 1) for the 1900-1935 period. For the 1880-1899 period we summed the steel productions of the USA, Britain, Germany and France and extended the series for world production backwards according to the growth rates of the sum obtained. The source for the three European countries is Mitchell (2013a, Table D9).

12 We normalize the two steel series by applying 7-year moving averages in order to smooth out the violent fluctuations that occur after the end of WWI due to the transition from a war- to a peace-economy and due to the Great Depression of the 1930s. As Grubler notes, it is not uncommon that the leading industries of a long cycle display great turbulence when they approach their saturation phase, i.e. when the logistic fit of the relevant variables approaches or goes beyond 90% of the upper asymptote value (Grubler, 1990, pp. 117-118).

Table 8: Automobile and the Fourth Long Cycle - Logistic Curve Estimations*[13]

Variable	4th Long Cycle	A (lower asymptote)	K (upper asymptote)	t_m (inflection point)	Δt (10%-90%)	R^2
(1) Number of Automobiles, World Production, (million)	1947-1984	5.59 (6.525)	29.84 (39.205)	1964.73 (3430.56)	19.97 (7.687)	0.97
(2) Toyota, Number of Automobiles, World Production	1947-1983	-	3487048.34 (38.181)	1971.13 (6048.506)	16.97 (17.293)	0.99
(3) Automobiles USA, Value of Output, ($1970 million)	1948-1983	16.63 (11.005)	45.11 (26.643)	1966.17 (2156.683)	20.74 (4.812)	0.95
(4) Intercity Passenger-miles, USA, (billion)	1946-1983	-	1346.55 (32.789)	1964.03 (2252.298)	33.28 (13.527)	0.98
(5) Intercity Freight Traffic, Ton-miles, USA, (million)	1944-1983	-	616.45 (23.666)	1963.29 (1823.382)	35.94 (12.109)	0.97

**The estimations for variables (1) and (3) were performed with the four-parameter logistic* $Y(t) = A + \frac{K\text{-}A}{1+e^{(-4.39)*(t-t_m)/\Delta t}}$ *, while for variable (2) with the simple three-parameter logistic* $Y(t) = \frac{K}{1+e^{(-4.39)*(t-t_m)/\Delta t}}$ *. The estimations for variables (4) and (5) were performed with the logistic curve of the form* $Y(t) = \text{Initial Value} + \frac{K\text{-Initial Value}}{1+e^{(-4.39)*(t-t_m)/\Delta t}}$ *. The values of t-statistics are in parentheses and all indicate zero p-values.*

In Table 9 we present the results of logistic fits to variables which are related to the basic input of the 4th long cycle, that is oil. The variables tested for are the world oil production, the production of oil in capitalist economies, the production of oil in centrally planned economies (CPE) and the respective variables related to consumption. Looking at the results obtained we should note two things: first, both the production and the consumption of oil present inflection points, and thus the beginning of falling growth rates, before the oil price shock by OPEC members in 1973, a finding which indicates that a recessionary situation had already started to develop before this shock took place and consequently that the stagflation which characterized the downswing phase of the fourth long cycle should not be attributed to it. Secondly, Kondratiev had argued that the validity of his theory about long cycles concerned only advanced capitalist economies; however, the findings of the logistic fits suggest that this may not be so. As far as the basic input of postwar industrialized economies is concerned, namely oil, the production and consumption of capitalist economies and CPE seem to follow the same basic long-cycle rhythm. It is not improbable then that Kondratiev cycles may concern also other types of industrialized economies, even

13 Sources: (1) - Brown (2011, appendix to Chapter 9), (2) - http://www.toyota-global.com/company/history_of_toyota/75years/data/automotive_business/production/production/overview/index.html , (3) Bureau of Economic Analysis (2015a, Tables 7.2.4A [line 1] and 7.2.5A [line 1]), (4) Carter *et al.* (2006, Table Df 39), (5) Carter *et al.* (2006, Table Df 50).

though their explanation in the case of such economies must be sought for in causes other than those that would relate to capitalist economies.

Table 9: Oil (thousand barrels per day) and the Fourth Long Cycle - Logistic Curve Estimations*[14]

Variable	4th Long Cycle	A (lower asymptote)	K (upper asymptote)	t_m (inflection point)	Δt (10%-90%)	R^2
World Production	1949-1986	12596.6 (10.817)	61577.37 (62.171)	1966.319 (5253.11)	16.35 (10.517)	0.985
Production of Capitalist Economies	1949-1986	12276.3 (11.565)	46477.23 (54.414)	1965.662 (4284.248)	13.41 (7.406)	0.97
Production of CPE	1949-1986	446.63 (1.445)	17572.44 (30.948)	1971.064 (4247.115)	27.4 (12.826)	0.994
World Consumption	1949-1986	12448.48 (13.116)	61898.69 (73.049)	1966.687 (6343.091)	16.81 (12.915)	0.99
Consumption of Capitalist Economies	1949-1986	11545.78 (13.797)	48198.81 (70.464)	1965.964 (5618.836)	15.39 (10.797)	0.986
Consumption of CPE	1949-1986	1150.16 (6.662)	14159.01 (56.956)	1969.850 (7027.099)	19.75 (16.22)	0.994

** All estimations were performed with the four-parameter logistic* $Y(t) = A + \frac{K-A}{1+e^{(-4.39)*(t-t_m)/\Delta t}}$ *. The values of t-statistics are in parentheses and they all indicate zero p-values (except for the A parameter in the 'production of CPE' which has a p-value of 0.158).*

Conclusions

In this study we attempt to offer indications of a connection between Kondratiev cycles and technological revolutions. To do this we first use a variable, called the normalized price index, as a time compass that assists us in the periodization of long cycles. More specifically, the time periods for which we test for long cycles, via the fitting of logistic curves, are essentially derived by the long fluctuations that this particular price index displays. The variables to which the logistic curves are fit, are all connected to the leading sectors and basic-input industries that, according to the relevant literature, carry the technological revolutions which characterize the upswings of Kondratiev cycles.

What emerges then from our empirical findings is that the logistic fits are all highly significant and, consequently, that the growth rates of the fitted variables seem to have followed a long cyclical course. Moreover, as can be seen from the summarized results of Table 10, the long-cycle periodization derived from the normalized price index corresponds very well to the logistic fits. The averages of the inflection points of the logistic fits in each cycle, which represent maximum growth rates for the series involved, are extremely close to the averages of the peak points of the normalized price indices of the USA and Britain.

14 Source: van der Linde (1991, p. 82)

Table 10: Coincidence of Cycles in Logistic Growth Fits and in the Normalized Index

Long Cycles	Averages of Inflection Points of Logistic Curves	Average of Peak Points of Normalized Prices
2nd Long Cycle, 1840s to 1890s	1871.51	1872.5
3rd Long Cycle, 1890s to 1930s	1914.4	1919.5
4th Long Cycle, 1940s to 1980s	1966.78	1968

References

Arnold, A. J., & McCartney, S. (2005) Rates of Return, Concentration Levels and Strategic Change in the British Railway Industry, 1830-1912, *The Journal of Transport History*, *26* (1), 41-60.

Brown, L. R. (2011). *World on the Edge: How to Prevent Environmental and Economic Collapse*. New York: Norton & Company.

Bureau of Economic Analysis (2015α). Fixed Assets.

Bureau of Economic Analysis (2015β). NIPA Tables.

Carter, S., & Gartner, S., & Haines, M., & Olmstead, A., & Sutch, R., & Wright G. (Eds.) (2006) *Historical Statistics of the United States, Volume D: Economic Sectors*.

Dosi, G. (1984). Technological Paradigms and Technological Trajectories: The Determinants and Directions of Technical Changes and the Transformation of the Economy. In C. Freeman (Ed.) *Long Waves in the World Economy* (pp. 78-101). London: Frances Pinter.

Feinstein, C. (1972). *National Income, Expenditure and Output of the United Kingdom, 1855-1965*. Cambridge: Cambridge University Press.

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

Freeman, C., & Perez, C. (1988). Structural Crises of Adjustment, Business Cycles and Investment Behaviour. Reprinted in C. Freeman (Ed.) (1996), *Long Wave Theory* (pp. 242-270). Cheltenham: Edward Elgar.

Furuya, J., Kobayashi, S., Yamamoto, Y., Nishimori, M. (2015). Climate Change Effects on Long-term World-crop Production, *Japan Agricultural Research Quarterly*, *49* (2), 187-202.

Gould, J. M. (1946). *Output and Productivity in the Electric and Gas Utilities, 1899-1942*. New York, NY: National Bureau of Economic Research.

Grubler, A. (1990). *The Rise and Fall of Infrastructures: Dynamics of Evolution and Technological Change in Transport*. Heidelberg: Physica-Verlag.

Hobsbawm, E. (1989). *The Age of Empire*. New York, NY: Vintage.

Hobsbawm, E. (1999). *Industry and Empire*. London: Penguin.

Jastram, R. (2009). *The Golden Constant The English and American Experience 1560–2007*. Cheltenham: Edward Elgar.

Kendrick, J. (1961). *Productivity Trends in the United States*. Princeton: Princeton University Press.

Kondratiev, N. (1998) [1926]. Long Cycles of Economic Conjuncture. In N. Makasheva, & W. Samuels, & V. Barnett (Eds.), *The Works of Nikolai D. Kondratiev, Volume 1* (pp. 25-63). London: Pickering & Chatto.

Marchetti, C. (1991). On Savings Banks: Modeling the Diffusion of the Savings Banks Idea in Italy and the Performance of these Banks over Two Centuries.

Marx, K. (1981). *Capital III*. London: Penguin.

Mensch, G. (1979). *Stalemate in Technology*. Cambridge, MA: Ballinger Publishing Company.

Mitchell, B. R. (1988). *British Historical Statistics*. Cambridge: Cambridge University Press.

Mitchell, B. R. (2013a). *International Historical Statistics: 1750-2010: Europe*. London: Palgrave Macmillan.

Mitchell, B. R. (2013b). *International Historical Statistics: 1750-2010: The Americas*. London: Palgrave Macmillan.

Mitchell, B. R. & Deane, P. (1962). *Abstract of British Historical Statistics*. Cambridge: Cambridge University Press.

Officer, L. & Williamson, S. H. (2016). The Price of Gold, 1257 – Present, http://www.measuringworth.com/gold/

Papageorgiou, A. & Tsoulfidis, L. (2017). The Recurrence of Long Cycles: Theories, Stylized Facts and Figures (MPRA Working Paper No. 82853). Retrieved from https://mpra.ub.uni-muenchen.de/82853/

Perez, C. (2002). *Technological Revolutions and Financial Capital: The Dynamics of Bubbles and Golden Ages*. Cheltenham: Edward Elgar.

Schumpeter, J. (1939). *Business Cycles: A Theoretical, Historical, and Statistical Analysis of the Capitalist Process*, 2 volumes. New York, NY: McGraw-Hill.

Shaikh, A. (2016). *Capitalism: Competition, Conflict, Crises*. Oxford: Oxford University Press.

Steel Statistical Yearbook (1993). Brussels: International Iron and Steel Institute.

Toyota Company History http://www.toyota-global.com/company/history_of_toyota/75years/data/automotive_business/production/production/overview/index.html

5

TURKISH LEFT'S PERCEPTION OF DEVELOPMENTALISM IN THE 1960S

Erkan Doğan[1]

Abstract

This study focuses on the idea of national developmentalism as it was understood by the Turkish left in the 1960s. National developmentalism became a very popular discourse at the periphery of the world after 1945 preaching an independent and national development strategy for underdeveloped countries of the Third World. In the post-war era, national liberation was not only seen as a political liberation but also as a struggle for national economic independence, aiming at eliminating economic subordination to the centers of the world economic system. The programs of many national liberation movements of the post-colonial era were characterized by a radical economic nationalism, with its emphasis on state-led national development and import-substitution industrialization. Likewise, Turkish left of the 1960s endorsed a similar type of economic nationalism, offering its own understanding of national development with a strong emphasis on industrialization and growing control of the state over national economy.

Key Words: *Developmentalism, Turkish Left, Post-Second World War Era*

Introduction

Developmentalism became an orthodoxy among the radical intellectuals and politicians of the Third World after the Second World War. The economic development strategy of the most of the Third World socialisms in this period was to follow a 'non-capitalist' and national development model for rapid industrialization. This strategy was understood within the conceptual matrix composed of notions such as 'statism', 'industrialism' and 'protectionism'. In this definition, development and industrialization appeared as the ultimate goals of the nation. The common belief was that these goals in the Third World could only be achieved by breaking all ties with the world capitalist system, fostering political independence by economic emancipation, and implementing a state-led, independent and national development strategy. The Turkish socialists of the 1960s were not an exception in this sense.

After the military intervention of 27 May 1960, socialism became a publicly visible ideological and political current of thought in Turkey. There were various but similar definitions of "Turkish socialism" in the 1960s which were based on the principles of anti-imperialism, nationalism, political and economic independence. Socialism was understood and introduced primarily as a development strategy to achieve rapid economic development and social justice; and was equated with central planning and state ownership. In this study, I would like to focus on the idea of developmentalsim as it was comprehended by the Turkish left in the 1960s and analyze the primary features of the development strategy offered by the leading figures and factions of the movement.

1 Kocaeli University, Department of Political Science and Public Administration, do.erkan@gmail.com

The rise of national developmentalism

Many theorists of nationalism understand the emergence of nation and nationalism within the transformation of traditional society into a modern one. The best representative of this outlook is Ernest Gellner (1983), who sees nationalism as an outcome of the cultural requirements of industrial social organization. He argues that it is the cultural standardization required by modern industrial society that produces nation and nationalism. In the Third World context, however, the causal relationship between nationalism and industrialization seems to be other way around; in this case, nationalism precedes the process of industrialization.

What is the relationship between economy and nationalism in the Third World context? On the periphery of the world, one of the sources of nationalist ideology appears to be the responses to the underdevelopment imposed by the uneven development and expansion of capitalism dividing the world economy along center-periphery axis. In the Third World context, nationalist discourse seems to be fostered through the resentment directed against imperialism, which is seen as the cause of economic and social backwardness, and through the drive for development and industrialization. It is not surprising to see the call for rapid industrialization via an independent and national development strategy coming from political movements marked by nationalism. This is also true for the socialist movements of the Third World emerging especially in the post-Second World War era.

The rise of the idea of national developmentalism in Turkey should be understood in a more general increasing trend of developmentalist discourse becoming very popular, especially, at the periphery of the world after the Second World War. Developmentalism was a specific and distinctive element of this new world which was established after 1945 (see, Keyder, 1993, p,9). In this new era, "the idea of development as national development was universalized" and "consolidated" (Berger, 2001, pp.212, 215). After 1945, national development involved "a universal emphasis… on the national economy and national industrialization, as well as agrarian reform and agrarian modernization within a national framework." The nation-state emerged as key element of this new development discourse and the state was given the privileging role in the management of economic development (p.216). In the Third World, this new development discourse was shaped in the process of de-colonization and national liberation. In the post-colonial era, after the fall of the colonial system of the preceding age, Third Worldism became a hegemonic mode of political imagination in the Third World countries. It appeared as an amalgamation of state socialism with the idea of national liberation and the strategy of independent and national development.[2]

In the post-war era, national liberation became also a struggle for national economic independence, a movement which aimed at eliminating economic subordination to the world economy. The program of national liberation in the post-1945 period was characterized by a radical economic nationalism, with its emphasis on state-led national development and import-substitution industrialization. The notions of economic development, industrialization seem to be intrinsic to nation and nationalism on the periphery. Economic nationalism is generally associated with policies such as "the pursuit of self-sufficiency, the protection of domestic production against foreign competition and a favorable trade balance" (Mayall, 1990, p.72). For this type of nationalism, import-substitution industrialization could "be sustained by the growth of the domestic market… For such an economy to be reasonably self-sufficient

2 Berger (2004) defines Third Worldism "as a world-historical movement", which "emerged out of the activities and ideas of anti-colonial nationalists and their efforts to mesh often highly romanticised interpretations of pre-colonial traditions and cultures with the utopianism embodied by Marxism and socialism specifically, and 'Western' visions of modernisation and development more generally." For Third World and Third Worldism see, Berger (1994); Dirlik (2004); Doğan (2017a); Prashad (2007; 2012); Tomlinson (2003); Worsley (1970).

at a tolerable level of income, it would have to produce all the main sectors of a modern economy; it would become a microcosm of the world economy… and would have no specialized role in world trade". And this new strategy was based on a nationalist position: "local companies should be owned by local peoples, profits should be invested at home rather than sent to other countries, innovations in technology should be developed in the country concerned rather than imported" (Harris, 1986, p.118).

The common sense of the radical intelligentsia of the period was explaining the root cause of underdevelopment in terms of the dependence on Western imperialist centers. This explanation was one of the basic creeds of the Third Worldist ethos of the post-colonial era. It found sympathizers not only among intellectuals of the Third World but also in the academic circles of the Western universities.[3] For the same Third Worldist credo, delinking from the world capitalist system was the only solution for the question of underdevelopment. The major obstacle to autonomous national development was the capitalist system and the remedy was to delink. For the proponents of this solution, it was possible to break with the world capitalist system and to initiate an autonomous development strategy at the national level.

National developmentalism in the Turkish context

After 1960, the victors and supporters of the military coup and their representatives in the civil-military and intellectual elite offered "a new model of accumulation with its social policy, political balances and administrative mechanisms" (Keyder, 1987a, p.144). The new model of economic regulation which was followed in Turkey in the 60s and 70s was the strategy of import substituting industrialization (ISI), which was considered as a successful economic growth model in combining the diverging interests of different social classes around the project of inward-oriented national development. The establishment of the State Planning Organization (SPO) in September 1960 was the first serious official attempt at the realization of this new model of economic growth.[4]

The foundation of the SPO, "whose principal function was to supervise the workings of the economy in a rational manner within the context of a plan" was one of the most important long term decision taken by the new military rule after the 1960 Coup (Ahmad, 1993, p.132). The claim of the proponents of the idea of central planning was that the "liberalization" of the economy under the DP rule led to the bankruptcy of the Turkish economy in the 1950s as a consequence of the DP's unplanned and uncontrolled inflationary opening policies, the lack of any coordination and long-term perspective in the administration of the economy. In order to solve the problems of the DP years, it was argued, the new regime should replace the economic legacy of the previous period with an industrial development strategy based on an economic plan which would control the functioning of the economy in an effective way.[5]

3 The dependency literature was providing the more sophisticated versions of this explanation. Contributions of the Economic Commission for Latin America (ECLA), founded by the UN Economic Social Council after the Second World War, and its first director, Raul Prebisch, to the issue of development in developing countries and the writings of two US economists, Paul Baran and Paul Sweezy, are among the intellectual sources of inspiration the dependency school. For the proponents of dependency theory, underdevelopment was not seen as a consequence of the internal conditions in the underdeveloped countries, but as a result of external factors. Andre Gunter Frank, leading figure of this approach, argues that it was through the mechanism of the metropoles/satellites dividing the world economy in a hierarchical way that economic surplus was transferred from the periphery to the center; it was this mechanism that prevented national economic development on the periphery, and condemned it to underdevelopment (for dependency theory see, Frank, 1966; Leys, 1996; Preston, 1996; Roxborough, 1979; Spybey, 1992).

4 For the implementation of the ISI strategy and the establishment and role of the SPO see, Keyder, 1987a; Aydın, 2005; Eralp, 1994.

5 Planning was one of the popular topics of the public debate in the 1960s with some ideological connotations. It was argued that a government's progressive-mindedness could be measured by the criterion whether it stood by the plan more or less rigorously (Sönmez, 1967, p.35).

It was the newly established SPO which institutionalized and formalized the four successive Five-Year Plans of the period between 1963 and 1980. The objectives and strategy of the first Five-Year Plan were to "attain and sustain the highest possible rate of economic growth and to achieve social justice within the democratic system" ("Resolution adopted by the High Planning Council on the objectives and the strategy of the development plan", 1967, p.322). Economic planning was considered by the SPO to pursue the common national good; it would give the priority to investments promoting public welfare. The general objectives of the planning was to achieve a rapid, balanced and sustained development within the principles of social justice, reducing the dependence of the Turkish economy on foreign resources and attaining national economic self-sufficiency (*Second five-year development plan*, 1969, pp.3-5). The development plan would accelerate the rate of industrial activity through inward-oriented policies supported by a high degree protection from foreign competition of the national economy. These plans formulated a mixed economic development strategy in which the public and private sectors would function side by side. The development plan, although it was imperative for the public sector, would also serve for the private sector as a guide and supporter and it would help individual entrepreneurs "explore and develop their enterprising potential" (*Second five-year development plan*, 1969, p. 109).

It was in this context that the Turkish left made developmentalism an issue of public debate. Development was understood in deeply nationalist terms oriented to achieving economic independence. The aim was to create a unified national economy and to reduce nation's dependence on Western imperialist powers. In that intellectual world, the idea of development was elevated to a virtue, an ultimate goal that should be reached up as rapidly as possible; it was considered to be the basic criterion for comparing nations. The developmentalist ideology of the 1960s glorified "the role to be played by technocratic elite in the industrialization of the country. The working class has not been yet discovered; the dominant intellectual current was a Baran-inspired dependency analysis with 'non-capitalist path' overtones, which required the transfer of state power from self-serving and corrupt politicians to nationalist planners whose aim was to serve the people." And the building blocks of this desired order would be industrialization, economic autonomy and social justice (Keyder, 1987a, p.146).

The ideology of developmentalism and the Turkish left

After the military intervention of 27 May 1960, socialism appeared as a growing ideological and political current of thought and attracted many people. In the newly liberalized atmosphere that followed the intervention and the new constitution, one of the most interesting developments was the growth of radical left groups.[6] The major peak point of this process was the entrance of the WPT and its socialist deputies into the National Assembly after the 1965 elections, which made the Turkish left more visible both politically and intellectually.

Socialism in the 1960s was understood and introduced as an ideology and development strategy to achieve rapid modernization and social justice. To reach these goals, it proposed central planning based on state authority. Statism was one of the key concepts in the socialism of the 1960s, and it was seen as a major means of socialism (see, Karpat, 1967, p.157; Karpat, 1968, p.302, 305; Karpat, 1973, p.341). For Turkish socialists, only their understanding of statism offered a real solution to the economic and social problems of the country. The socialist movement of this period had also an elitist character. Successors to the elite-bureaucratic tradition, socialists of

6 By main factions of the Turkish left in the 1960s, I specifically mean the *Yön* group, the Workers Party of Turkey (WPT), and the national democratic revolution (NDR) movement. But, in the following pages, the focus will be on the writings of the leading figures of the *Yön* group, since it represented the developmentalist outlook of the Turkish left best. For a brief and general history of these movements and organizations see Doğan, 2017b.

the 1960s believed in a permanent revolution from above (Keyder, 1987b, p.52). Most of the Turkish socialist groups were "theoretically and politically shackled to an obsolete and romanticized vision of an alliance between the working masses and a 'progressive' state bureaucracy" (Samim, 1987, p.154).

This strategy was best represented by a political group that emerged around a weekly review, *Yön* (Direction). Founded by writer-journalist Doğan Avcıoğlu, the first issue of *Yön* appeared on 20 December 1961 and its publication continued until 30 June 1967. The programmatic approaches and analyses that determined the political perceptions and perspectives of the Turkish left during the decade were first seen in the pages of this journal.[7] As Landau (1974, p.50) writes, "for the five-and-a-half years of its publication, it was undoubtedly one of the most discussed periodicals in Turkey."[8] *Yön* typified the socialism of the 1960's in many respects. It had an eclectic social and economic policy, composed of Kemalism, Third Worldism, and to some extent Western European social democracy and Marxism. The *Yön* circle identified imperialism, feudalism, and the big comprador bourgeoisie as the main obstacles to initiating a rapid economic development and to establishing a "national democracy" in Turkey. So, for the *Yön* movement, the main political task was to construct a national democratic front in which all anti-feudal, anti-imperialist forces would unite in order to carry out the national democratic revolution.

The "statement" (*Yön Bildirisi*) on economic and social development in Turkey that was published in the first issue of *Yön* gives us a general idea about the development strategy, the "philosophy of development", advocated by the large sections of the Turkish left in the 1960s.[9] It stated that "the attainment of the level of modern civilization, the final solution of the problem of education, the enlivening of Turkish democracy, the realization of social justice and the establishment of democratic regime" can only be achieved by rapid economic development led and planned by the state (Statement on economic development in Turkey, 1963, p.75). This strategy was sharing the goal of attaining the level of Western civilization with the previous modernizing bureaucratic-intellectual elite of the First and Second Constitutional periods and the Republican era. But, this goal could not only be achieved through the efforts for the implementation of institutional (or superstructural) reforms inspired from the Western experiences. Westernization, the primary goal of the Kemalist reforms, could only "be realized by approaching the level of productivity of the West" (Statement on economic development in Turkey, 1963, p.75). The logic was simple:

As the level of productivity in Turkey rises, the country's social structure will change, the dichotomy between city and village will disappear, opportunities will increase, and rationalism, the basis of Western civilization, will spread among the masses (Statement on economic development in Turkey, 1963, p.75).

The level of development was the only criteria for measuring the progress; development was the key to all the economic, social and political problems of the country.

7 The contributors of *Yön* included many well-known left-inclined thinkers and writers of the period, such as Nermin Abadan, Muammer Aksoy, Çetin Altan, Sadun Aren, Şevket Süreyya Aydemir, Fakir Baykurt, Mihri Belli, Niyazi Berkes, Erdoğan Berktay, Behice Boran, Edip Cansever, Fazıl Hüsnü Dağlarca, Arif Damar, Abidin Dino, Muzaffer Erdost, Selahattin Hilav, Sırrı Hocaoğlu, Rıfat Ilgaz, Atilla İlhan, Abdi İpekçi, Orhan Kemal, Yaşar Kemal, Sait Kırmızıtoprak, Ahmet Taner Kışlalı, Hasan Hüseyin Korkmazgil, Onat Kutlar, Yalçın Küçük, İdris Küçükömer, Uğur Mumcu, , Fethi Naci, Nadir Nadi, Aziz Nesin, Fikret Otyam, Bahri Savcı, İlhan Selçuk, Mümtaz Soysal, Kemal Tahir, Ülkü Tamer, Cahit Tanyol, Taner Timur, Turgut Uyar, Can Yücel (for the *Yön* movement, see, Landau, 1974, pp.50-64, 79-87; Lipovsky, 1992, pp.85-108; Özdemir, 1986; Özdemir, 2000; Aydınoğlu, 2007, pp.73-85, 107-19; Atılgan, 2002; Altun, 2004, pp.135-156).

8 *Yön*'s circulation reached nearly 30,000. This was a very big number for a Turkish weekly at that time.

9 The statement was translated into English by Frank Tachau (see, "Statement on Economic Development in Turkey", 1963, pp.75-78). The signers who backed the statement held different ideological and political views and belonged to different political party and organizations. Among the signers there were members of the left of the RPP as well as socialists close to Marxism.

Turkey was described by the Turkish left as an underdeveloped country. For them, when its economic, social and political structures were considered, Turkey, like other developing countries, was a dependent country in the world imperialist system and exploited by the same order, from its raw materials and mineral resources to its foreign trade, politics and culture. The commonsense of the Turkish left was that Turkey "could long ago have become a developed, industrialized country and taken its place at the forefront of contemporary civilization. It is imperialism that has prevented this development" (Mango, 1975, p.41). It was Turkey's dependence on imperialist powers that was responsible for the backwardness of the country; it damaged national sovereignty and formed an obstacle to the economic and social development of Turkey.

It was argued that Turkey was brought into a close contact with the Western powers through foreign economic and military aids and was turned into a mere satellite of Western imperialism by the Turkish governments of the post-Second World War period. The attempts at developing Turkey through foreign capital, aids or loans were considered by all the main factions and leading intellectuals of the left in the sixties to be useless and destined to fail. The real reason behind the foreign economic and military assistance to Turkey was to penetrate into the country, to undermine its national independence and sovereignty, and to takeover its economy. Dependency relationship with imperialism was hindering social and economic progress and producing underdevelopment in the country.

Any attempt at fostering close relationship with Western powers was severely criticized by the Turkish left. One of the popular topics of public debate in the 1960s, the issue of the integration of Turkey into the European Economic Community (EEC) was also elaborated from this perspective. The WPT, for instance, organized one of its first serious political campaigns against Turkey's integration with the EEC. Just after the signing of the association agreement, on September 14, 1963, the party released a circular condemning the integration attempts of Turkey with the EEC (see, Aybar, 1968, pp.289-290; Aren, 1993, pp.64-66). The aim of the accession process was claimed to incorporate Turkey into the world capitalist system. The party was sure that by entering the EEC, Turkey, in the long term, would lose its national independence. These attempts of economic integration with Europe were against the interests of the Turkish people. According to the party, the EEC was a collective colonialist association and this integration would only serve France, Germany, Italy, Belgium, the Netherlands, and Luxembourg, the six member states of the community, by supplying them with export markets, cheap raw materials and fields of investment. The accession to the EEC was considered to be a real threat to Turkey. The process would work against Turkey's national development and progress and would evaporate the last hopes of implementing an independent national economic development strategy for overcoming underdevelopment (see, Aybar, 1968, p.284; Boran, 1968, pp.319-321).

But, what was development? Development, according to the *Yön* group, was an effort that aimed to liquidate pre-capitalist social-economic system and comprador classes in order to create a unified and independent national economy and to implement a rapid modernization that would elevate the country to the level of Western civilization (Avcıoğlu, 1962b). The proponents of the national-democratic revolution (NDR) were of the same opinion. The national goal of the NDR strategy was to put an end to the domination of imperialism and comprador classes over the national economy and domestic politics (Belli, 1970, pp.220-221, 226). Comprador classes were portrayed as being not nationalist and as being against a real, national development and industrialization. The other important element of the development program of the Turkish left was to implement a fully-fledged land reform which was supposed to dismantle feudal social and economic structures and relations, confiscate the lands of big land owners to landless people, and so, terminate the social, political and cultural hegemony of the landlords over the landless and poor peasants. Destroying feudal relations was considered as a big step in the way to the establishment of a real unified national economy which was assumed to be necessary for an independent and rapid national economic development (Belli, 1970, pp.221-222).

Avcıoğlu (1969, p.619) pointed to three distinct and alternative paths of development that Third World countries could choose for putting an end to their old aged backwardness. These were the communist path, the American (capitalist) path, and the statist or national-revolutionary path. The first path was out of the question, because of the brutality of the method it suggested (Avcıoğlu, 1963a). Capitalist path was also not an option for the underdeveloped countries of the Third World in the 20th century, in the age of imperialism. Turkey and other underdeveloped countries had not had a strong progressive national bourgeoisie. Capitalism was imported to these countries from outside. Capitalist classes of the Third World were dependent on Western capitalism. These classes were not mature, powerful and national enough to take the responsibility of liquidating pre-capitalist classes and structures and to lead a national industrialization strategy, and so, to pave the way for social and economic progress. (Avcıoğlu, 1963b).

The national-revolutionary path, on the other hand, was characterized by a new type of statism, in which the state sector would have the dominant role in the economy. The idea of statism as a strategy for industrialization and development was advocated by all different sections of the Turkish left in the 1960s. State was illustrated as the motor of national development and industrialization. Private sector was thought to be weak and unable to offer a rapid development strategy that Turkey needed; a rapid national development strategy could only be carried out under the guidance of the state (see, Aren, 1961; Aren, 1962). The state should takeover the basic industries, the major part of the means of production and should control the mechanisms of production, circulation and distribution.

Not only statism, but also a central, compulsory and rational planning accepting state's dominant role in the economy and oriented to the construction of heavy industry was considered to be necessary for the rapid national development. Planning was seen as an effective instrument that would enable large scale changes in social, economic, political and cultural realms (see, for instance, Avcıoğlu, 1962b; Avcıoğlu, 1963b). Planning would be complemented with nationalization. The economic programs of the major leftist movements and organizations of the sixties was calling for nationalization of foreign companies, foreign trade, banking, credit institutions, insurance companies, and some large enterprises in heavy industry, transport, and mining (see, for instance, Aybar, 1968, pp.663-665; Belli, 1970, pp.220-221; Boran, 1968, pp.258-259, 268).

Statist model of development offered by the Turkish left was different from the model applied by the Kemalist regime in the thirties. The new model was claimed to be more radical and wide-ranging, and not confining itself only with economy. In the new model, the state would control all pivotal points and mechanisms of the economy from the establishment and management of the key industries to the regulation and control of foreign trade, banking, insurance and other financial sectors. But, the state control over economy would also be exceeded to social, political and cultural realms. What was suggested was a kind of total statism. The argument was that the state could only find solutions to social and economic problems of underdevelopment (stagnation, poverty, unemployment, health and education problems) by implementing a national development strategy that would encompass every major realm of the social life. Statism was the most effective way of avoiding unequal distribution of resources and taxation of incomes. It could increase the level of public savings and channelize them into new useful fields of investment in more rational way. As well as, while private initiative was considered to be profit seeking and pursuing particular interests, statism was approved for being a rational model and for pursuing the general good. New statism would stand not for particular, private interests but for general interests of the nation (see, for instance, Avcıoğlu, 1962c).

But, what would be the limits of state intervention into the national economy? What would be the role of the private sector in this schema? In the statist path of development, although state would play the leading role in the development of the national economy, the existence of private enterprise would be also guaranteed. But it would not be the major leading force of the economy. It would lose its privileged place in the economy and would be relegated to a secondary position; "the activity of the private sector will be oriented towards supplying the needs of the national economy" (Aybar, 1968, p.391). The interests and needs of the private sector would not determine the composition and orientation of the national economy any more. And, this did not mean a total rejection of the private sector. Avcıoğlu (1964a) interestingly argued that

Private entrepreneurs will be surprised a little bit, but socialists will be the first acclaimers of the emergence and development of a real national private industry. Socialists have been yearning for a national industry, which can stand against the Common Market undermining our country's hope of development and industrialization, which can oppose snatching assembly industry, and which can lead the process of elimination of land lords.

According to him, friends of national manufacturers were neither imperialists nor their internal comprador allies who were working against national industrialization. The real friends of national industrialists were socialists, those who wanted to achieve economic independence, development, social justice, and democracy through statist strategies. For these reasons, national industrialists should give up following the directions of foreign capital, break up with imperialism, and take part in the statist national development strategy (Avcıoğlu, 1965d).

Conclusion

So far, I have focused on the ideology of national developmentalism as it was understood by the Turkish left in the 1960s. Developmentalism was a very strong element of the leftist discourse in Turkey.

Turkish left's endorsement of the idea of developmentalism, in this period, can also be observed in their account of the modernization history of the late-Ottoman and the Republican era. Turkish left provided us with its own specific reading of this history form the prism of the idea of developmentalism. In this account, the 19th century history of the Ottoman Empire was seen as the integration and the subordination of the Ottoman economy into the world capitalist system, as the penetration of imperialism into the country. This history was narrated as a history of underdevelopment. The Independence War of 1919-22 led by Mustafa Kemal Atatürk, on the other hand, was glorified as an anti-imperialist war and portrayed as the first successful national liberation movement in the Third World. Statism of the 1930s was seen as an important element of the Kemalist Revolution. Kemalist statism, although it was not extensive and radical enough, was considered as the first successful experience in the implementation of the idea of national developmentalism in Turkey. This revolutionary process was interrupted by the Democrat Party's coming to power after the 1950 general elections. This transition to multi-party system was described as a "counter-revolution" which paved the way for the economic, political and military integration of the country into the imperialist system.

As the Kemalist regime of the early Republican era was glorified as an anti-imperialist, national developmentalist revolutionary breakthrough, the years following the accession of the Democratic Party to power in 1950 were condemned as the era of counter-revolutionary resurgence. The change of the government in the 1950 general elections was thought to signal the restoration of the *Tanzimat* Westernism and cosmopolitanism under the DP rule. For the Turkish left of the 1960s, the DP government was representing the interests of the alliance between the Western imperialism and its domestic collaborators, the big land lords and the new comprador bourgeoisie. In this period, it was argued, Turkey followed a different path of development from the one adopted in the previous period under the Kemalist rule. The DP government abandoned the policy of self-sufficiency and independent development strategy, and integrated (and subordinated) Turkey once again into the world capitalist system in the 1950s through opening Turkish economy to foreign capital The DP era ended with the 1960 military coup. The coup was supported by the Turkish left since it was thought to give an end to the "reactionary" and "counter-revolutionary" Menderes government. The return to the ISI strategies once again, the establishment of the SPO and implementation of the new development plans after 1960 were approved by the Turkish left. But these measures were not radical enough and did not signify a genuine return to the independent and rapid development strategy which would break the dependence of Turkey on Western imperialism and would pave the way for the industrialization of the country. In the new period, opened up after 1960, the Turkish left saw new opportunities for the continuation of the Kemalist Revolution and for finishing its unfinished tasks in a new historical context.

References

Ahmad, F. (1994). *The making of the modern Turkey*. London: Routledge.

Altun, F. (2004). Kemalist bir modernleşme yorumu olarak Yön Dergisi. *Türkiye Araştırmaları Literatür Dergisi* 2(1), 551-575.

Aren, S. (1961, December 20). Ne istediğimizi biliyor muyuz?, *Yön*, 1.

Aren, S. (1962, January 24). Devletçilik ve ötesi, *Yön*, 6.

Aren, S. (1993). *TİP olayı 1961-1971.* İstanbul: Cem Yayınevi

Atılgan, G. (2002). *Kemalizm ile Marksizm arasında geleneksel aydınlar: Yön-Devrim hareketi*. İstanbul: TÜS-TAV.

Avcıoğlu, D. (1962a, January 28). Niçin sosyalizm?, *Yön*, 7.

Avcıoğlu, D. (1962b, March 14). Kalkınma programı II, *Yön*, 13.

Avcıoğlu, D. (1962c, June 13). Kalkınma programı, devletçilik. *Yön*, 26.

Avcıoğlu, D. (1963a, April 10). Sosyalizmden önce Atatürkçülük, *Yön*, 69.

Avcıoğlu, D. (1963b, May 23). Açık oturum konuşması, *Yön*, 75.

Avcıoğlu, D. (1965, January 22). Kalkınmaya götüren yol, *Yön*, 95.

Avcıoğlu, D.(1969). *Türkiye'nin düzeni: Dün-bugün-yarın*. Ankara: Bilgi Yayınevi.

Aybar, M. A. (1968). *Bağımsızlık, demokrasi, sosyalizm*. İstanbul: Gerçek Yayınları.

Aydemir, Ş. S. (1962, September 12). Artık devletçilik yetmez", *Yön*, 39.

Aydın, Z. (2005). *The political economy of Turkey*. London: Pluto Press

Aydınoğlu, E. (1992). *Türk solu (1960-1971): Eleştirel bir tarih denemesi*. İstanbul: Belge Yayınları.

Belli, M. (1970). *Yazılar, 1965-70*. Ankara: Sol Yayınları.

Berger, M. T. (1994). The end of the "Third World'. *Third World Quarterly*, 15(2), 257-75.

Berger, M. T. (2001). The rise and demise of national development and the origins of post-Cold War capitalism. *Journal of International Studies*, 30(2), 211-234.

Berger, M. T. (2004). After the Third World? History, destiny and the fate of Third Worldism. *Third World Quarterly*, 25(1), 9-39.

Boran, B. (1968). *Türkiye ve sosyalizm sorunları*. İstanbul: Gün Yayınları.

Dirlik, A. (2004). Specters of the Third World: Global modernity and the end of the Three Worlds. *Third World Quarterly*, 25(1), 131-48.

Doğan, E. (2017a). Socialism and nationalism in the Third World in the age of Third Worldism. *METU Studies in Development*, 44(3), 281-300.

Doğan, E. (2017b). Türkiye'de sol düşünce ve hareketlerin tarihi. In *Osmanlı'dan günümüze Türkiye'nin siyasal hayatı*, Adem Çaylak ve Seyit Ali Avcu (Eds.), Savaş Yayınevi: Ankara, 155-170

Eralp, A. (1994). Turkey in changing postwar world order: Strategies of development and westernization. In A.Oncu, Ç. Keyder, S. E. Ibrahim, (Eds.), *Developmentalism and beyond*. Cairo: The American University in Cairo Press.

Frank, A. G. (1966). The development of underdevelopment. *Monthly Review*, 18(4), 17-31.

Gellner, E. (1983). *Nations and nationalism*. Oxford: Blackwell.

Harris, N. (1986). *The end of the Third World: Newly industrializing countries and the decline of an ideology*. London: I. B. Tauris.

Karpat, K. H. (1967). Socialism and the Labour Party of Turkey, *Middle East Journal*, 23.

Karpat, K. H. (1968). *Political and social thought in the contemporary Middle East*. London: Pall Mall Press.

Karpat, K. H. (1973). Ideology in Turkey After the revolution of 1960: Nationalism and socialism. In Kemal H. Karpat, (Ed.), *Social change and politics in Turkey*. Leiden: E.J.Brill.

Keyder, Ç. (1987a). *State and class in Turkey: A study in capitalist development*. London, New York: Verso.

Keyder, Ç. (1987b). The political economy of Turkish democracy. In I. C. Schick & A. E. Tonak, (Eds.), *Turkey in Transition* (pp.27-65). Oxford: Oxford University Press.

Keyder, Ç. (1993). *Ulusal kalkınmacılığın iflası*. İstanbul: Metis Yayınları.

Landau, J. M. (1974). *Radical politics in Turkey*. Leiden: E.J.Brill.

Leys, C. (1996). *The rise and fall of development theory*. London: EAEP, Indiana University Press, James Currey.

Lipovsky, I. (1992). *The socialist movement in Turkey 1960-1980*. Leiden: E.J.Brill.

Mayall, J. (1990). *Nationalism and International Society*. Cambridge: Cambridge University Press.

Özdemir, H. (1986). *Kalkınmada bir strateji arayışı: Yön hareketi*. Ankara: Bilgi Yayınevi.

Özdemir, H. (2000). *Doğan Avcıoğlu, Bir Jön Türk'ün ardından*. Ankara: Bilgi Yayınevi.

Prashad, V. (2007). *The darker nations: A people's history of the Third World*. New York, London: The New Press.

Preston, P. W. (1996). *Development theory: An introduction*. Oxford, Cambridge, Massachusetts: Blackwell Publishers.

"Resolution adopted by the High Planning Council on the objectives and the strategy of the development plan". (1967). İlkin and İnanç, (Eds.), *Planning in Turkey*. Ankara: METU, Faculty of Administrative Sciences, 322-328

Roxborough, I. (1979). *Theories of underdevelopment*. London: Macmillan.

Samim, A. (1987). The left. In I. C. Schick, and E. A. Tonak, (Eds.), *Turkey in transition*. New York and Oxford: Oxford University Press, 147-176

Second five-year development plan, 1968-1972. (1969). Ankara: The Central Bank of the Republic of Turkey.

Sönmez, A. (1967). The re-emergence of the idea of planning and the scope and targets of the 1963-1967 Plan". In S. İlkin & E. İnanç, (Eds.), *Planning in Turkey*. Ankara: METU, Faculty of Administrative Sciences, 28-43.

Spybey, T. (1992). *Social change, development & dependency*. Cambridge: Polity Pres.

Statement on economic development in Turkey. (1963). *Middle Eastern Affairs*, 14(3), 75-78.

Tomlinson, B. R. (2003). What was the Third World?, *Journal of Contemporary History*, 38(2), 307-21.

Worsley, P. (1970). *The Third World*. Chicago: The University of Chicago Press

6

DEBATING COOPERATIVES AS AN ALTERNATIVE TO PRIVATIZATION OF SUGAR MILLS IN TURKEY: THE CASE OF BURDUR SUGAR MILL

Özal Çiçek[1] *& Çağatay Edgücan Şahin*[2]

Abstract

Privatization in Turkey has its own agenda since the 1980s. It started with industrial and service sector enterprises and then spread to enterprises in agriculture and stock raising sector. Privatization of sugar mills is the last major case for 2018. This privatization process has critical importance in terms of social policy, because of two main reasons: 1- according to results of previous privatizations, there may be mass layoffs (it already happened in some sugar mills) and retirements, and 2- privatization of sugar mills may have devastating effects both on beet producers and their organization Pankobirlik. In this study, we will discuss the possibility of an alternative model of production under neo-liberalism, based on a cooperation between cooperatives and worker unions.

Keywords: *Cooperative-Union Collaboration, Sugar Cooperatives, Sugar Industry, Sugar Beet, Privatization in Turkey, Alternative Production Model.*

Introduction

Neoliberal policies pursued in Turkey by the 1980s. Since then, privatizations of state-owned enterprises are one of the main motives of the neoliberal agenda. The same agenda also paved the way for declining total union members and dissolving collective organizations such as the producer cooperatives. Eventually, this agenda caused social and economic devastation for farmers and working class: proletarianization of farmers and loss of these laborers due to widespread workplace accidents, closure of privatized companies or keep operating with fewer workers, de-unionization, etc. Thus, primary losers of the privatization process are farmers and workers. Labor relations and also property relations are changing with neoliberalism both for farmers and workers. In this study, we will try to discuss the basics of an alternative hypothetical model of agricultural production organized by cooperatives and unions. To answer this question, we interviewed Pankobirlik Cooperatives' local branch manager and Şeker-İş Unions' local branch manager, besides literature review. We used a semi-structured questionnaire in the interviews. We focused on Burdur Sugar Mill case, because Şeker-İş Union and Pankobirlik Cooperative tried to buy Burdur Sugar Mill in an auction, and this is the one and only case that Union and Cooperative act together. Even they could not buy the Sugar Mill, privatization process is still in progress due to lack of payment.

1 Research Assistant, Suleyman Demirel University, Department of Labor Economics and Industrial Relations, E-mail: ozalcicek@hotmail.com

2 Ph.D., Ordu University, Department of Labor Economics and Industrial Relations, E-mail: cedgucansahin@gmail.com

Some Facts on Production Process of Sugar and Its By-Products in Turkey

People used the sugar in various ways such as medicine, seasoning, adornment, flavoring, a preservative in the history of civilization (Mintz, 1997, p. 132; Geerdes, 1966, p. 30), and it is producing by over 130 countries all around the world (International Sugar Organization, 2017). Although sugar can produce via various plants and products, the large part of sugar supply got by 1- sugar cane and sugar beet-based sucrose, and 2- starch-based sugar got by corn, wheat, and potato. Besides these products, there are also various artificial sweeteners products in the sugar industry (Sendika.org, 2006). To sum up, sugar industry produces a variety of products including crystal sugar, cube sugar, beet pulp, wet pulp, molasses, and molasses dried pulp (Şeker-İş, 2011, p. 21).

Sugar beet industry embedded with medicine, animal feed, meat, dairy products, and transportation and service industries. Thus, sugar beet industry directly affects half a million farmers and almost three million people overall. We can consider sugar beet industry as a strategic industry for Turkey because; 1- this high level of embeddedness, thus sugar policies, especially privatization of sugar mills may lead to a higher unemployment rate, proletarianization, etc., and 2- public health issues related to widespread starch-based sugar production (Öztaş et al., 2015, pp. 19-22). We interrelate these two consequences. According to Cargill Report on Sugar Industry in 2018, sugar industry should be liberalize entirely, and the quota applied to starch-based sugar should be 60%, instead of 5%. Pankobirlik states that Cargill Report point out a future which Turkish farmers bankrupt, and the country turned into cheap corn fields (Pankobirlik, 2018a: 7).

Productivity in the industry is important, and farmers have to be careful about how and when to fertilize, plant, water, harvest and silo (Pankobirlik, 2018b). It is because sugar beet is subject to mattock planting, and most of the farmers in Turkey are not familiar with its production phases (Tekeli, 1964, p. 28). Sugar mills play an important role as they consistently fill this "know-how gap" and guide the sugar industry through support on personal and financial issues (Öztaş et al., 2015, p. 22).

The sugar industry is the prominent industry among other agricultural industries because contract farming, agricultural credits, and price guarantee system practices firstly applied in the sugar industry, and followed by others. Thus establishing sugar industry can be considered as a way of establishing modern agricultural techniques in Turkey such as the increase in agricultural mechanization and fertilizers, alternate planting, using certified seeds. (Erdinç, 2000, pp. 111-112). Since its establishment, governments always supported sugar industry by providing/financing agricultural tools, fertilizers, disinfestation, in-cash and in-kind aids, training of farmers, social-cultural activities, conferences, theater plays, concerts in mills. This supports not only improved the lives of farmers and workers who work under permanent employment contracts but also improved the whole community's social life. (Günçıkan, 1999, p. 245; Geerdes, 1966, p. 39). To sum up, as sugar industry improved: 1- less or semi-developed regions developed, 2- farmers become richer over time, and finally 3- tax revenues increased (Ersun, Müftüoğlu and Güzel, 1997, pp. 26-29).

Sugar beet plants are quadrennial. Sugar beet farmers suggested planting bean, wheat, corn, and sunflower, in the other three years (Pankobirlik, 2018b). Sugar beet farmers also have a unique advantage, which emerges from their contracts with sugar mills. According to their ordinary contract, farmers sell every sugar beet they possessed; there is not a lack of demand for sugar beet (Oluç, 1946, p. 113).

During the harvest, farmers cut beet top and leaves, which may use as cattle feed (Schneider, 1971, p. 1244). Sugar mills process crops and farmers take back 40 kilograms of beet pulp free, for every 100 kilograms of sugar beet they sell to the mill. Wet pulp has digestive effects for cattle, thus daily milk production increases (Oluç, 1946, pp. 110-111). Finally, four percent of molasses remains from the sugar beet production process, which may have mixed with beet pulp and consume as animal feed. Therefore, the sugar industry plays an important role to support stockbreeding (Tekeli, 1964, p. 33). Remains also can use as fertilizer (Nafiz, 1930, p. 222). Molasses contains uncrystallized sugar up to 50%, which is one of the main ingredients of ethyl alcohol, and the farmers may use remaining sugar as bread yeast (Tekeli, 1964, pp. 36-37). Finally, sugar beet is among one of the raw materials to produce bio-ethanol, considered future fuel oil (Şeker-İş, 2011, p. 92). Bio-ethanol production is important for 1- agricultural development, and 2- to absorb excess sugar beet supply and convert it to energy (Türkşeker, 2018a, pp. 42-43).

Sugar beet is a heavy crop, because it contains water, and harvests in summer. Transportation of crops is a tough issue and to prevent decay, beets need to process in sugar mills as soon as possible (Tanoğlu, 1942, p. 126). Thus, sugar mills settled in the nearest locations to the fields (Oluç, 1946, p. 121). Today, sugar mills in Turkey presence on intersection areas of railways and highways.

Table 1: Sugar Beet Farming in Turkey: An Overview (2002-2017)

Year	Number of Contract Farmers	Cultivated Area (Decares)	Production (Tons)	Productivity (Ton/Decare)	Beet Prices Including 16% Polar Sugar (Turkish Liras/Ton)
2002	492.232	3.724.680	16.523.166	4.4	74.00
2003	459.571	3.153.030	12.622.934	4.0	88.31
2004	390.635	3.153.440	13.517.241	4.3	98.91
2005	347.814	3.358.120	15.181.247	4.5	99.00
2006	311.799	3.256.995	14.452.162	4.4	92.00
2007	246.797	3.002.421	12.414.715	4.1	96.00
2008	209.115	3.219.806	15.488.332	4.8	110.00
2009	187.937	3.244.428	17.274.674	5.3	116.00
2010	196.901	3.291.669	17.942.112	5.5	118.00
2011	171.752	2.972.648	16.126.489	5.4	126.00
2012	140.682	2.806.945	14.919.940	5.3	137.00
2013	126.307	2.913.282	16.488.590	5.7	147.00
2014	124.354	2.887.851	16.743.045	5.8	159.00
2015	103.400	2.744.873	16.022.783	5.8	191.00
2016	105.460	3.224.477	19.592.731	6.1	194.00
2017	110.146	3.392.742	21.149.020	6.2	210.00
Rate of Change (2002-17)	**%-78**	**%-9**	**%28**	**%41**	**%184**

Sources: *Data collected and compiled from Türkşeker, 2018a, p. 34; Pankobirlik, 2017, p. 1; Agricultural Engineers Chamber, 2016; Turkish Statistical Institute, 2017.*

Table 1 shows that between the year 2002 and 2017, while the total number of farmers decreased by 78%, and cultivated area decreased by 9%, total production increased by 28%, productivity increased by 41%, and beet prices increased by 184%. These data point out a trend: while beet prices increasing, fewer farmers get more product. This trend means less but richer beet farmers in more productive areas, dominate the industry year by year.

Table 2: Sugar Beet Farming: Türkşeker Inc. (2011-2017)

Year	Number of Contract Farmers	Cultivated Area (Decares)	Production (Tons)	Productivity (Ton/Decare)	Beet Prices Including 16% Polar Sugar (Turkish Liras/Ton)
2011	118.338	1.782.682	8.950.721	5.02	125.00
2012	92.919	1.700.675	8.426.804	4.95	135.00
2013	85.700	1.771.065	9.285.479	5.24	144.00
2014	83.665	1.710.856	9.352.751	5.46	157.50
2015	66.974	1.581.511	8.790.050	5.55	190.00
2016	67.650	1.905.683	11.353.771	5.95	190.00
2017	70.762	1.995.889	12.164.355	6.09	210.00
Rate of Change (2011-17)	**%-40**	**%12**	**%36**	**%21**	**%68**

Sources: *Data collected and compiled from Türkşeker, 2018b; Türkşeker, 2018c; Türkşeker, 2018a, p. 36.*

Table 2 shows that between the year 2011 and 2017, while the total number of farmers decreased by 40%, cultivated area decreased by 12%, total production increased by 36%, productivity increased by 21%, and beet prices increased by 68%. If we analyze these data together with the data at Table 1, the economic condition of farmers who contracted with Türkşeker Inc. is compatible with the general trend in the sugar industry, but less increase on prices.

Table 3: An Overview to Sugar Beet Production (2016-2017 Periods)

Sugar Mills	Purchased Sugar Beet (Tons)	Cultivated Sugar Beet (Tons)	Sugar Produced (Tons)
Amasya (Pankobirlik Coop.)	686.793	681.000	84.547
Kayseri + Boğazlıyan (Pankobirlik Coop.)	2.608.457	2.567.000	340.980
Konya + Çumra (Pankobirlik Coop.)	3.339.932	3.254.000	455.760
Pankobirlik Total	6.635.182	6.502.000	881.287
Private Companies Total (Adapazarı+Aksaray+Kütahya)	1.604.047	1.307.000	273.313
Türkşeker Inc.	11.353.771	10.617.000	1.404.000
Grand Total	**19.593.000**	**18.426.000**	**2.559.000**

Source: *Pankobirlik, 2017, p. 6.*

Even though sugar beet market share of state-owned enterprise Türkşeker was 74% in 2002, and 55% in 2017 (Türkşeker, 2018b; Pankobirlik, 2017, p. 4), it has decreased to approximately 25% in 2018[3]. The company still occupies a leading position in the market. Türkşeker has become 25th biggest company (among biggest 500 companies) with net sales of 3.874.621.336 Turkish Liras by January 2017 (Türkşeker, 2018a, p. 56). Türkşeker also has become 14th biggest company among biggest 20 sugar producer companies, with an average of one million five hundred thousand tons of sugar (Retail Türkiye, 2018). According to data in Table 3, state-owned company Türkşeker and representative and senior organization of beet cooperatives Pankobirlik have way ahead positions on all three indicators, as against private companies.

The Effects of Neoliberal Policies on Sugar Production in Turkey

State-owned company Türkşeker re-organized as a public monopoly in 1983, and it became a ministerial entity (under the Ministry of Industry and Trade) in 1984 (Avcı, 1996, p. 296). The company remained as a monopoly until April 1989 which was the year the government allowed private companies to import sugar. According to April 5, 1994, economic stability measures, sugar import increased, and sugar production put under protection due to commitments to World Trade Organization (WTO) in 1996 (Fedai, 2016, p. 463). With an agreement on agriculture with the WTO, Turkey limited cultivated areas and started quota and differential pricing system in 1998. Determining the quotas and distribution of sugar beets among mills organized by Türkşeker Inc. until 2001 (Aytüre, 2004, p. 87).

1999 and 2001 economic crises have paved the way to StandBy agreements with the International Monetary Fund (IMF), and IMF conditionality meant privatization of agricultural state-owned companies (tea, tobacco, sugar beet, etc.). Sugar Law No. 4634 (date of entry into force 2001) aimed to regulate conditions and methods of sugar regime in Turkey under the principles of neoliberalism, which puts export to the forefront: pricing, marketing, enough domestic supply up to the domestic demand (Tosun and Arslan, 2016, p. 329). Until Law No. 4634, sugar price determined by the Council of Ministers, but it also abolished with the law. Instead, sugar industry liberalized, and sugar prices determined with contracts between sugar mills owners and sugar beet farmers (Odaman, 2007, p. 68). The Law also removed all restrictions on establishing sugar mills (Demirci, 2003, p. 14). Main principles of Sugar Law No. 4634 may summarize: to provide stability in sugar beet production, to guide sugar industry under domestic competition, to get in a harmony with international commitments (For instance, Turkey's quota regime become similar with the European Union (EU) sugar regime, and 5% starch-based sugar quota was even higher than the average of EU countries (2%), and it might increase/decrease with an executive order according to Sugar Law), and finally to establish legal infrastructure which allows privatizations in sugar industry (Türkşeker, 2018a, p. 27). After six years of the Laws' date of entry into force, the number of the total sugar mills reached thirty-three. Twenty-five of them belong to Türkşeker Inc., five of them belong to Pankobirlik Cooperative and three of them belong to private companies (Türkşeker, 2018a, pp. 24-29). With a decree-law in 12.24.2017, Türkşeker has abolished and turned into a ministerial institution of the Ministry of Food, Agriculture, and Livestock. This statute change also means that the company lost its control mechanism in the sugar market (Gök, 2018: 19).

3 Türkşeker Inc. has undertaken the sugar production in most privatized sugar mills for two reasons: 1- the takeover process still in progress in some cases, 2- sugar beet campaign has already started for 2018. We may argue that Türkşeker Inc. will lose its hegemonic position after the privatization process completed.

New quota regime and decreasing market share of state-owned company Türkşeker in favor of private companies lead to disadvantaged contracts for farmers. With restrictions to sugar beet with quota and diminishing power of public authority to set minimum prices in comparison with EU countries, farmers have a tendency to quit sugar beet farming, because it offered lower prices than minimum prices (Kıymaz, 2003, pp. 21-22). This situation not only has effects on farmers, who casually work in sugar mills at winter time but also on different worker groups, such as blue/white-collar workers in sugar mills -permanent, seasonal, contractual-, agricultural laborers, logistics workers.[4] (Erdinç, 2000, p. 116). Even though the number of permanent workers is sufficient in sugar mills, seasonal workers still needed due to sugar beet product specifications (perishable) to harvest and to treat within the shortest time (Güven, 1967, pp. 20-22). Sugar industry, 1- create jobs in rural areas and prevents rural-urban migration, 2- supports mechanization and modernization in Turkish agriculture, 3- supports sugar beet farmers which organized as cooperative's and protect their wealth, 4- puts an alternative and "national way" of production against global capital (Öztaş et al., 2015, p. 19).

Rethinking Cooperatives as an Alternative to Privatization of Sugar Mills: Burdur Sugar Mill Case

Privatization of Türkşeker Inc. was first mentioned in "Privatization Master Plan", submitted by The Morgan Bank in 1986, and its privatization process started with a letter of intent to IMF, dated 22/06/2000 (Türkşeker, 2018a, p. 51). Turkey's letter promised to complete privatization of all sugar mills until January 2003 (Kılıç et al., 2006, p. 125), but privatization process of sugar mills interrupted several times with the Council of State decisions, and lack of demand (Türkşeker, 2018a, p. 52; Şeker-İş, 2018) and electoral concerns which may originate from farmers and their families. Thus, privatization of sugar mills strung out to the year 2018. However, governments continued to privatize other big state-owned monopolies in the 2000s which have high market values, such as Tekel Inc. (tobacco, liquor, etc.), and Telekom Inc. (telecommunication).

Table 4: An Overview to Sugar Mills Ownership by Year 2018

Companies	Sugar Mills	Market Share Before Privatization (%)	Market Share After Privatization (%)
TŞFAŞ (Türkşeker) [12 Mills]	Susurluk, Uşak, Eskişehir, Ankara, Ereğli, Çarşamba, Kastamonu, Malatya, Elazığ, Kars, Ağrı, Erciş	76	36
Pankobirlik Coop. [6 Mills]	Konya, Çumra, Kayseri, Boğazlıyan, Turhal, Amasya	15	18
Private Companies [15 Mills]	Adapazarı, Kütahya, Aksaray, Alpullu, Burdur, Afyon, Ilgın, Bor, Kırşehir, Çorum, Yozgat, Elbistan, Erzincan, Erzurum, Muş	9	46

Source: *Table 4 created by authors by using the data from various websites such as Privatization Administration (www.oib.gov.tr), Pankobirlik Cooperative (www.pankobirlik.com.tr), and The Chamber of Agricultural Engineers (www.zmo.org.tr).*

4 Sugar beet production creates jobs five times more than sunflower production, eight times more than corn production, and 13 times more than wheat production. Thus, a possible shrink in sugar industry will be triggered a chain-reaction effect other industries, such as agriculture, stockbreeding, transportation and service sector etc. (Öztaş et al., 2015, p. 19).

Table 4 shows that private companies increased their entities over five times and they turned into a hegemonic position altogether while Türkşeker loses its entities more than half. Only "Turhal Sugar Mill" has bought by Pankobirlik Cooperative, and the cooperative still keeps its position in the market.

To discuss an alternative model of production and wealth distribution via cooperatives, we conducted semi-structured and face-to-face in-depth interviews with Şeker-İş Unions' and Pankobirliks' authorized personnel of Burdur city. These interviews were conducted on 16/08/2018 and voice recorded. We also interviewed with investment and project manager at Pankobirlik Headquarters in Ankara at 20/09/2018, this interview also voice recorded. We also tried to interview Şeker-İş Unions Headquarters in the capital city Ankara, but the Union rejected our request several times. However, both people in the cooperative and the union headquarters are secondary source of information for this study, thus we did not include the interview with Pankobirlik Headquarters in Ankara. We focused on Burdur Sugar Mill, because it is the only case until now, that local branches of Pankobirlik Cooperative and Şeker-İş Union acted together to buy and operate it, but they failed at auction. Even though Burdur Sugar Mill privatized and bought by joint venture companies in "plastic and warehouses business", ownership did not transfer because withhold payment in time and take extra time to December 2018, Şeker-İş Union preparing to prosecute privatization because of procedural issues. We tried to reveal the point of views against privatization of sugar mills, effects of privatizations on farmers and workers, thoughts after privatization about the sustainability of sugar beet production, and finally whether they have an alternative agenda against privatizations.

To discuss an alternative model of production, we need to understand institutional positions (union and cooperative) against privatization first. Neither Şeker-İş Unions' local branch, nor Pankobirliks' are not against privatization ideologically, but both uncomfortable about the method pursued:

"We never reacted against privatization, but we side with a privatization where farmers and workers come together under control of the state" (Interview with Şeker-İş local branch manager, 16/08/2018).

"We are not against privatization, but we are against a privatization like here in Burdur. They could restore this sugar mill, and it could get rid of bureaucracy. Pankobirlik proposed a project to state: transfer our operating rights, keep control the mill (state). Unfortunately, everything has gone (privatized), including the factory site. Who knows what will they build there?" (Interview with Pankobirlik local branch manager, 16/08/2018).

Both managers stated that the state should have kept control of the sugar mill and transfer operating rights to cooperative and/or union. The factory site centrally located, so union and cooperative concerns about pulling down of the mill, and build something else, such as shopping-mall. Farmers and workers seem to be the losers of privatization under these circumstances.

One other issue about privatization is its effects on sugar mill workers. Answering this question partly shows the importance of searching for an alternative model which workers and farmers act together. Şeker-İş Unions' local branch manager states:

"Directorate of Privatization Administration decided about us: it will force those who reached retirement age (73 workers) to compulsory retirement, those who can't retire (75 workers) appealed to transfer to other sugar mills. 94 fellow workers appealed to transfer to other public institutions based on public servants' law. Seven fellow workers took none action, so they are just waiting for the end of the story… Unfortunately, there will be zero unionized workers at Burdur Sugar Mill..." (Interview with Şeker-İş local branch manager, 16/08/2018).

Privatization of the Mill will have devastating effects not only for farmers and workers, but could also cause social problems in Burdur and around. Pankobirliks' local branch manager states:

"So, what happens if this factory closed? Transportation is among one of the biggest costs, and there is no chance to transfer sugar beet from Burdur to the closest mills in Konya, Uşak or Afyon. There will be huge transportation costs, and factory owners won't prefer to purchase expensive sugar beet. Farmers also won't prefer to transfer it because it would vaporize their whole gain with transportation costs. Long story short, if this mill close, sugar beet agriculture in the region will also be over. Then, starch-based sugars and sweeteners will fill this gap. This will also affect stockbreeding because the price of animal feed also will go up. Stockbreeding SME's will bankrupt, some farmers will seek an alternative production pattern, some will migrate into big cities…" (Interview with Pankobirliks' local branch manager, 16/08/2018).

Privatization of Burdur Sugar Mill will also have social effects that go beyond it such as migration, new patterns of production, and disappearing economic sustainability of stockbreeding. The privatization process also concerns the Union and the Cooperative about the future of the sugar mill. Because the history of privatization in Turkey has its own problematic areas such as destructing privatized entity, and building a shopping mall to the factory land, selling the privatized mill to another company just six months after its privatization (See. Ülker, 2018). Privatization process of sugar mills also has its own chaos:

"We don't know how these 14 of 25 factories chosen to privatize… After supreme courts' decisions, it's been decided to privatize one by one. But these factories are far from being homogeneous in terms of their technology. We have Ilgın, which is a high-tech sugar mill, again we have factories operate with low costs, such as Afyon, Turhal, Çorum, Kırşehir, Yozgat, Burdur… While Directorate of Privatization Administration privatizing these companies, Çarşamba sugar mill remains, which is not operational for five years. It's not normal at all. For instance, Kayseri Şeker Company, bought Turhal sugar mill and it will continue to produce, as Kırşehir factory did. But here in Burdur, the company (Erser-Sterk Joint Venture) does not have a tendency to keep production. We think the company is irrelevant to sugar beet agriculture and sugar products. We pointed out that from the beginning" (Interview with Şeker-İş local branch manager, 16/08/2018).

Pankobirliks' local branch manager also holds a similar position:

"We are not proposing that the state should directly interfere in sugar production. However, the state shall control the process definitely. The sugar industry is a strategic industry for Turkey, and privatization shouldn't doom it. Pankobirlik or the state should be parts of the production process in a way or other, so private companies may not end sugar production, after three or five years of their privatization. Otherwise, this won't be sustainable (Interview with Pankobirlik local branch manager, 16/08/2018)."

As we mentioned above, Türkşeker has become the 25th biggest company in 2017, among the biggest 500 companies in Turkey. While Türkşeker's most effective, productive and cost-efficient sugar mills sold, Çarşamba Sugar Mill remains at Türkşeker's portfolio, which is not functional for five years. This is challenging.

Whether the Union or the Cooperative seek an alternative gain importance for initial losers of privatization process:

"The state's position in neoliberal rhetoric is simple: to get rid of public entities and just control them. So, our Union defends a position to operate sugar mill together with farmers, which the state controls the production process. Union organization in the private sector is tough because the firms one and only aim is to make the profit. So, I prefer to organize in a sugar mill runs by Pankobirlik Cooperative, instead of a private company. The Union acted together with Pankobirlik Cooperative, at auction, and collected 450 million Turkish Liras for Burdur Sugar Mill. The highest bidder provided 487 million Turkish Liras. If the Union and the Cooperative- could have own the sugar mill, all workers would remain unionized, same as before privatization just with minor revisions such as higher working discipline under higher technology, and maybe fewer workers (150 workers, instead of 250). All workers organized at Torku Cooperatives' Sugar Mill. The company which owns Aksaray Keskinkılıç Sugar Mill, pursues union-busting techniques to defeat union at all costs, even pays trade union compensations to equal up to 14 months' salary of a worker. To be honest, unionism at state-owned enterprises made us inactive in time. If we organized at private companies since the beginning, we would better know how to struggle against these employer strategies. I don't agree with left-wing unionism, but I have to accept that they know how to struggle and their unions are way better from us (Interview with Şeker-İş local branch manager, 16/08/2018).

These statements show that the political orientation of institutions (both union[5] and cooperative), and the struggle history of the Union to determine the strategy against privatization. Burdur Sugar Mill case also differs from other cases in terms of a person who occupies a managerial position at both institutions, which made easier for these institutions to act together. However, the emphasis's on "operate the Mill under state control" should be evaluated both as an intention to prevent nepotism in employment relations, and also prevent to act arbitrarily:

"Farmers and workers should operate sugar mills, and state should control it, this is what we stand for. In Burdur, we have a strong sugar beet cooperative which is also eager to operate Burdur Sugar Mill, but it can't be successful without state control on the production process. Why? The answer is nepotism on employment relations. When individual relationships override the productivity of an applicant, you can't be successful. That's why we need state control. Besides the authority of the president of the cooperative has to be limited. Otherwise, we can't prevent arbitrarily behavior. A cooperative with 70000 members shouldn't turn into an organization directed by desires of four or five persons'. The cooperative movement lost its base in Turkey, mostly because of mismanagement practices. Thus, we need a brand new cooperative law, focused to prevent these practices (Interview with Pankobirlik local branch manager, 16/08/2018)."

These statements show that only looking for an exit from the privatization process is not enough to discuss an alternative model. Here, even the Union and Cooperative act together to buy Burdur Sugar Mill, their motivation is far from what we try to discuss in this study: an alternative model to privatization under neoliberalism. The Union does not act with class consciousness, which is obvious from the statements above about left-wing unionism and run the mill with higher technology and fewer workers. The Cooperative also defends a position compatible with liberalism, which points out state control to prevent nepotism and act arbitrarily.

5 While thirteen of fourteen sugar mills sold and five of them did not transfer to their new owners yet, Şeker-İş Unions' leader bought a luxury official car with union dues, cost one million Turkish Liras, which is almost equal to 623 times to minimum wage (Sputnik, 2018). Even we experienced none problems while interviewing with the local branch of the union, we experienced difficulties while we try to contact with union headquarters. We tried to make an interview with union headquarters on an alternative mode of production in cooperation with cooperatives, but they have rejected us several times as we mentioned above. These two facts may consider pointing out to a serious problem is beyond the limits of our study: union bureaucracy.

Conclusion

The privatization process still in progress at Burdur Sugar Mill case. Even though the positions held by cooperative and union is clear, we prefer to highlight some important points about our discussion, rather than concluding remarks. The success of a hypothetical production model organized by a cooperative and a union, will highly depend on the political orientation of both producers and workers and also their organizations, in our case Pankobirlik and Şeker-İş. Pankobirlik Cooperative proposed a model which workers (union) and farmers' (cooperative) operate the Mill altogether and the state has a control duty. This proposal rejected by state authorities. "What if this initiative would be successful?" We could answer this question with political orientations of two institutions. Due to their position of defending liberalism, we would expect a raise on production levels with fewer farmers and workers. That scenario would be consistent with the data shown in Table 1 and Table 2. Even this model would be operated, it would have been compatible with the neoliberal paradigm, and this is not what we were tracing for.

If cooperatives and unions cannot act together against the privatization process, farmers and workers will be losers of this process in near future. If this scenario happens, outcomes for workers are de-unionization and unemployment. Privatization will also destroy the know-how produced by sugar mill workers. Most of the small-scale farmers who faced sugar mill closures may withdraw from sugar beet farming because increased costs especially in some specific regions/cities. The farmers either will seek new production patterns and keep their property, or they will most likely experience proletarianization. This also means that less but big scaled and rich sugar beet farmers.

Privatization process of sugar mills has other risks on sugar beet production. After five years of guarantee (sugar beet farming is already quadrennial), farmers may face financial difficulties, most likely will be caused by increasing costs of production: higher transportation costs because of closed sugar mills, lower product prices determined by the free-market system, etc. Thus, downsize the scale of sugar beet farming and limit it to some specific cities in central Anatolia in the next ten to fifteen years is the strongest possibility. This will also trigger unsustainability in stockbreeding industry because of increasing costs. Thus, discussing an alternative model of production, and tracing a common strategy for small-scale farmers and workers is vital more than ever.

References

Agricultural Engineers Chamber (2016). *Sugar Beet Case 2015*. http://www.zmo.org.tr/genel/bizden_detay.php?kod=25757&tipi=17&sube=0. [Accessed Online: 12/08/2018]. (in Turkish)

Avcı, S. (1996). "Position of Turkish State from Establishment to Development of Sugar Industry". *Istanbul University Journal of Geography*. (4). 291-302. (in Turkish)

Aytüre, S. (2004). *Turkey's Sugar Production Policies in Terms of EU Harmonization Process*. Unpublished Ph. D. Thesis. Ankara University Institute of Social Sciences. Department of European Communities. Ankara. (in Turkish)

Demirci, S. (2003). *An Economic Analysis of Possible Effects by Sugar Law*. The Ministry of Agriculture and Rural Affairs. Ankara: Agricultural Economy Research Institute Publishing. (in Turkish)

Erdinç, Z. (2000). *Sugar Beet Agriculture and Sugar Industry's Effects on Turkey's Economic Development*. (1208/166). Eskişehir: Anadolu University Publishing & Faculty of Economics and Administrative Sciences Publication. (in Turkish)

Ersun, C., Müftüoğlu H. & Güzel H.T. (1997). *Current Condition in Sugar and Sugar Beet Production: Problems and Solution Recommendations*. (1997/12). İstanbul: Istanbul Chamber of Commerce Publishing. (in Turkish)

Fedai, R. (2016). "Sugar and Sugar Beet as a Policy Space". *Journal of History School*. 28(9). 455-471. (in Turkish)

Geerdes, T. (1966). *Essential Nutrient: Sugar and Its History*. C. Gökdağ (Trns.). Ankara: Türkşeker Publishing. (in Turkish)

Gök, İ. (2018). "Our Struggle of Independence is Continuing". *Şeker-İş Union Newspaper*. Year: 8. Issue:19. pp.18-19. (in Turkish)

Günçıkan, B. (1999). "Three Generations in Sugar Industry: Boyacıoğlu Family". in *Who Rotated the Wheels in 75 Years* (pp.241-248). İstanbul: Tarih Vakfı Publications. (in Turkish)

Güven, E. (1967). *Labor and Social Policy in Turkish Sugar Industry*. (45). Ankara: Eskişehir Faculty of Economics and Administrative Sciences Publishing. (in Turkish)

International Sugar Organization (ISO). (2017). *About Sugar*. https://www.isosugar.org/sugarsector/sugar. [Accessed Online: 03/08/2018].

Kılıç, Cem, et al. (2006). *The Future of Turkish Sugar Industry in EU Harmonization Process: EU Sugar Policy, EU Sugar Reform and Turkish Sugar Industry*. C. Kılıç (Ed.). Ankara. (in Turkish)

Kıymaz, T. (2003). "Sugar Policies in EU and Turkey". *Turkey in EU Enlargement: Agricultural and Rural Policies Symposium* (pp.1-24). Ankara: TMMOB Agricultural Engineers Chamber. (January 08-09, 2003). http://www.zmo.org.tr/resimler/ekler/fe77ac7060e716f_ek.pdf?tipi=14&sube=. [Accessed Online: 08/08/2018]. (in Turkish)

Mintz, S. W. (1997). *Sweetness and Power: The Place of Sugar in Modern History*. Ş. Alpagut (Trns.). İstanbul: Kabalcı Publishing. (in Turkish)

Nafiz, İ. (1930). "Our Sugar Industry". in *1930 Congress of Industry Reports-Decisions-Proceedings*. (pp.218-234). Ankara: National Economy and Savings Society Headquarters Publishing. (in Turkish)

Odaman, S. (2007). *Analyzing Sugar Industry in Context of WTO, EU, and Turkey*. Unpublished Master's Thesis**.** Dokuz Eylül University Institute of Social Sciences. Department of EU. İzmir. (in Turkish)

Oluç, M. (1946). *Agricultural Economy of Thrace*. Istanbul University Faculty of Economics. Istanbul: Institute of Economics and Sociology Publishing. (in Turkish)

Öztaş, N. et al. (2015). *Sugar Industry in Turkey: Production Process and Labor Relations*. Ankara: Şeker-İş Publishing. (in Turkish)

Pankobirlik (2017). (Beet Cooperatives Manufacturers Association). *Global, EU, and Turkish Sugar Statistics*. http://pankobirlik.com.tr/ISTATISTIKLER.pdf. [Accessed Online: 12/08/2018]. (in Turkish)

Pankobirlik (2018a). (Beet Cooperatives Manufacturers Association). *A Response to Cargill's Sugar Industy Report*. http://pankobirlik.com.tr/pankobirlikraporu.pdf. [Accessed Online: 21/08/2018]. (in Turkish)

Pankobirlik (2018b). (Beet Cooperatives Manufacturers Association). *Sugar Beet Agriculture*. http://www.pankobirlik.com.tr/AnaSayfa/Seker_Pancari_Tarimi. [Accessed Online: 20/08/2018]. (in Turkish)

Retail Türkiye (2018). *Sugar Industry and Privatization***.** https://www.retailturkiye.com/dosya/seker-sektoru-ve-ozellestirme. [Accessed Online: 28/09/2018]. (in Turkish)

Schneider, F. (1971). *Sugar Technology*. Osman Bozok (Trns.). Ankara: Türkşeker Publishing. (in Turkish)

Sendika.org (2006). *Sugar Beet Case–Cumhuriyet Agricultural Journal*. http://sendika62.org/2006/10/seker-pancari-dosyasi-cumhuriyet-tarim-dergisi-9345/. [Accessed Online: 08/02/2018]. (in Turkish)

Sputnik (2018). *A Statement from Türk-İş Confederation Chairman Atalay on the Official Car: Our Friend is Really Sorry*. https://tr.sputniknews.com/turkiye/201810121035629794-turk-is-ergun-atalay-seker-is-makam-araci/. [Accessed Online: 12.10.2018]. (in Turkish)

Şeker-İş (2011). *Future of Sugar*. Şeker-İş Union R&D Unit. Ankara: Mattek Press. (in Turkish)

Şeker-İş (2018). *Our Struggle Against Privatization of Türkşeker Inc.* http://www.sekeris.org.tr/turkiye_seker_fabrikalari_a_s_nin_ozellestirilmesine_karsi_mucadelemiz. [Accessed Online: 26/08/2018]. (in Turkish)

Tanoğlu, A. (1942). *Agrarian Life Volume I: An Overview to Agricultural History*. (177/8). Istanbul: Istanbul University Publishing & Institute of Geography Publications. (in Turkish)

Tekeli, S. T. (1964). *The Importance of Sugar Industry for Turkish Economy*. Ankara: Ankara University Faculty of Agriculture Press. (in Turkish)

Tosun, F. & Arslan, S. (2016). “Development in Turkish Sugar Industry after Sugar Law – No: 4634”. *Journal of Central Research Institute for Field Crops*. 25(2). 328-333. (in Turkish)

Turkish Statistical Institute (2017). *Cereals and Other Crops: Cultivated Areas and Production Data (2001-2017)*. http://www.tuik.gov.tr/UstMenu.do?metod=temelist. [Accessed Online: 12/08/2018]. (in Turkish)

Türkşeker (2018a). *Sectoral Report 2017*. http://www.turkseker.gov.tr/sector_report_2018.pdf. [Accessed Online 04/08/2018]. (in Turkish)

Türkşeker (2018b). *Personal, Sugar Beet Sells, Planting and Production*. http://www.turkseker.gov.tr/PersonelSekersatisEkimUretim.aspx. [Accessed Online: 12/08/2018]. (in Turkish)

Türkşeker (2018c). *Sugar Beet Farming by Cities*. http://www.turkseker.gov.tr/illereGorePancarEkimUretim.aspx. [Accessed Online: 12/08/2018]. (in Turkish)

Ülker, K. (2018). “Dişli family is buying Bor Sugar Mill”. *Dünya.* https://www.dunya.com/ekonomi/bor-sekeri-disli-ailesi-aliyor-haberi-428383. [Accessed Online 27/09/2018]. (in Turkish)

Interviews

Interview with Pankobirlik Cooperative local branch manager, Burdur, 16/08/2018.

Interview with Şeker-İş Union local branch manager, Burdur, 16/08/2018.

7

ECONOMIC AND SOCIAL GROUNDS OF PUBLIC SUBSIDIES IN THE MARKET FAILURES: AN EXAMPLE OF A MUSEUM AS A MERIT GOODS IN TURKEY

Binhan Elif Yılmaz[1]

1. Introduction

In terms of the market failure theory, the economic and social reasons for the state interventions transpire in the areas where the market mechanism is not working or inadequate. According to R. Musgrave, the market economy is insufficient in most cases regarding the optimal distribution of resources, economic stability, fair income distribution, and economic growth.

In the presence of merit goods, the market economy is not successful in the efficient allocation of resources. Merit goods are the goods that have the characteristics of a private commodity and which are deprived of consumption, that have special benefits as well as divisive benefits, that are produced and consumed incompletely when the market is not perceived correctly by the poverty or lack of education. The state intervenes through subsidies to increase the consumption of merit goods. This study suggests that the intervention of state subsidies to museums, which are examples of merit goods, cannot be justified by economic and social reasons.

2. The Theory Of Market Failures And The State Intervention

The welfare economy is based on the rational individual model following full competition conditions and self-interests. In this view, Pareto Optimality is the most important criterion for the efficient distribution of resources. The first fundamental theorem of welfare economics suggests that competitive markets create efficiency. The allocation of resources generated by competitive markets is Pareto Optimal resource allocation in which the state of a person cannot be improved without worsening others. When efficiency is achieved in the field of production and consumption, social welfare is maximized. Competitive environment can allocate resources Pareto Optimally, however, it does not make judgments about income allocation. According to the second fundamental theorem of the welfare economy, the policies to redistribute the resources should be emphasized. These policies are shaped by tools such as tax, spending, subsidies of the public. Economic and social reasons are formed for the state intervention in this framework (Yılmaz, 2018: p. 7).

The failure to achieve a level of production with maximum social benefit as a result of the production of a good or service according to market conditions is the market failure for optimal resource distribution of the market economy. In this case, the state should intervene in the market for the resources to be allocated more efficiently. Within this framework, the market fails to ensure the efficient allocation of resources in the case of public goods, externalities, incomplete competition, incomplete markets, and asymmetric information.

1 Prof. Dr., Istanbul University, Faculty of Economics, binhan@istanbul.edu.tr

2.1. Merit Goods and Paternalist State

Several definitions of paternalism from the contemporary literature are examined. These are all found to be more or less defective when tested against various counterexamples. An alternative definition is subsequently developed using two necessary conditions which taken together are considered sufficient to define paternalistic actions. Those conditions are (1) the paternalistic action is primarily intended to benefit the recipient, and (2) the recipient's consent or dissent is not a relevant consideration for the initiator (Hershey, 1985: p. 171).

In the most general sense, paternalism, defined as the decision of the state to serve individuals' well-being, has a side that explains the justification of the state. Cause the state has to protect its individuals, to offer them various services, and to advance social welfare. However, this view is criticized in the capitalist system because of the abolition of the consumer sovereignty assumption. Paternalism is diametrically opposed to personal freedom at the core of liberal thought and perceived as a sort of authority.

The state ensures the efficient allocation of resources by producing merit goods that individuals do not consume due to lack of knowledge and/or income deficiency, or by offering a low price in their consumption or by offering them free of charge, and sometimes even enforcing their consumption.

2.2. Public Subsidies in Merit Goods

We believe that subsidies to various cultural and artistic activities are justified if the market fails in merit goods. State intervention in the production of merit goods can be justified in a Pareto-efficient market due to both the improvement of income distribution and the reflection of the Paternalist State. Although the contribution of cultural activities such as museums to the educational and artistic development of the individual is known, the reasons why consumers do not prefer to go to such places can be listed as high prices and the failure to recognize the benefits of the cultural activity. Thus, the difference between the perceived marginal utility and the actual marginal utility is furthered.

According to the paternalist theory, utility associated with cultural activities are determined by the government. In this case, if the government believes that cultural activities are good for the consumers, then it is indeed right to consider them merit goods. On the other hand, the welfarist theory states that utility is determined by the consumer who experiences the benefits of the good, so the good does not contain more utility than what the consumer perceives (Yap, 2013).

If the welfarist view is used, then market failure does not occur in the first place: the consumer consumes the amount of cultural activities that is best for him, so utility is maximised already. Considering the subjectivity in consumer preferences, the government should not dictate a standard of utility, so the welfarist theory is more reliable. Hence, subsidies are not required at all, and cannot be justified on economic grounds, according to the Utilitarian theory.

3. Museums As Merit Goods

Museums are one of the excellent examples of merit goods that individuals do not consume due to lack of knowledge and income deficiency. According to a definition by the International Council of Museums (ICOM), "a museum is a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment". Museums systematically collect material related to art, cultural history or natural science (ICOM 2013).

3.1. Externalities of Museums

Cultural activities such as museums increase the sense of prosperity by providing an opportunity for individuals to enjoy their output. Museums have the desire to pass on the cultural and historical heritage to future generations. They can also be proud of this heritage at the local or national level (Borger, 2006). Especially impressment of foreign tourists by the country's richness of heritage becomes a source of pride. With appreciation for the past and development in terms of meaning, individuals lead a better life.

Other external benefits of such activities as museums are as follows; it provides the transfer of cultural heritage to the next generations through various forms, provides the formation of social and international aesthetic values, contributes to the increase of cultural capital in the society and enables the development of creative thought. As it is known, cultural capital and intellectual knowledge are an important part of human capital. In the world of the 21st century, human capital and knowledge are important inputs for an economy (Büyükyazıcı, 2016: p. 81).

Especially museum and art galleries play an essential role in the development of children. In an age where 'lifelong learning' is dominant, it is of great benefit to gain them the habit of visiting a museum at a young age. As a continuation of the school, all activities in the museum of art education provide the awareness of history, the formation of aesthetic appreciation, thinking and learning (Maccario, 2002: p. 276).

In modern societies, museums aim to educate the public as a non-formal education institution. In order to achieve this, they have tried to use public relations and communication as a method. From the 20th century on, the main purpose is to transfer culture and science to all segments of society. For this reason, the educational function of the museums is shaped as a guide in addition to collecting, protecting, examining, evaluating and exhibiting (Maccario, 2002: p. 276).

Museums, by registering, transferring and presenting the cultural-historical heritage and documents, ensure the accessibility of cultural heritage and natural knowledge, and protect these documents and culture. Museum tourism in many major tourist destinations creates economic growth and trade-related effects. Cause museums are the sub-sector of cultural tourism.

Museums increase the economic activity of the region. Museums, which have an important role in the increase of cultural travel and as places of interest for travelers, allow the tourism industry to grow and revitalize the economy. It has been observed that museum visitors spend a multiple amount of money outside the museum compared with their spending in the museum. These money flows support considerably the regional economy of museum locations. Restaurants, hotels, transport services, and the retail trade are the primary beneficiaries, but indirectly also municipalities receive their share. Increases in tax revenues and better employment benefit the actors in the local communities even more widely (Piekkola, Suojanen & Vainio, 2014: p. 4).

The tourist's amount of money spent leads to direct income effects, i.e. a growth of demand in tourist industry enterprises. At the same time, the growth of demand leads to indirect income effects in enterprises servicing tourism enterprises and increases the total demand due to its employment-improving impact. Along with the growth of earned income, the economic impacts of tourism further transfer downstream to other enterprises due to increased demand and to the public sector as increased tax revenues (Piekkola, Suojanen & Vainio, 2014: p. 22).

3.2. Demand Analysis of Museums and Public Subsidies

Organizations undertaking the presentation of cultural activities may belong to the public or private sector. In this context, they are profit-oriented and non-profit organizations. Non-profit public museums finance their expenditures with the funds transferred from the state budget, allowing people to visit for a low price or free of charge.

The profit-oriented acts focus on profit maximization within the logic of market economy, while non-profit focuses on social benefit maximization and aims to increase participation with low price to support the increase in demand by considering budget balance.

Public museums can be defined as public good due to their free supply to all segments. There are also private non-profit museums that receive public subsidies. Determining a low price by supporting the budget balance in museums and supporting the increase in demand depends on the price elasticity of the demand for museums. With the information on price elasticities of demand, the budget deficits encountered in museology can be prevented, and the total social benefit can be increased by transferring the resources obtained by the state through taxes to more effective areas (Büyükyazıcı, 2016: p. 76).

In case the price elasticity of the demand is low, the increase in museum entrance prices will not reduce the visitor demand, thus increasing the museum income. Public subsidies will not be required in such a case. However, as the price elasticity of demand increases, a small increase in museum entry prices will significantly reduce visitor demand. Increasing the entry prices through efforts to achieve the budget balance will lead to a reduction in the benefits to society.

As it is seen, it is crucial to determine the price elasticity of demand for private museums receiving public subsidies. In addition, income elasticity should be considered in pricing. Determining the demographic characteristics (level of education, occupation, income level, etc.) of the demand is essential to be an indicator of future policy choices to increase the demand and to extend the benefits of a cultural activity like a museum to the whole society.

Museum visitors have better income and higher education than the average person. Furthermore, only a smallish portion of the country's population visit museums but they visit museums several times a year. According to the findings of this and previous studies, the visitor group is biased towards the middle-aged, managerial employees, clerical employees, and experts. For many persons belonging to these groups, it is typical to have higher incomes than the average. This study concluded that higher incomes also mean larger spending in connection with the trips. For this reason, the economic impact of trips made by museum visitors was greater than that of tourists on average (Piekkola, Suojanen & Vainio, 2014: p. 6).

However, it is difficult to determine how much public subsidy will be given to a property with externalities. Cause externalities cannot be priced. Consequently, uncertainties linger about how public subsidies will be submitted.

Although cultural activities have very serious externalities, their position in the hierarchy of needs is below. Therefore, in the developed countries, a significant part of the society has completed the basic needs of shelter and survival, and the state does not need to continue to wider projects for the economy, and the cost of subsidies for cultural activities is low. Otherwise, the necessity for subsidies to cultural activities such as museums to reach alternative places due to the presence of more urgent economic needs in most developing countries struggling with economic crises and where the income distribution is not fair does not justify such subsidies on economic grounds.

The source of subsidies is taxes. As it is known, today, taxes are taken according to the 'ability to pay' approach instead of 'utilizing' approach. Tax refers to the financial sacrifice, which takes its basis from the sovereign power of the state and made by the taxpayers on behalf of the society. It is essential for everyone to participate in these sacrifices in a balanced and fair manner. The state collects taxes from natural and legal persons and creates a public burden. This burden must be duly distributed to society. The main criterion that will provide it is the tax based on the ability of pay. When evaluating the subsidies for a museum, it is necessary to remember that the museum is financed by taxes collected from taxpayers who have a low or no chance of visiting the museum. For this reason, the result of the fact that the museums which benefit a small part of the society are financed with taxes imposed on the whole of society is controversial in terms of efficiency and justice.

In the evaluation of subsidies, the cost of the taxes imposed by the community should be greater than the social positive return in that area. In other words, in order for the state to reduce the opportunity cost to finance museums, the benefits from museums to the society should be higher.

When evaluated in terms of the per capita load created by subsidies, it is often not possible to say that the burden occurs at a fairly low level. In some countries, the cost of subsidies per capita is quite high. Moreover, given the fact that these subsidies are financed by taxes, the per capita calculation does not mean the same as the calculation for taxpayers. In the per capita calculation, the whole population is considered, but the financing of the burden is assumed by the taxpayers who represent only a certain percentage of this population (Kovancılar & Kahriman, 2002: p. 28).

4. Museums And Public Subsidies In Turkey

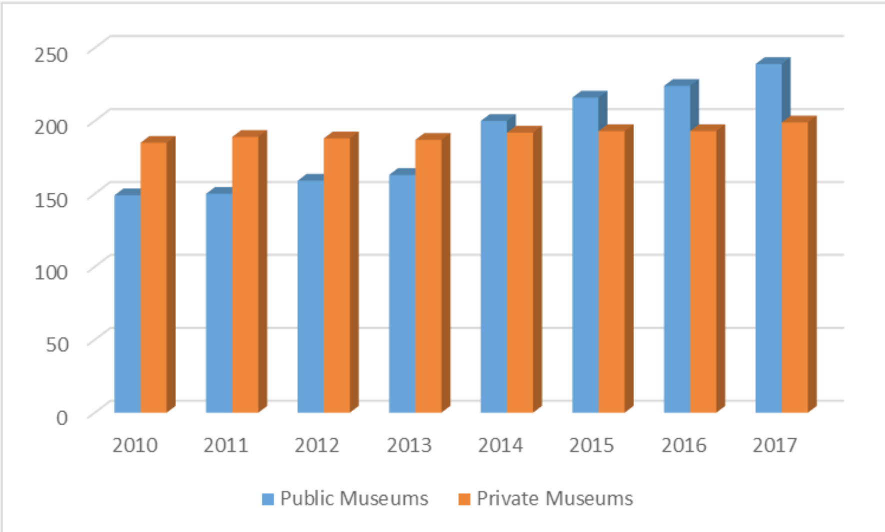
In addition to the share of public museums in the budget, it is not always necessary to determine a ticket price that will provide the budget balance since there are additional sources of income, such as public subsidies and private donations. Free museums and historical sites are also accessible.

Museums in Turkey serves as both the public and private sector organization. The private sector, Ministries, public institutions and organizations, real and legal persons and foundations can establish private museums containing all kinds of movable cultural assets for the fulfillment of their service subjects or objectives provided that permission is obtained from the Ministry of Culture and Tourism in accordance with Article 26 of the Law on the Protection of Cultural and Natural Assets.

4.1. Overview of the Museums in Turkey

The number of museums in Turkey is 334 in 2010, 149 of them are the museums under the Ministry of Culture and Tourism (public museums). The number of museums are 417 in 2015, 193 of them are the public museums. On the other hand, 224 of museums operating in 2015 in Turkey are private museums (TURKSTAT, 2017) (Graph 1). In 2018, the number of private museums increased to 244.

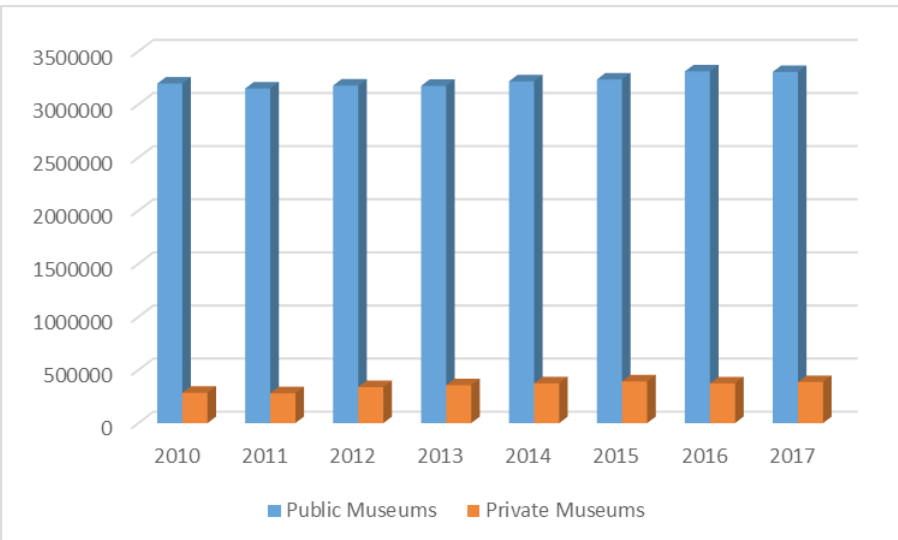
Graph 1. The Number of Museums in Turkey



Source : Turkish Statistical Institute (TURKSTAT) (2017). Cultural Heritage Statistics.

According to Graph 2, the number of artifacts in museums given above is different from each other. In 2010, there were 3,196 thousand artifacts in public museums, while the number of works in outnumbering private museums was only 285,6 thousand. In 2012, there were 3,277 thousand artifacts in public museums, while the number of works in outnumbering private museums was 339 thousand. In 2017, the number of artifacts in public museums increased to 3,306 thousand while it increased to 387 thousand in private museums (TURKSTAT, 2017).

Graph 2. The Number of Artifacts in Museums in Turkey

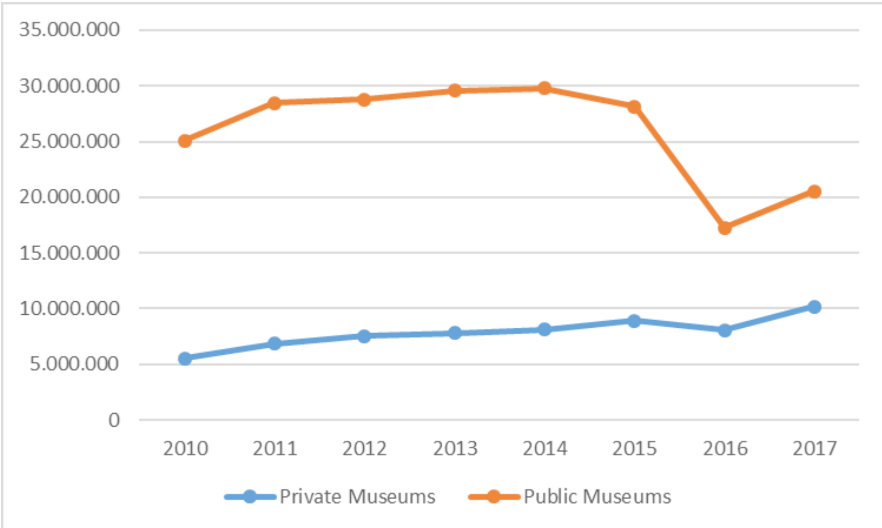


Source : Turkish Statistical Institute (TURKSTAT) (2017). Cultural Heritage Statistics.

The number of visitors of both public and private museums varies according to years. Cause the number of visitors depends on the volume of the tourism sector. In recent years, Turkish tourism has been severely damaged by the developments in internal and external conjuncture. TURKSTAT data shows that, the number of tourists visiting Turkey in 2015 was 39,5 million with a decrease of 9% compared to 2014. The number of tourists visiting Turkey in the January-June period of 2016 decreased by 21% compared to the same period of 2015 and was 13 million (TURKSTAT, 2017).

While the number of visitors to public museums was 25,1 million in 2010 and 29,8 million in 2014, the number of visitors in 2016 decreased by 35% to 17,2 million people. In 2017, 20,2 million people visited public museums (TURKSTAT, 2017) (Graph 3). The number of museum visitors is expected to increase by 20% by the Ministry of Culture and Tourism in 2018 and reach 25 million (Ministry of Culture and Tourism, 2018).

Graph 3. The Number of Museum Visitors



Source : Turkish Statistical Institute (TURKSTAT) (2017). Cultural Heritage Statistics.

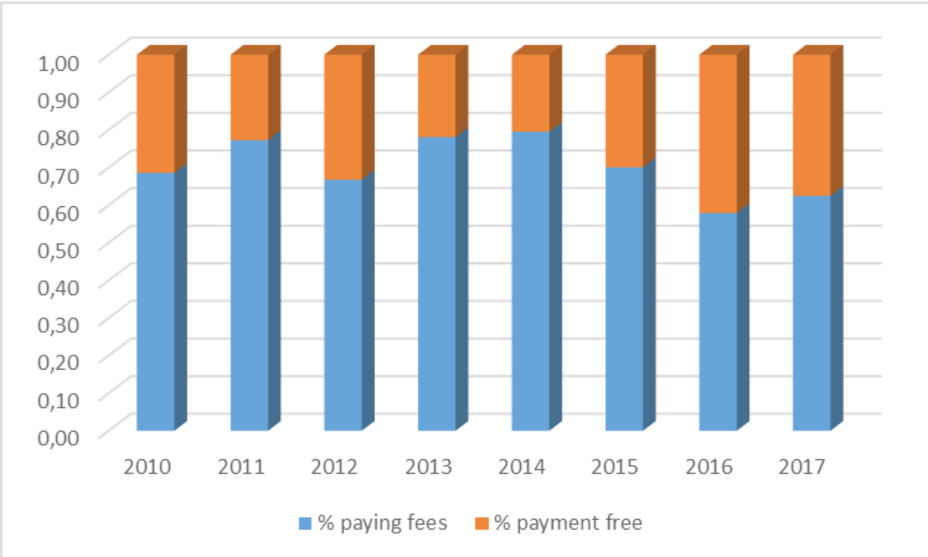
Graph 3 shows that, while the number of visitors to private museums was 5,5 million in 2010 and 8,1 million in 2014. Private museums was negatively affected by the contraction in the tourism sector. The number of visitors, which was 8,9 million in 2015 decreased by 10% in 2016 to 8 million people (TURKSTAT, 2017).

4.2. Finance and Public Facilities of Museum in Turkey

According to the Turkey Statistical Institute's, Cultural Heritage Statistics for 2017, the number of visitors paying fees for public museums in Turkey in 2014 was 23,7 million. Accordingly, the share of fee-payers in total visitors was 80%, whereas this figure decreased to 70% in 2015 with 19,7 million visitors. In 2016, the number of visitors paying fees for public museums is 9,9 million visitors. This figure decreased by 49% compared to the previous year, and the share in total visitors decreased to 58% (Graph 4).

The number of visitors to the payment-free museums is 6,1 million. Accordingly, the share of visitors paying fees for public museums was 20% in 2014, and this share increased to 30% in 2015 with 8,4 million visitors. In 2016, the total number of visitors decreased by 39% compared to the previous year, and the number of visitors visiting payment-free museums increased by 42% with 7,3 million visitors (TURKSTAT, 2017) (Graph 4).

Graph 4. The Number of Visitors in Public Museums (% share of visitors paying fees and % share of visitors payment free)



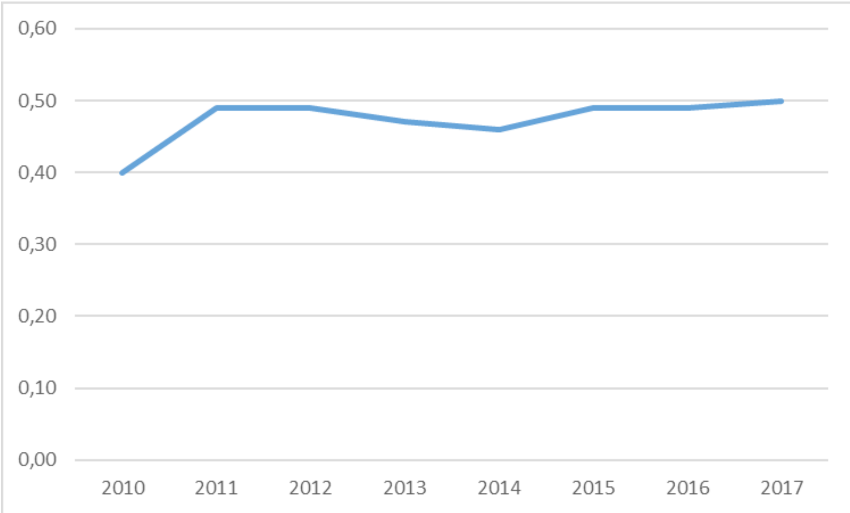
Source : Turkish Statistical Institute (TURKSTAT) (2017). Cultural Heritage Statistics.

In parallel with the increasing number of museums, in 2017, museum revenues increased by 13% compared to 2016 and reached 190 million TL. In the first month of 2018, an increase of 236% compared to the previous year transpired, and 14,5 million TL revenue was collected in January (http://www.hurriyet.com.tr/ekonomi/muze-ziyaretlerinde-tarihi-artis-40732783).

Public museums in Turkey operate depending on the Culture and Tourism Ministry. Ministries, such as any other spending agencies, receive funding from the public budget. The budget of the Ministry of Culture and Tourism was allocated as 1,1 billion TL in 2010, 1,8 billion TL in 2013, 3,5 billion TL in 2017 and 4 billion TL in 2018. For example, in 2018, the budget of the Ministry of Health was 37,5 billion, the Ministry of Labor and Social Security budget was 59,7 billion TL, the Ministry of Environment and Urbanization budget was 1,9 billion TL and the Ministry of Economy budget was 4,4 billion TL (Ministry of Finance, 2018).

While the share of the Ministry of Culture and Tourism from the overall budget was around 4% by 2010, it increased up to 4,9% after 2010. The share of the Ministry from the overall budget in 2018 is 5% (Ministry of Culture and Tourism, 2018: p. 160) (Graph 5).

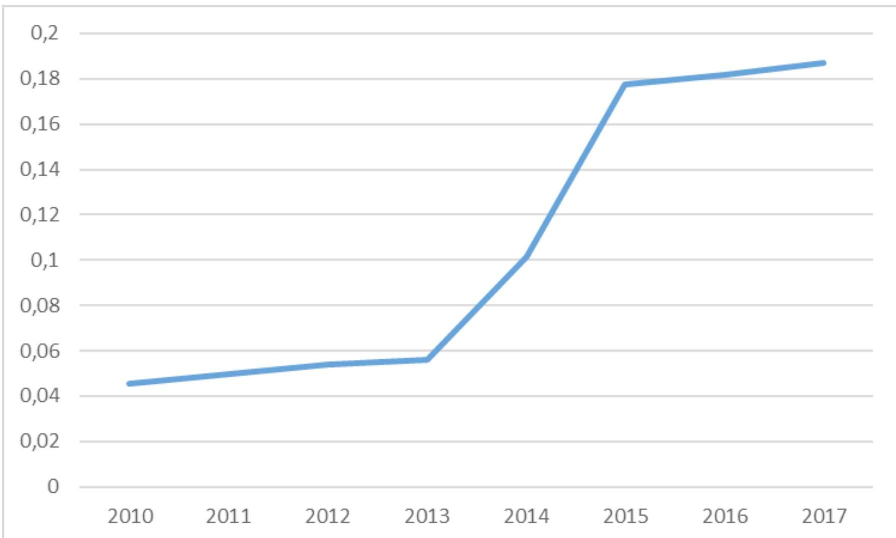
Graph 5. The Share of the Ministry of Culture and Tourism from the Budget (%)



Source : Ministry of Finance (2017). 2018 Central Government Budget Law Draft.

Expenses related to the museum in Turkey are mostly carried out by the General Directorate of Cultural Heritage and Museums of the Culture and Tourism Ministry. The General Directorate of Cultural Heritage and Museums is one of the 20 units within the Ministry and receives a share from the ministry's budget. This share was 5% in 2013, 18,5% in 2017 and 20% in 2018 (Graph 6).

Graph 6. The Share of the General Directorate of Cultural Heritage and Museums from the Ministry of Culture and Tourism Budget (%)



Source : Ministry of Culture and Tourism (2018). 2018 Budget Presentations.

According to this, 655 million TL was allocated to the General Directorate of Cultural Heritage and Museums in 2017 and 806 million TL in 2018 from the budget of the Ministry. The budget of the General Directorate is distributed almost equally to the current and investment expenditures (Ministry of Culture and Tourism, 2018: p. 161).

The design of the state's support for cultural activities is crucial. In our country, tax legislation has an incentive system for cultural activities. According to m. 193 89-7/j titled 'Other Discounts' Income Tax Law Act No. 193, in the determination of income tax base, 100% of the donations and grants they make down from the proceeds to be declared in the income tax return shall be subject to discount. In addition, in the determination of corporate tax base in accordance with Article 10-d/10 of the Corporate Tax Law numbered 5520, 100% of the donations and aids made by the corporation, respectively, on the corporate tax return, are shown on the corporate tax return:

According to the related articles and sub-paragraphs in the income and corporate taxes, "public administrations with special and public budget, provincial private administrations, municipalities, villages, public benefit associations, foundations granted tax exemption by presidency, institutions or organizations engaged in scientific research, or expenditures related to construction, repair or modernization of the library, museum, art gallery and cultural center which are supported or deemed appropriate to be supported by the Ministry of Culture and Tourism, and facilities exhibiting cultural and artistic activities such as cinema, theater, opera, ballet and concert" is subject to reduction.

In addition, according to Article 4a regulating exemptions in the Corporate Tax Law No. 5520, acquisitions from "schools, school workshops, conservatories, libraries, theaters, museums, exhibitions, sample nurseries, seed and animal development and production stations, racing venues, books, newspapers, magazine publishers and similar organizations operated by public administrations and organizations to teach, disseminate, develop and promote agriculture and animal husbandry, science, technical, and fine arts" exempted from corporate tax.

5. Conclusion

Merit goods reflect the paternalist state and also a market failure, due to the public administrators who believe that the best way to make decisions about the well-being of the society and the well-being of individuals is best achieved. At this point, financing of merit goods with public subsidy payments can be justified.

In this study, we question whether there is a need for state financing in cultural activities such as museums. We examined the main arguments of the state to support museums by subsidies, such as market failures, externality, merit goods and paternalism. As a result, we have found that some of these arguments for state support in museums are not strong enough and have critical directions and weaknesses. Factors leading to this judgment can be listed as follows:

- Determining the optimum price level for museums depends on knowing the price elasticities of the demand for museums. this elasticity is a problematic area. In cases where price elasticity of demand is high, subsidies will prevent the effective use of resources and increase the cost of subsidies.
- Knowing the price elasticity of the income of museum visitors is important in determining the optimum price and reducing the alternative cost of subsidies. Demographic characteristics of the demand should be closely monitored in order for the demand increase to be achieved and the benefits of a cultural activity such as a museum to be spread throughout society.
- Public museums are non-profit organizations. In Turkey, these organizations are financed by a share of the general budget of the Ministry. At this point, keeping the price low should not leave the aim of increasing participation.

- Government support for museums involves a number of contradictions between government and taxpayers. Such programs, representing small sums per capita, represent significant amounts in the overall total.
- The alternative cost of subsidies for cultural activities such as museums is rising in developing countries with economic stability and growth problems.
- Taxes, which are the source of subsidies, are taken according to the pay force approach and the burden of subsidies is spread to the whole society. The financing of all taxpayers, who are less likely to visit the museum, raises important efficiency and justice issues.
- Direct legislation can be used to correct market failures of merit property in the museum example. Public schools can decide for the implementation of museums and sightseeing programs at least once a year and implement subsidy payments on a school basis.
- Museums are the sub-sector of cultural tourism. Number of visitors of museums in Turkey, the number of foreign tourists decreased during the years of decline, the number of visitors to the viability of tourism is also increasing. Our museums and historical places in our country are organized according to foreign tourists. Due to the continuation of subsidies in museums, taxpayers of our country have financed foreign tourists.

6. References

Büyükyazıcı, D. (2016). Kültür ve sanat ekonomisi kapsamında talep analizleri yardımı ile kültür politikasına teorik yaklaşım: Türkiye örneği. *Uluslararası Bilimsel Araştırmalar Dergisi,* V:1, No:1, August, 71-83.

Hershey, P.T. (1985). A definition for paternalism. *The Journal of Medicine and Philosophy*, May (10)2, 171-182.

http://www.hurriyet.com.tr/ekonomi/muze-ziyaretlerinde-tarihi-artis-40732783

International Council of Museums (ICOM) (2013). *Museum Definition*, Accessed: Aug 23 2018, www.icom.museum/the-vision/museum-definition

Kovancılar, B. & Kahriman, H. (2007). Devlet-sanat ilişkisi: sanat desteklerinin dayandığı argümanlar. *Finans, Politik ve Ekonomik Yorumlar*, V: 44, No: 513, 21-33.

Maccario, N.K. (2002). Müzelerin eğitim ortamı olarak kullanımı. *Uludağ Üniversitesi Eğitim Fakültesi Dergisi*, V: XV, No: 1, 275-285.

Piekkola, H., Suojanen, O. and Vainio, A. (2014). *Economic Impact of Museums*. University of Vaasa, Levón Institute Publication 139a, Vaasa.

Republic of Turkey. Ministry of Culture and Tourism (2018). *2018 Budget Presentations.*

Republic of Turkey. Ministry of Finance (2017). *2018 Central Government Budget Law Draft*.

Turkish Statistical Institute (TURKSTAT) (2017). *Cultural Heritage Statistics*.

Yap, L. (2013). Can public subsidies to theatres, museums and art galleries be justified on economic grounds? Accessed: Aug 23 2018, https://lutheryap.wordpress.com/2013/05/10/can-public-subsidies-to-theatres-museums-and-art-galleries-be-justified-on-economic-grounds/

Yılmaz, Binhan E. (2018). *Maliye*, 3. Edition, Der Publisher, İstanbul.

8

TAXPAYERS' RIGHTS DURING TAX AUDIT IN TURKEY

Funda Tunçel[1]

Abstract

According to Tax Procedure Law, the taxpayer is the person who is responsible for tax liability. Taxpayers have formal and fiscal obligations that are legally arranged. Taxpayers are obliged to fulfill these obligations. Nevertheless, the rights of taxpayers are as crucial as their obligations.

Taxpayers' rights are entitled to taxpayers under taxation relationship. These rights provide legal security against violations. Taxpayers' rights guarantee fair and legal tax audits.

Tax audit of the taxpayers is an obligation that is the result of a declaration based tax liability. According to Tax Procedure Law, aim of the tax audit is to investigate and determine the accuracy of the taxes to be paid. Taxpayers may be subject to tax audit until the end of the expiry date. Although tax administration has a right to audit all of the taxpayers, taxpayers have some rights during the tax audit process. Rights of the taxpayer should be protected during the tax audit. Protection of the rights of the taxpayers during the tax audit is the responsibility of tax administration and tax audit personnel.

The main sources of taxpayers' rights during the tax audit are Tax Procedure Law and Regulation on Procedures and Principles to be followed in Tax Examinations. Additionally, guides and brochures prepared by the Ministry of Finance are accepted as secondary sources.

Keywords: *Taxpayers' rights, tax audit*

1. Introduction

Taxation is a debit and credit relationship between persons (legal entity or individual) and state. In this relationship, the creditor is the state and debtor is the person (Karakoç, 2011:190).

This mandatory relationship between taxpayer and state is maintained by tax laws. In contrast with that in the private law, legal positions of the two sides of the relationship are not equal. As a legal and mandatory partner, state has the authority to use force to get its share. Taxpayer is weak and indefensible against this overwhelming force due to his/her position[2] (Candan,2016:1).

Taxation process is a process in which both the tax administration and the taxpayer has legal responsibilities. However, since tax administration that has the major responsibility in the process is given the authority to perform

1 Marmara University

2 However, though the term protection here has a governmental content, tax payer right has an individual content. Because, there is an authority element in the term right. Right means an authority to demand from others to do something or to behave in a specific way. This authority is given to individuals by objective or positive law (Yaltı ;2006:2-3).

its duties, this authority should be restricted to protect rights of taxpayers. Thus, there are responsibilities for both tax administration and taxpayers and there are rights for tax payers (Başaran, 2013:25).

While tax obligation was accepted as a civic duty in the past, today tax obligation is expressed as a share for contributing to the costs of rights and freedom (Yaltı,2006:1). In this manner, rights of tax payers become as important as responsibilities of tax payers in tax obligation relationship that is maintained by laws.

In modern society, as taxpayer oriented approaches become more important, tax administrations tried to maintain feeling of confidence and voluntary adaption to taxes in order to achieve efficiency and justice in taxation. While regulations about taxpayer rights started in the 1990s in the USA, UK an Australia, these regulations became viable in 2006 by "Tax Payer Rights Declaration" published by the Revenue Administration Department in Turkey. However, this declaration does not include any rights beyond basic working philosophy of the tax administration. In 2014, Revenue Administration Department published "Guide for Rights and Responsibilities of Tax Payers". In this guide, tax payer rights have been explained. In terms of a tax audit, taxpayer rights have been explained in a brochure, named "Rights and Responsibilities of Tax Payers during Tax Audits". This brochure has been published by Tax Audit Board in 2016.

Aim of this study is to determine the sources of taxpayers' rights during tax audit process and thereby determine the problems that arise during the use of taxpayers' rights. The significance of the study arises from determining whether the taxpayers' rights that come from a variety of sources during the tax audit process are real rights.

In the study, conceptual descriptions will be made at the beginning. Then sources of taxpayers' rights and taxpayers' rights during tax audit process will be described. Finally, availability of these rights by taxpayers will be debated.

2. The Concepts of Right, Taxpayer And Rights of Taxpayers

The Right may be defined as the authority that is given to the person by the legal system. This authority includes the authority to demand the general authority that comes from the law system (Önen, 1991:216). The Right may be defined as authority and benefits that are seen as legally conservable and given by the founder government (Tiryaki:2008,30). According to another definition, right is a benefit that is protected by the legal system by giving the persons will of force (Gözler:2017,154). Determining and legally protecting the rights is important and necessary (*Mikhwane, 2018: 4).* Because sometimes it may be insufficient for a right to be recognized by the legal system. One aspect of this guarantee is to have the right owner to use the rights that are in the legal system; another aspect is to replace the right if the right is lost by the right owner without his/her approval (Gerçek et.al., 2015:27).

According to Tax Procedure Law, taxpayer is an individual or an institution that has tax liability. Taxpayer, means persons who have rights and responsibilities in the tax law relationship. As responsibilities of the taxpayer who constitutes the passive side of public law relationship are vital, rights of the taxpayer are also important under current conditions (Öncel et.al., 2010:71).

Examining the relationship between tax administrations and taxpayers defines the balance between authority and freedom (Tieghi, 2015:1). This reveals the responsibility-right relationship between tax administrations and taxpayers.

Taxpayer rights may be defined as the rights that would be claimed during taxation and that arise from basic human rights existing in the legal system, constitution, international agreement and that are protected by law and administrative regulations (Gerçek,2015:23).

When it is mentioned about taxpayer rights, one does not just refer to rights that are restricted with taxation. Basic rights of an individual existing in the general legal system as well as taxpayer rights of a taxpayer should be evaluated (Yaltı, 2006:3).

Taxpayer rights create a favorable impact about maintaining a sense of taxation and having the taxpayer adapt to taxation. Taxpayers become more deliberate and fulfil their responsibilities completely and timely due to protected tax payer rights. On the contrary, taxpayers tend to avoid fulfiling their responsibilities and cause reduction in public revenues when taxpayer rights are not protected (Buyrukoğlu et al., 2012:126).

3. Sources of Taxpayers' Rights

Sources of Taxpayers' Rights are constitution, international agreements in the form of constitution, declarations, administrative arrangements. When we classify these tax payer rights, tax payer rights may be evaluated as major and minor sources.

3.1. Major Sources

Major sources of taxpayers are the constitution, international aggreements and law.

3.1.1. Constitution

Constitution is a whole of rules that are at the highest level of all hierarchial norms and it is more difficult to alter it than any other laws (Gözler, 2009:12). The constitution is the major source of general rules about structure and basic qualifications of the state, rights and responsibilities of people, major parts and functions of the state (Oktar,2018:32). State of Law principle which is one of the constitutional principles, requires assuring basic rights and freedom (Öncel et.al., 2010:43).

Constitutional principles and regulations that assure fundamental rights of all people are also valid for tax payers. Equavalance before law, secrecy of private life, immunity of residents, freedom for vacation and communication, freedom for seeking justice, right to apply are all arranged in the constitution and they determine, direct and limit the actions to be taken against tax payers during the taxation process. Thus, though there are not direct regulations about tax payer rights in constitutions, general constitutional arrrangements create a baseline for tax payer rights (Yücedoğru, 2007:25).

The distinctive characteristic of constitution is that constitution indicates basic principles to be used in administering the state and other laws would not be incontintent with constitutional principles. So, constitution has a prominence and priority over all other laws. In this manner, using taxation authority is prominently limited by the constitutional principles of the state (Bakar, 2011: 23).

Constitution of the Turkish Republic is not a frame like constitution. Instead it is a regulative constitution that aims arranging everything in a detailed way. Thus, since arrangements about tax payer rights tale place in the constitution in a detailed way, this position seems to protect tax payer rights (Bakar, 2011:153).

3.1.2. International Agreements

Another source of taxpayer rights is international human rights agreements, international economic integration agreements and two or multi sided double taxation preventive agreements (Gökbel; 2000:32).

International agreements aim to determining and regulating tax payer rights. In some international agreements, there are direct or indirect regulations about tax payer rights in constitutions and tax laws of several countries. Tax payer rights are protected by assuring basic human rights in international human rights aggreements, international economic integration agreements and two or multi-sided double taxation preventive agreements (Çetin, 2010:23).

The supranational protection for tax payers appears in two forms. Some international agreements come into effect without a requirement for a secondary process after approval and acception. In the latter phase, agreemant becomes obligatory after a socondary signature. In order for tax payers claim a right arising from international agreements, local courts that would be applied should approve the agreement (Gökbel, 2000:33).

3.1.3. Law

Laws are written legal rules that are prepared by the authorized legislative body according to determined techniques and formats and come after constitution in hierarchical order (Kırbaş, 2012:24). Laws regulate details of principles of basic rules of the state that are determined by constitution (Gökbel, 2000:36-37).

Laws, that are the major source of tax law, are natural results of the principle of the legal status of taxes and principle of rule of law. Since taxation is related with basic rights and freedom, it constitutes the major reasoning of legal statute of taxes (Öncel et.al., 2010:44).

It is important for tax payer rights to be covered by laws for obtaining rights in the tax system and claiming these rights (Gökbel,2000:39). Thus Tax Procedure Law is an important source for claiming rights in Turkey. Moreover, Administrative Procedure Act and Law on Collection of Public Claims also include some regulations about tax payer rights. Besides, efforts toward positioning tax payer rights in laws cannot be ignored.

3.2. Minor Sources

Minor sources of tax payers are certificates, declarations and administrative arrangements.

3.2.1. Certificates and Declarations

Tax payer declarations is an attempt to summarize rights and responsibilities of tax payers with an unsophisticated language. Though most of the tax payer declarations and privileges introduce rules in tax systems, they do not possess legal document characteristic but they only constitute a guide for tax laws. They generally do not introduce additional rights and responsibilities beyond the ones already exist in the regulations (Çetin, 2010:25).

Each right depends on a legal rule (Kükrer:2017:16). However, most of these declarations are not strong as a law and they are in the form of documents that indicate service standards of tax administrations and good intention (Gökbel, 2000:2). Thus if there is not a clarity about the method for implementation of these declarations, these declarations that are without ability of law cannot go beyond becoming merely ethical and political opinion or an advice for written law (Özyörük, 1959:135). Because tax offices and governments demand flexibility in the guides prepared for themselves and demand authority (Gökbel, 2000:42).

It is clear that The "TaxPayer Rights Declaration" published in Turkey in 2006 is not arranged in a legal statute. It merely includes a systematic and brief declaration of tax Office about tax payer rights. Most of the articles in the declaration has informative character about the services of tax Office or includes targets for service quality. With this format, TaxPayer Rights Declaration" in Turkey is more an income administration's commitment of services to tax payers than being a declaration (Bakar, 2011:156-157). In fact, creating rights by declarations seem impossible in the law system in Turkey.

3.2.2. Other Administrative Arrangements

The sources of tax law that arise from executive authority are presidential decree, regulation, gereral communique, notice and tax ruling. Executive authority may entitle rights for tax payers. The most important sources associated with tax payer rights in Turkey are general communique and tax ruling. For example, Regulation on Procedures and Principles is the most important determinant administrative regulation about tax payer rights in tax audit process.

The admininstrative rights arising from decisions of executive authority may Pioneer tax payer rights to be included in the tax system as legal rights (Gökbel, 2000:44). For example, the arrangements in general communique may be added to laws or tax ruling presented to tax payers may be adopted and legalized.

4. Classification of Taxpayers' Rights

Taxpayers' rights are classified as general and special rights. According to this classification, general rights are the rights that are owned by all tax payers as a result of basic human rights. These rights are, the right to have fair, equal and respectful service, the right to obtain information, the right to apply, the right of determined taxation, secrecy of information about tax payers, the right to use agents, secrecy of private life. There is not a priority and hierarchical order among general rights. The provide assurance for all tax payers about conformity, application and validity of tax laws (Gerçek et.al., 2015:70).

Special rights are the rights that are introduced to tax payers when tax laws are applied to real events. Special rights may be listed as rights during imposing and collectting taxes, rights during tax audit and rights during the solution of tax conflicts (Candan, 2016).

5. Taxpayers' Rights During Tax Audit

Taxation relationship is founded by constitutional basis and regulated in terms of administrative law relationship. In order to maintain taxation relationship as it is defined in tax laws and have it executed in line with laws, tax payers should be audited, works, transactions, registers and books of the tax payers should be examined. Moreover, this examination process would serve performing constitutional principles such as generality, taxation by financial strength while taking into account determining financial strength (Soydan, 2015:243).

Since the principle of statement is valid in Turkish Tax system, accuracy of tax payer statements is merely determined by tax audit. Tax audit, that is used to examine, determine and maintain accuracy of taxes to be paid, is the most important and comprehensive method among tax examination methods (Tax Procedure Law, Article 134). According to 137. Article of Tax Procedure Law, individuals and institutions that should keep books and registers and submit documents are subject to tax audit.

The authority that constitutes the base for tax audit is an extension of state sovereignty, taxation authority and the budget right. Constitution and legal regulations are the sources of some basic rights and freedom that would be violated during tax audit (Soydan, 2015:243). In this manner, in Turkey, in which Continantal European legal system is applied, tax payer rights are regulated in constitution and tax laws[3].

There are formal rules that tax audit personnel should obey during tax audit process. As a matter of fact, these rules are explained as tax payer rights below. Not obeying the formal rules, in other words violating tax payer rights regulated by these rules may cause cancellation of taxation made due to this tax audit or may cause ignoring this transaction (Candan, 2016). Nevrtheless, there is not consensus among legal decisions about this issue.

Tax audit process refers to a time interval that begins with signing "tax audit beginning protocol" and ends with submitting the tax audit report to audit department of the tax audit personnel to be given to report evaluation commission. Tax payer rights during tax audit process would be listed as following.

5.1. The Right to View Identity of the Tax audit personnel

According to 136. Article of Tax Procedure Law, tax audit personnel who have the authority for tax examination is obliged to have a photograph attached identity card and present it before the tax examination. The same point also exists in the 10. Article of Regulation on Procedures and Principles to be followed in Tax Examinations. Thus this right results from both law and regulations.

The aim of these regulations is to create trust in tax audit personnel and have taxpayers submit their registers and documents to these personnel. In this manner, tax payers have a right to demand a photograph attached identity card from tax audit personnel and avoid submitting their registers and documents when a photograph attached identity card is not presented (Egeli et.al.,2012:140).

5.2. The Right to Know Subject and Extent of the Tax Audit

According to 140/1. Article of Tax Procedure Law, Tax audit personnel is obliged to clearly explain the subject of the tax audit before the beginning of the tax audit. Thus, tax payers have a right to know the subject of the tax audit. 11/ç. Article of Regulation on Procedures and Principles to be followed in Tax Examinations indicate that subject of the tax audit should exist in the Protocol of Starting the Tax Audit. Identity, title, address and field of

3 In the countries, where Anglo-Saxon law system is valid, administrative regulations about tax payer rights are more prominent since a broad judicial discrection is given to tax administration. However, articles in tax laws are restricted with rendering correctness and justice of these regulations. On the other hand, tax payer rights are regulated in tax laws since rules about taxation process are also strictly regulated by laws in the countries that apply Continental European law system (Gerçek,2006:8).

activity of the tax payer as well as kind, reasoning, subject and period of the tax audit should be included in a Protocol of Starting the Tax Audit

As a result, tax payers have a right to know the official reasoning of the tax audit, whether the tax audit bears a notice, extent of the tax audit in terms of taxes, the length of the examination period, kind and reasoning of the tax audit (Kükrer, 2017:206).

5.3. The Right to Demand Tax Audit to be Performed in the Address of the Taxpayer

Tax payers have a right to demand Tax Audit to be performed in the address of the tax payer according to 139/1. Article of Tax Procedure Law and Regulation on Procedures and Principles to be followed in Tax Examinations.

Performing tax audit in the address of the tax payer introduce two benefits for both tax payer and the efficiency of tax audit. Benefit of performing tax audit in the address of the tax payer for the tax payer arises from the fact that tax payer would not be under supression and feel free when the tax audit takes place in his/her own address. Benefit of performing tax audit in the address of the tax payer for efficiency of the tax audit is associated with the aim of the tax audit. Aim of a tax audit is to investigate and detect the event that causes taxation and context of the transactions that are related with this event. Since the event that causes taxation and context of the transactions that are related with this event occur in the address of the tax payer, in order to have the investigations and detections to give the expected results, the audit should be performed in the same place (Candan, 2016).

5.4. The Right to Demand Tax Audit in Tax Office due to Mandatory Requirements

Although tax audit should be performed in tax payer's address, tax audit would be performed in the tax Office under exceptional circumstances. According to 139/2. Article of Tax Procedure Law, tax audit would be performed in the tax Office when it becomes impossible to perform the tax audit in the tax payer's address due to some reasons, such as inconvenience of the workplace, death, quiting the business.

Council of State, in some sentences, accept examination in Tax Office by interpreting the following as a demand for examination in the tax Office: When tax payer submits registers and documents to tax Office without any objections and when tax payer does not provide any objections though he/she does not meet the demands of the tax Office. Moreover, Council of State accepts examination at the tax Office when the investigation subject may be detected just from registers and documents (Candan, 2016).

5.5. The Right to Demand Additional Term for Submitting Registers and Documents.

When tax payers are not able to submit their registers and documents until the end of the demanded period due to being under difficult conditions, they have a right to demand additional period.

Both 139/4. Article of Tax Procedure Law and 13/3. Article of Regulation on Procedures and Principles to be followed in Tax Examinations maintain that when tax audit is to be performed in the Tax Office, the tax payers who do not submit their registers and documents until the end of the specified period without a reasoning are accepted not to submit their registers and documents. Tax payers who assert a justified reasoning may be given additional period to submit their register and documents to the Tax Office.

Although giving additional term to submit their registers and documents to the tax Office is not clear in the relevant Law article, providing addition term to the tax payer seems to be valid since the timing of submitting registers and documents is determined. Because, determined timing should be long enough for the tax payer to submit his/her registers and documents to tax Office. This may be obtained only by determining the timing to provide the tax payer a sufficient length of period. Length of the period is not specified in the relevant law article. Thus, the length of the period should not be less than 15 days due to 14/2. Article of Tax Procedure Law. The tax payers who do not submit their registers and documents to the Tax Office without a reasoning are accepted not to submit these. The tax payers who provide reasoning are given additional period in line with the reasoning provided (Candan, 2016).

5.6. The Right to Demand Tax Audit Reports Consistent with Regulations.

According to 140/5. Article of Tax Procedure Law, tax audit personnel should not prepare a tax audit report that is not consistent with president decisions, regulations, comminuque and notice. However, if tax audit personnel detect that the regulations are not consistent with tax laws, they would inform Revenue Administration Department by preparing a report. This right has a position in the regulations. Meanwhile, tax audit reports are already evaluated by Report Evaluation Commission and tax audit reports that are inconsistent with regulations are returned to the tax audit personnel to be revised.

5.7. The Right of not to Demand Tax Audits to be Performed Out of Working Hours

According to 140/3. Article of Tax Procedure Law and 14/1. Article of Regulation on Procedures and Principles to be followed in Tax, except preparing protocol and taking precautions for safety, tax audit personnel should not make or continue examinations during out of official working hours without the permission of the tax payer.

5.8. The Right to Demand not to Interfere with Operations in the Workplace.

According to 140/3. Article of Tax Procedure Law, tax audit personnel should be careful about not to impact efficiency of the operations in the workplace and institutional and personal credibility of the tax payer negatively (Erol, 2010:116).

5.9. The Right to Demand Registers and Documents to be Received by a Protocol

Although there is not a regulation about receipt of registers and documents with a protocol, 12. Article of the Regulation explains this issue. Accordingly, registers and documents would be received by a protocol and this protocol should include the content of these registers and documents, as well as identities and signatures of the persons who submit and receive the registers and documents. However, during the tax audits, receipt of registers and documents without a protocol or with an undetailed protocol due to size of the documents or work load may cause violation of tax payer rights (Doğrusöz,2017).

5.10. The Right to Demand Information During Each Phase of Tax Audit.

The sixth right among the rights listed in the Brochure published in the web site of Revenue Administration in 2007 specifies that tax payers have a right to demand information about the audit process from the authorized personnel for tax audit during each phase of tax audit[4]. Thus, tax payers may demand information from tax audit personnel about the tax audit process during each phase of tax audit.

5.11. The Right to Demand the Expenses to be Repaid Arising from Physical Inventory Control

The expenses arising from physical inventory control that aims determination and valuation of current physical assets, receivables and payables would be paid to the tax payer by treasury as long as these expenses are approved by tax audit personnel (Tekin et.al., 2014:199); Tax Procedure Law, 134/2).

5.12. The Right to Benefit from Registers and Documents that are Seized

As a natural result of the tax payer's uninterrupted operational processes, 144/3. Article of Tax Procedure Law maintains that tax payers, under the supervision of tax audit personnel, have authority to examine, sample and register over registers and documents that are seized to be examined (Erol, 2010:118).

5.13. The Right to Demand Viewing Search Warrant

The tax payer may demand viewing search warrant during the tax audit when there is an official paper written by the tax audit personnel for demanding search warrant is submitted to the magistrate and when the magistrate permits this. Because search cannot be made without a search warrrant. In order for the tax payer to demand judicial remedy, a sample of the search warrant should be given to the tax payer.

5.14. The Right to Demand the Name of the Informer when Denunciation is Incorrect

According to 142. Article of Tax Procedure Law, in order to have the tax payer demand compensation in case of a search as a result of denunciation, tax payer may demand the name of the informer when the denunciation is incorrect.

5.15. The Right to Have a Consultant and/or Lawyer During Tax Audit

According to "Rights and Responsibilities of Taxpayers' During Tax Audits Brochure" published by Presidency of Tax Inspection Board, tax payers may have a public accountant, certified public accountant, chartered accountant or a lawyer with them during the meetings about tax audits or they may send authorized agents to these meetings. However, the agents of the tax payer should be legally authorized and the agency document should be submitted to tax audit personnel before the meetings.

Although there is no regulation about this issue in law and regulation, a number of tax audit personnel give this right to tax payers. Nevertheless, without leaving this issue to initiative of the tax audit personnel, this right may

4 Revenue Administration Department (2007). Vergi İncelemelerinde Mükellefin Hakları-İdarenin Yükümlülükleri Broşürü, (http://www.gib.gov.tr/sites/default/files/fileadmin/beyannamerehberi/vergi_incelemelerinde_haklar.pdf) 30.09.2018.

be regulated as a legal right. Because, the information provided by experts have a critical importance for progress of the tax audit.

5.16. The Right to Demand Tax Audit to be Finished in Legal Period.

According to 140. Article of Tax Procedure Law and 23. Article of Regulation on Procedures and Principles to be followed in Tax Examinations, tax audit personnel should complete the examination in one year after the beginning of the tax audit for complete tax audits and in six months after the beginning of the tax audit for restricted tax audits. Additional period would be demanded when the tax audit is not completed in these periods. This demand is evaluated by the departments of the tax audit personnel and additional period that would not be longer than six months may be given.

There is no clarity in law about the legal results when the tax audit cannot be completed even if additional period is provided. State council decides that these durations specified in law, though have an aim of accelerating public services, it is not clear when these durations are not met. When the tax audit cannot be completed at the end of the additional period, the negative outcome will arise for the tax payer and it is possible for these outcomes to become special losses (Candan,2016). Because, each tax audit that is not completed in time would result in as an additional cost in terms of default interest for the tax payer when there appears additional taxable basis as a result of the tax audit. Yet, in law states, persons would not be expected to bear losses that arise from delayed public services.

5.17. The Right to Demand Rejections and Views to be Written in Tax Audit Protocols

Taxpayers have a right to demand rejections and views to be registered in tax audit protocols (145. Article of Tax Procedure Law).

5.18. The Right to Demand Additional Period for Processing Registers

According to 146. Article of Tax Procedure Law, tax payer may make the registers that could not be made due to seizure of registers and documents during the search in a specified period, that is not less than one month, after the receipt of registers.

5.19. The Right to Demand a Document which Specifies that Tax Audit is Completed

According to 140/4. Article of Tax Procedure Law, tax payers may demand a document which specifies that tax audit is performed when tax audit is completed.

5.20. The Right to Demand Obey Tax Confidence

According to 5. Article of Tax Procedure Law and 15/1. Article of Regulation on Procedures and Principles, tax audit personnel would not reveal or use the secret information about the registers, business, corporation, wealth and job of the tax payer in behalf of themselves or in behalf of other persons. This prohibition will continue even if tax audit personnel leave their job.

In order to have tax payers use seeking justice and jurisdiction options, tax audit report as well as cited tax audit reports should be notified to tax payers. In this case, reasons such as belonging of the cited report to another party and privacy principle would not overwhelm right seeking of another tax payer (Doğrusöz,2017).

5.21. The Right to Demand a Copy of the Protocol

According to 141. Article of Tax Procedure Law, taxpayers may demand a copy of the tax audit protocol that is prepared during tax audit and demand rejections to be written in the protocol when there is a rejection.

5.22. The Right to Demand to be Listened by Report Evaluation Commission

According to 14. Article of Report Evaluation Commission Regulation, Report Evaluation Commissions may listen the tax payer when the commision finds it necessary or when upon the demand of the tax payer about tax audit reports prepared by tax audit personnel.

Listening the tax payer by Report Evaluation Commission is a type of right of defense that is given to the tax payer during the tax audit process. This regulation aims to have the tax assessments to be finalized by learning thought of tax payer about taxes and penalties arising as a result of tax audit and minimize conflicts (Kükrer, 2017:214). Although this mechanism seems correct, it is not clear how the tax payer would be listened by Report Evaluation Commission and how the defence right would impact administrative transaction. Since the administrative transaction is not completed, tax payer would not know the content of the tax audit report. In this manner, there are no rules about how the tax payer would be informed about tax audit report and the content of the report before the administrative transaction is completed in law and regulation except last meeting. Thus, if there is, tax payer would not know the content of tax assessments and penalty transactions. However, to be listened legally and agency right are seen as tax payer rights (Soydan, 2015:586).

5.23. Reconciliation Right

Taxpayer may demand reconciliaiton before or after the tax assessments about amount of the taxes assessed as additional assessments, arbitrary assessments or administrative assessments and penalty for loss of these taxes. The tax penalty for causing tax losses as a result of acts written in 359. Article of Tax Procedure Law and penalties of whom attended these acts are exceptions. The reconciliation method during tax audit process is reconciliation before tax assessments.

6. Conclusion and Evaluation

Beginning by particularly 2000s, regulations about taxpayer' rights have been made in Turkish tax law. However, regulations in the form of declarations, guides and brochures prepared by tax administration have neither been adapted by tax payers nor been validated by jurisdiction. Taxpayer's rights declarations should include guarantees that would create confidence of tax payers in tax administration. Otherwise, declarations would not be appreciated by the tax payers and confidence problem in tax administration would not be solved.

In Turkey, although tax payer rights declarations mostly include some rights fom constitution and tax laws, the sometimes include some rights that do not depend on a legal basis. Creating right does not seem possible by using documents like declarations. Declarations, that do not maintain protection for taxpayers, merely survives as indicators of good intention of tax administration.

A number of transactions that are maintained as tax payer rights seem to merely depend on initiative of tax audit personnel. Thus in order to have tax payer rights to be adapted in general, tax audit personnel should also be educated about tax payer rights.

Regulating some types of rights just by legal sources such as laws and regulations does not seem to sufficient. Since no sanctions are maintained in case of a right violation, tax payers do not adapt rights. Thus, proper legal sanctions should be regulated and effective implementation of these sanctions should be performed due to tax payer rights violations. Otherwise, tax payer rights will be quasi rights.

Tax audits are inseperable part of taxation transaction. In this manner, tax audits constitute the largest area for rights-responsibility relationship. Regulating tax payer rights well, making legal regulations in line with constitutional principles and assuring tax payers are important and necessary in tax audit process. Because, though most of the tax payer rights are regullated in constitutional norms and tax laws in Turkey, there are not clear statements or regulations about some basic rights such as fair, equal and respectful service right, determination right and representation right.

Tax audits are the largest area where tax payer rights are violated. The most important reason of this is that tax payer rights are not sufficient. Collaboration between tax audit personnel and tax payers as well as empathy of tax audit personnel would contribute to both maintaining voluntary adaption of tax payers to taxation and improving tax collection ratios.

Tax Procedure Law, that is formal law about taxation, has a structure that regulates responsibilities of tax payers and authority of tax administration. Tax payer rights have minor importance. In order to have tax payers be aware of their rights, another law or a separate chapter in Tax Procedure Law would be regulated that includes tax payer rights in a more systematic way. As responsibilities of tax payers are regulated as a separate chapter in Tax Procedure Law, tax payer rights would also be regulated separately. A party of tax payers and tax administration would negotiate during this legal regulation.

A number of regulations have been made about tax payer rights in Turkey from year to year. However, legal regulations should be made particularly about tax payer rights during tax audits and tax payers should be informed about jurisdiction option when there is right violation.

References

Bakar, F. (2011). Mükellef Hakları ve Türkiye'de Mükellef Haklarının Korunmasına Yönelik Öneriler, Yayınlanmamış yüksek lisans tezi, Bursa, Uludağ Üniversitesi.

Başaran, F. (2013). Vergi Ödevi İlişkisinin Tarafları Üzerinden Alman Vergilendirme Usulü (Hukuk Devleti Bakış Açısıyla), Ankara, Seçkin Yayınevi.

Buyrukoğlu, S; Erasa, İ. (2012). Vergi Bilincinin Oluşmasında Mükellef Haklarının Yeri ve Önemi, Vergi Dünyası, Sayı:375.

Candan, T. (2016). Vergi İncelemeleri Bağlamında Mükellef Haklarına Danıştay'ın Bakışı, (https://turgutcandan.com/2016/03/04/vergi-incelemeleri-baglaminda-mukellef-haklarina-danistayin-bakisi/)29.09.2018.

Çetin, G. (2010).Mükellef Hakları ve Vergiye Gönüllü Uyum, Yayınlanmamış doktora tezi, Manisa, Celal Bayar Üniversitesi.

Doğrusöz, B. (2017). Mükellef ve Hakları, Dünya Gazetesi (https://www.dunya.com/kose-yazisi/mukellef-ve-haklari/347873) 29.09.2018.

Egeli, H.; Dağ, M.(2012). Vergi Hukuku Açısından Mükellef Haklarının Değerlendirilmesi, Maliye Dergisi, Sayı:163.

Erol, A. (2010). Vergi İncelemesi ve Mükellef Hakları, İstanbul, İSMMMO Yayın No:133.

Gerçek, A. (2006). Vergilemede Mükellef Hakları ve Türkiye'deki Durumun İncelenmesi, Vergi Sorunları Dergisi, Sayı:209.

Gerçek, A.; Gerger, G.Ç.; Taşkın, Ç.; Bakar, F.; Güzel, S. (2015). Mükellef Hakları, Türkiye Perspektifi ve Geliştirilmesi, Ankara, Seçkin Yayıncılık.

Gökbel, D. (2000). Mükellef Hakları, Yayımlanmamış Doktora Tezi, Eskişehir, Anadolu Üniversitesi Sosyal Bilimler Enstitüsü.

Gözler, K. (2009) Kısa Anayasa Hukuku, Bursa, Ekin Kitabevi.

Gözler, K.(2010).Hukukun Temel Kavramları, Bursa, Ekin Kitabevi.

Karakoç, Y. (2011). Genel Vergi Hukuku, Ankara, Yetkin Yayınları.

Kırbaş, S. (2012). Vergi Hukuku, 19. Baskı, Ankara, Siyasal Kitabevi.

Kükrer, C. (2017). Türk Vergi Sisteminde Mükellefin Hakları, Ankara, Nobel Yayınları.

Mikhwane, E.(2015) Challenges in "Operationalizing" Taxpayer Rights, International Conference on Taxpayer's Rights, 2015 Conference Papers - Washington, DC (https://taxpayerrightsconference.com/wp-content/uploads/2015/11/Mkhawane_ChallengesinOperationalizingTaxpayerRights.pdf) 28.09.2018

Oktar, A. (2018). Vergi Hukuku, İstanbul, Türkmen Kitabevi.

Öncel, M.; Kumrulu, A.; Çağan, N. (2010). Vergi Hukuku, Ankara, Turhan Kitabevi.

Önen, M. (1991).Hukukun Temel Kavramları, İstanbul, Der Yayınevi.

Özyörük, M. (1959). Hukuka Giriş, Ankara, Ege Matbaası.

Rapor Değerlendirme Komisyonlarının Oluşturulması İle Çalışma Usul ve Esasları Hkakında Yönetmelik, RG No:28101, RG Tarihi:31.10.2011 (https://www.vdk.gov.tr/File/?path=ROOT%2f1%2fDocuments%2fDosya%2fRAPOR%20DE%C4%9EERLEND%C4%B0RME%20KOM%C4%B0SYONLARININ%20OLU%C5%9ETURULMASI%20%C4%B0LE%20%C3%87ALI%C5%9EMA%20USUL%20VE%20ESASLARI%20HAKKINDA%20Y%C3%96NETMEL%C4%B0K_(g%C3%BCncelleme%2031.10.2015).pdf) 30.09.2018.

Revenue Administration Department. (2014). "Guide for Rights and Responsbilities of Tax Payers". (http://www.gib.gov.tr/sites/default/files/fileadmin/beyannamerehberi/mukellefinhakveodevleri2014.pdf) 30.09.2018.

Revenue Administration Department. (2007). Vergi İncelemelerinde Mükellefin Hakları-İdarenin Yükümlülükleri Broşürü,(http://www.gib.gov.tr/sites/default/files/fileadmin/beyannamerehberi/vergi_incelemelerinde_haklar.pdf)30.09.2018.

Revenue Administration Department (2006). "Tax Payer Rights Declaration" (http://www.gib.gov.tr/mukellef-haklari-bildirgesi) 30.09.2018.

Soydan, B. (2015). Türk Vergi Hukukunda Vergi İncelemeleri, İstanbul, Oniki Levha Yayınları.

Tax Audit Board (2016)."Rights and Responsibilities of Tax Payers during Tax Audits Brochure". (https://www.vdk.gov.tr/File/?path=ROOT%2F1%2FDocuments%2FDosya%2FVergi%20%C4%B0ncelemelerinde%20M%C3%BCkellef%20Hak%20ve%20Y%C3%BCk%C3%BCml%C3%BCl%C3%BCkleri%20Bro%C5%9F%C3%BCr%C3%BC.pdf)30.09.2018.

Tekin, F., Çelikkaya, A. (2014). Vergi Denetimi, Ankara, Seçkin Yayıncılık.

Tieghi,G. (2015). Taxpayer Rights: a constitutional perspective The Italian Taxpayer Bill of Rights 15 years on ' at the top of the world' . But what about effectiveness?, International Conference on Taxpayer's Rights, 2015 Conference Papers - Washington, DC (https://taxpayerrightsconference.com/wp-content/uploads/2016/08/Tieghi_Final_Paper.pdf)28.09.2018

Tiryaki, R. (2008). Ekonomik Özgürlükler ve Anayasa, Ankara, Yetkin Yayınları.

Vergi İncelemelerinde Uyulacak Usul ve Esaslar Hakkında Yönetmelik, RG No:28101, RG Tarihi:31.10.2011 (http://www.gib.gov.tr/node/86783)30.09.2018.

Yaltı, B. (2006). Vergi Yükümlüsünün Hakları, İstanbul, Beta Yayınları.

Yücedoğru, R. (2007). Türk Vergi Sistemi Açısından Mükellef Hakları, Yayınlanmamış Yüksek lisans tezi, İstanbul, Marmara Üniversitesi.

Public Sector Economics & Development

This book is one of the products of the Ninth International Conference of Political Economy (ICOPEC) held in September 2018 at Panteion University with the main theme "10 years after the Great Recession: Orthodox versus Heterodox Economics". This conference was co-organised by the Faculty of Economics of Marmara University, the Greek Association for Political Economy (GAPE), and the Department of Social Policy of Panteion University. This volume contains eight selected papers that benefited from comments and discussion during the conference and subsequently improved significantly. They analyze the relationship between the public sector and economic development.

IJOPEC PUBLICATION
London ijopec.co.uk Istanbul

ISBN 978-1-912503-62-9
9 781912 503629

Public Sector Economics & Development

M. Mustafa Erdoğdu
Michel S. Zouboulakis
Sevda Mutlu Akar
Başak Turan İçke

IJOPEC PUBLICATION
London ijopec.co.uk Istanbul