Handbook of Research on Global Enterprise Operations and Opportunities

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Chapter 13
Determinants of Public Spending Composition in OECD and MENA Countries: A Political Economy Approach

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ABSTRACT

This paper examines the determinants of different public spending components in the OECD and MENA countries from a political economy perspective. The authors primarily concentrate on partisan motivation approach. Yet, they control for macroeconomic and institutional variables besides the political economy variables in the estimations. They use panel data estimation with country and year fixed effects (two-way fixed effects model) covering the period of 1980 and 2008. Regarding the estimation results of the OECD countries sample, compared to a presidential system, in assembly – elected president and parliamentary systems expansions in public agriculture, education, health, defense, and social protection spending are supported more. Among the macroeconomic variables, current account balance and GDP per capita turn out to be statistically significant. Regarding the estimation results of the MENA countries sample, it is found that right – wing ruling parties support higher levels of public spending in various areas.

INTRODUCTION

This chapter examines the effects of economic, political economy and institutional factors on different public spending components for OECD (Organization of Economic Cooperation and Development) and MENA (Middle East and North Africa) countries during the period 1980-2008. The authors concentrate on six public spending components: agriculture, education, health, defense, social protection, and transportation – communication. The authors argue that the political decision making process about the public spending levels and composition are affected by not only macroeconomic factors but also by political and institutional factors. Two streams of political viewpoint are usually focused in the related literature.

DOI: 10.4018/978-1-5225-2245-4.ch013
According to the opportunistic approach, in order to attract more electorate votes, win the elections, and be reelected into office the incumbent government’s members can engage into expansionary fiscal policy and increase public spending levels especially on more visible public spending components. On the other hand, if the incumbent government’s policy makers expect to lose the next elections and be replaced by a rival political party, then they may still pursue expansionary fiscal policy designs, this time to increase the public debt burden on their rival political party in the next term.

In this chapter the authors mainly concentrate on the partisan theory and partisan motivation approach. According to partisan theory welfare state and redistributive public finance management can be explained by partisan factors. Partisan theory is usually broken down into two research streams: Power resources theory and party difference theory. Power resources theory argues that the major responsibility of political parties is to reflect different socio–economic classes’ interests in their policy implementations and act upon those groups’ behalf (Guleryuz, 2013, Bradley et al., 2003, Hicks, 1999, Huber and Stephens, 2001, and Esping-Andersen and Korpi, 1985).

Party difference theory argues that political parties forming the government can affect public policy outcomes, so public policies are not determined by macroeconomic and institutional (exogenous) factors. Furthermore, left – wing and right – wing government parties follow different agendas, and so they pursue different policy objectives. The reasoning behind this statement is that political parties form their policy choices and strategies based on their social class-based constituencies’ objective economic interests. In this way they can actively use the public policy outcomes which they achieve for the appeal and consolidation of their core electoral base (Hibbs, 1977 and 1987, Schmidt, 1996, Castles, 1982, and Busemeyer, 2009). Therefore, different political parties have conflicts over distribution of economic resources, aggregate income and welfare. Related studies state that since right- wing parties represent capital owners and upper income groups they don’t support expansionary fiscal policies. Contrary to this, left – wing parties are supported by low income groups, so they pursue more redistributive public policy preferences (Huber and Stephens, 2001). This can also be exemplified in public education sector. Social democratic parties that are left – wing prefer to invest more in public education (human capital accumulation) to purposefully direct aggregate wealth towards less privileged groups and achieve a more egalitarian society. On the other hand, right- wing parties such as conservative parties prefer policies that will lead to free market outcomes and private sector solutions, and decrease the tax burden of their upper income class electoral base rather than pursuing higher public education spending which favor low income groups (Boix, 1998).

Some recent studies propose ‘the new partisan politics of public investment’ (Busemeyer, 2009, Iversen 2006a and 2006b). According to this view, political parties observe opinions and preferences of various socio–economic classes in different areas. Then, they essentially utilize public policies to attract and appeal to new voter groups, while simultaneously consolidating their core electoral base constituencies.

The authors are interested to evaluate if the officers of the political party in power are interested to implement policy measures to please their constituents. The variables related to political regimes are also controlled in the estimation. These variables are usually used to measure political fragmentation. Moreover, the authors will control variables about institutional quality and political party affiliation / orientation. The authors adopt a fixed effects model and a panel data estimation. The primary reasons of using fixed effects model and panel data estimation are that compared to cross-country estimation this model provides less collinearity, more variation, and it better examines the dynamics of change (Guleryuz, 2015). For the empirical analysis, partisan motivation is the primarily used political economy approach. Furthermore, the authors examine the impact of the political regime on fiscal policy and public
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spending composition. The dependent variable in the subsequent regressions is the public spending on one of the six spending components. The authors derive the data for public spending composition from the Statistics of Public Expenditure for Economic Development (SPEED) database. Other important data sources are the World Development Indicators (WDI) (2012) from the World Bank, Database of Political Institutions (DPI), and CANA database which covers areas such as innovation and technological capabilities, education and human capital, infrastructures, economic competitiveness, social capital, and political and institutional factors.

According to the partisan approach political parties maximize different objective functions. For example, left-wing parties favor policies fighting unemployment while right-wing parties prioritize policies that fight against high inflation. Compared to opportunistic policy makers’ short-term goal of winning the next election and their policy preference accordingly, partisan policy makers focus on achieving ideological goals and winning elections to impose policies to please their voters. Hibbs (1977 and 1986) uses an expectations and macroeconomic framework to explain the partisan approach. Nonhomogeneous voter groups support different ideologies, and so they would have various objective functions (Nordhaus, 1975). According to this view it is usually the case low income groups make up the electoral base of left – wing parties, so left – wing parties’ policy makers will support more redistributive public finance and expansionary fiscal policies. In contrast, upper middle and high income groups build up the fundamental electoral base of right – wing political parties. These income groups would not support redistributive economic policies that would benefit the broad sections of the society at the expense of carrying a higher tax burden. Hence, right – wing party representatives prefer to implement public finance and fiscal policies taking into account their electoral base’s preferences. In this respect, left-wing political parties take policy measures to reduce unemployment at the expense of higher inflation. On the other hand, right-wing political parties fight against high inflation even their policies are likely to cause higher unemployment. The reason for this notion is that usually middle or low income groups which are more sensitive to the negative effects of high unemployment make up the constituency base of left-wing parties. Contrary to this, capital owners who are inflation-averse are the usual voters of right-wing parties. Hence, the party in office often imposes macroeconomic policy to protect and reflect its constituency’s interests, and according to the expectations model, voters are aware of these policy variations.

Another partisan viewpoint has received considerable attention recently. The strategic debt behavior models propose that through fiscal policy actions the policy makers in the incumbent government can impact the economic environment where the future government’s policy makers will function (Alesina & Tabellini, 1990; Persson and Svensson, 1989; and Pettersson, 2001). Especially, if the incumbent and future governments have different standpoints on fiscal policy, and also if the incumbent government does not expect to win the next election, then it has the opportunity to use the current public debt strategically to influence the future government’s fiscal policy actions. Since policy makers in office at different times would like to benefit from this debt policy strategy this may cause over accumulation of public debt. Furthermore, according to both traditional and rational partisan models, left-wing governments prefer to implement a more expansionary fiscal policy and experience larger budget deficits compared to right-wing governments.

In the institutional arrangements literature political fragmentation approach is often concentrated due to its effect on public finance. There are studies which examine the effect of voter, parliament and government fragmentation on fiscal performance. The models focus on disagreements among policy makers in decision making. The deeper the conflicts among parties and policy makers, the more difficult
it becomes to successfully manage fiscal policy (Roubini and Sachs, 1989; Alesina and Drazen, 1991). Moreover, government, parliamentary and voter fragmentation may cause greater public deficits. Short-lived governments are also associated with greater budget deficits. Public debts and budget deficits can be greater in proportional electoral systems than in single-party government where finance minister is usually stronger and also the fractionalization of government tends to be positively correlated with the degree of proportionality of the electoral system.

The two explanatory variables of interest which the authors are interested to examine their respective impacts on the public spending components are the political system of the country and the ruling executive party’s orientation. Political system is broken down into three categories as parliamentary, assembly – elected president and presidential. The ruling executive party’s orientation is divided into three groups: right – wing, left – wing and center parties. The authors also control vectors of macroeconomic variables including current account balance, GDP per capita, dependent population percentages etc., and institutional variables including checks – balances, civil liberties, political rights etc. The authors estimate the benchmark regression with two samples: OECD countries sample (including observations for 23 countries) and MENA countries sample (including observations for 13 countries).

Regarding the estimation results of the OECD countries sample, compared to a presidential system, in assembly – elected president and parliamentary systems expansions in public agriculture, education, health, defense, and social protection spending are supported more. These may be due to the case that in assembly – elected president and parliamentary systems negotiation and governance responsibilities are divided among multiple policy makers causing a larger public goods provision and more welfare programs (Grilli et al., 1991, Persson, 2002, Persson and Tabellini, 2002). Among the macroeconomic variables, current account balance and GDP per capita turn out to be statistically significant. Regarding the estimation results of the MENA countries sample, it is found that right – wing ruling parties support higher levels of public spending in various areas. The authors discuss the estimation results more in detail in the conclusion section.

More specifically, we try to answer the following questions: Which factors explain the variation in agriculture, social protection, education, health, transportation – communication, and defense spending in OECD and MENA countries, and Turkey? What is the relative explanatory power of macroeconomic, institutional and political economic factors? What different experiences have OECD countries, MENA countries, and Turkey had in terms of public finance management and public spending composition? Following the introduction to the subject in the first section, section 2 reviews the related literature, section 3 presents the empirical analysis. Section 4 proposes an analytical comparison between Turkey, and OECD and MENA countries, so discusses Turkey’s case more specifically. Section 5 presents the conclusion.

**RELATED LITERATURE**

When the literature about the partisan approach and party differences approach is examined the authors observe various valuable contributions. Castles (1982) finds out that right – wing parties’ participation into the government is negatively correlated with public education spending, and it is statistically significant. Other studies argue that specific party groups such as Christian democratic, social democratic parties pursue policies supporting higher social spending and larger welfare state (Hicks and Swank, 1984, Huber and Stephens, 2001). Regarding the institutional quality and framework factors, stronger
veto structures are found to slow down social policy implementations and negatively affect public expenditures in different areas (Hicks and Swank, 1992, Huber et al., 1993). In the empirical analysis in this chapter the authors find the institutional variable ‘checks and balances’ exerts a similar negative impact on different public spending components. As the fiscal decentralization, the tax autonomy of lower – level government sections, rises this positively impacts public spending, especially in the education field (Stegarescu, 2005). Castles (1982), Meltzer and Richard (1981) argue that increases in democracy level are positively correlated with public expenditure. When democracy gets stronger in a society, this indicates that middle and low income groups will support more redistributive fiscal policies through using their voting power. This impact will increase public spending levels in different fields.

In the stream of partisan motivation approach, Boix (1997 and 1998), and Garrett and Lange (1991) largely argue that political party executives pursue certain policy goals in order to reflect their fundamental constituency base’s economic and social preferences, this is a social class – based approach. Schmidt (1996) further states that policy makers also use policy implementations to achieve the consolidation of their core voter groups. On the other hand, Iversen (2006a, 2006b) and Busemeyer (2009) argue that political parties use certain fiscal policy tools and enforce specific policies to not only securely consolidate their core constituency bases, but also to attract and appeal new voter groups.

Rogoff (1990) concentrates more on the opportunistic approach. According to this study, in the pre – electoral periods, policy makers direct more fiscal funds into visible and short – term consumption goods spending rather than invisible but durable investment items in order to earn more voter support and influence election results on their behalf. Furthermore, Drazen and Eslava (2005) argue that during pre – electoral periods when the number of swing voters increases, the incumbent government’s policy makers invest more into visible public services to attract these voters.

Rational partisan models usually predict that the right – wing and left – wing partisan influences on the production and unemployment turn out to be short – lived whereas the changes in the inflation rate linger longer after the elections (Alesina, 1987 and Swank, 1993). Alesina and Tabellini (1990), and Persson and Svensson (1989) propose political economy models related to strategic debt management. They mainly argue that if the incumbent party predicts to be replaced by a rival political party in the next election, then its policy makers implement fiscal, public policies based upon their and their constituencies’ preferences which can be opposite to those of the rival party. In this way, the incumbent party also increases the prospective public debt burden on the policy makers of the rival party.

In other studies, coalition governments, a higher number of policy makers, a bigger swing voter base, and short – term governments are associated more with low degree fiscal discipline and high public budget deficit (Alesina and Drazen, 1991, Perotti and Kontopoulos, 2002, De Haan and Sturm, 1997, Spolaore, 2004, and Persson and Tabellini, 2002). Political party executives will be more motivated to increase public spending if they try to appeal to swing voters. The more intense disagreements among higher number of policy makers gives way to higher public spending.

**EMPIRICAL ANALYSIS**

The authors primarily aim to examine the effects of political system and political orientation of the government party on various public spending items. The econometric analysis method adopted by the researchers is a panel data estimation covering the period 1980 – 2008. In what follows, the variables and estimation method will be discussed in detail.
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Dependent Variables

The dependent variables used in the regressions are the six components of the public spending composition: agriculture, education, health, defense, social protection, and transport-communication expenditures. These variables are defined in terms of constant 2005 U.S. dollars in order to maintain comparability. The data source for the dependent variables is the Statistics of Public Expenditure for Economic Development (SPEED) database compiled by the International Food Policy Research Institute (IFPRI).

Independent Variables

The authors aim to use a set of partisan, institutional, and macroeconomic variables in the regressions. Partisan variables determine the motivations and strategies of politicians behind their actions. Institutional factors determine the nature and quality of governance and resources of politicians. Macroeconomic variables determine the total consumer demand and economic resources available for policy enforcement (Busemeyer, 2007). The two primary independent variables of interest whose effects on the public spending components are the political system (polsystem in the tables) and the ruling political party’s orientation (orientation in the tables) with respect to economic policy. The statistics for these two variables are the Database Political Institutions (DPI 2012) (Beck et al., 2001). Political system variable covers three categories as parliamentary, assembly-elected president and presidential. Political systems where the president is elected directly, and he/she has veto power, can appoint a prime minister, and can dissolve the parliament are defined as presidential. If the president is elected by the legislature, then the system is defined as parliamentary. If the parliament has to dissolve itself to make the president resign, then the system is defined as assembly-elected president. The ruling party’s orientation is classified into three categories; right, left and center. Conservative, Christian democratic, or right-wing political parties are considered as right. Communist, socialist, social democratic, or left-wing parties are classified as left. When the executives of a party both advocate free market economy and have a social – liberal economic agenda, then that political party is called a center party.

The vector used to control macroeconomic conditions includes current account balance, GDP per capita, GDP per capita growth rate, unemployment rate, young population percentage, old population percentage, inflation rate, and Gini inequality index. The authors also control tertiary school enrollment in education spending regressions. The data sources for these variables are the IMF Economic Outlook, the World Bank Development Indicators (2012) and the CANA dataset. The CANA dataset is a panel dataset including indicators related to national systems, economic growth, and development constructed by two researchers (Castellaci and Natera, 2011).

The macroeconomic conditions in a country certainly have an influence on public spending. The macroeconomic performance measured by GDP per capita which shows long run effect and GDP per capita growth rate which shows business cycle short run fluctuations determines the amount of economic resources available for public spending. Therefore, the authors control GDP per capita and GDP per capita growth rate in the regressions. Current account balance can act as a fiscal constraint over public finance policy decisions. Unemployment and inflation rates can influence policy makers’ motivations about public spending amounts. For instance, a high unemployment rate may positively affect social protection spending levels. A high inflation rate may delimit the public spending amount since it decreases the purchasing power of money. When the income inequality (measured by the Gini inequality coefficient) in a society widens, this can affect public spending composition and levels in a way to alleviate
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The negative impacts of high income inequality. The demands and needs of young and old populations can significantly affect public spending dynamics and levels (Pinho, 2008).

The authors use a set of variables to capture the institutional constraints and the quality of governance. The variable, checks – balances, is derived from the Database Political Institutions. Corruption index, women’s rights, political rights, civil liberties, democracy – autocracy index, legislative electoral competitiveness, and executive electoral competitiveness are derived from the CANA dataset.

Econometric Specification

The authors’ goal here is to estimate the impacts of political system and political orientation of the government party on public spending components. In order to eliminate the possible omitted variable bias and other causality problems observed in cross-country studies a two-way fixed effects (FE) model is used. Country and year fixed effects are controlled in a panel data estimation covering the period 1980 - 2008 for 23 OECD and 13 MENA countries. The OECD countries include Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States. The authors select the countries which became OECD members before 1980. The MENA countries include Algeria, Bahrain, Egypt, Iran, Israel, Jordan, Kuwait, Lebanon, Morocco, Oman, Qatar, Tunisia, and Yemen. The MENA countries are selected based upon the World Bank’s country groupings and data availability. Panel data estimation provides more data variation and less collinearity, and it better examines the dynamics of changes (Guleryuz, 2015). The benchmark estimation is written in Equation (1) as the following,

\[
\text{publicspending}_{it} = \beta_0 + \beta_1 \text{system}_{it} + \beta_2 \text{orientation}_{it} + \\
\beta_3 \text{macroeconomic}_{it} + \beta_4 \text{institutions}_{it} + \sigma_i + \mu_t + \varepsilon_{it}
\]  

where public spending is the dependent variable and one of the six public spending components, \(\sigma\) represents country fixed effects, \(\mu\) captures time fixed effects, and \(\varepsilon_{it}\) is the error term. System is the political system and orientation is the political orientation of the ruling party. These two variables are composed as dummy (qualitative) variables. The political systems, assembly – elected president, parliamentary, and presidential take up the values 1, 2, and 3 respectively. The ruling executive party’s orientation is classified into three groups: Center (3), left (4), and right (5). Macroeconomic is the vector of macroeconomic variables, and institutions is the vector of institutional and governance variables discussed above. The authors do not include a lagged dependent variable as a control since this would cause an additional bias on the coefficient estimates (Kittel and Winner, 2005).

ESTIMATION RESULTS

In this section the authors will first report the estimation results of the OECD countries sample and then those of the MENA countries sample. Estimation results can be seen in Tables 1 and 2. Depending on data availability the OECD panel dataset turns out to be strongly balanced. On the other hand, due to
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lack of statistics and missing data the MENA dataset becomes unbalanced. The variables, legislative electoral competitiveness and executive electoral competitiveness are dropped due to multicollinearity in the OECD countries estimations.

OECD Countries

Agriculture Spending

Political system is found to be negatively correlated with agriculture spending suggesting that agriculture spending is favored more in assembly – elected president and parliamentary systems compared to presidential system. Regarding the ruling party’s impact, it can be said that right-wing parties (including Conservative, Christian democratic) favor higher agricultural spending more compared to center or left-wing (including Communist, Socialist, Social Democratic) parties. Nevertheless, both of these variables appear statistically insignificant.

The current account balance shows a negative and statistically significant at the 10 percent level effect on agriculture spending. This result is consistent with the hypothesis that as the current account balance increases within a country it will negatively affect the amount of available resources for public spending, so the levels of public spending components will decrease. GDP per capita is negatively associated with agriculture spending and it’s statistically significant. When a country’s economic development level increases its dependence on agriculture production can decrease. The coefficient of the unemployment rate is negative and statistically significant at 5 percent level. As unemployment rate increases policy makers may find it difficult to allocate sufficient funds into agriculture spending. Both young and old population percentages are negatively correlated with agriculture spending at the 5 percent significance level. This may suggest that available economic resources are allocated into other public spending components according to young and old population groups’ demands. The coefficients of institutional variables appear to be statistically insignificant.

Education Spending

Political system appears to be negatively correlated with agriculture spending suggesting that agriculture spending is favored more in assembly – elected president and parliamentary systems compared to presidential system. Regarding the ruling party’s impact, it can be said that right-wing parties (including Conservative, Christian democratic) favor higher agricultural spending more compared to center or left-wing (including Communist, Socialist, Social Democratic) parties. Nevertheless, both of these variables appear statistically insignificant.

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Education Spending

Political system appears to be negatively correlated with agriculture spending suggesting that agriculture spending is favored more in assembly – elected president and parliamentary systems compared to presidential system. This may be due to the situation that compared to a presidential system, in assembly – elected president and parliamentary systems there are representatives of political parties who support higher education spending since their constituents demand this kind of policy. The executive ruling party’s orientation is negatively correlated with education spending suggesting that compared to right-wing parties, center and left-wing parties support higher levels of education spending even though the correlation appears to be statistically insignificant.

GDP per capita shows a negative and statistically significant effect on education spending. This may be due to the situation that when a country is richer private education options may become more widespread and preferred in the society (Guleryuz, 2015). Old population percentage is negatively correlated with education spending. It is usually the case that old constituents’ social demands do not include a higher education spending. The authors also control tertiary enrollment and it turns out to be negatively associated with public education spending. This result is in line with the hypothesis that in
many developed countries tertiary education is perceived as a product of free private market economy, not a part of the universal education system as primary and secondary education (Busemeyer, 2009).

Checks and balances are negatively associated with public education spending. This can be caused due to the case that as checks and balances in effect rise policy makers can confront political constraints during the process of fiscal policy design. Furthermore, as the levels of civil liberties and democracy increase within a country it positively affects education spending.

Health Spending

The coefficient of political system turns out to be negative meaning that public health spending may be supported more in assembly-elected president and parliamentary systems compared to a presidential system. However, the coefficient appears to be statistically insignificant. The ruling party’s orientation exerts a positive and significant impact on health spending. This indicates that within an OECD country a left-wing ruling party supports health spending more compared to a center party, and a right-wing ruling party can favor health spending more compared to a left-wing party.

The current account balance is negatively correlated with public health spending suggesting that when the current account deficit widens within a country this will negatively affect the amount of available resources that can be invested in health spending. Economic growth within a country, measured by GDP per capita, shows a negative and statistically significant effect on public health spending. As the percentage of young population increases this positively affects health spending. Gini income inequality is positively associated with health spending indicating that within OECD countries when income inequality rises policy makers will be motivated to invest more in public health trying to alleviate the negative impacts of higher income inequality in the society. As in the education spending regression checks and balances put a negative impact on health spending. When the level of civil liberties increases this positively affects health spending.

Defense Spending

Political system appears to be negatively correlated with defense spending, but its effect is statistically insignificant. The ruling executive party’s orientation exerts a positive and significant effect on defense spending. This indicates that within OECD countries the executives of Conservative and Christian democratic ruling parties defined as right-wing parties support defense spending more compared to executives of left-wing and center parties. This result is consistent with the hypothesis that right-wing parties are more interested in a bigger defense spending component in the government budget (Alesina and Perotti, 1994, Blais et al., 1993). Similar to the results obtained in education and health spending estimations current account balance shows a negative effect on defense spending and it’s significant. Income inequality measured by Gini coefficient is positively and significantly associated with defense spending.

Women’s rights which include economic, political, and social rights are positively correlated with defense spending at 10 percent significance level. Civil liberties can be defined as people’s right to execute their fundamental freedoms without interference from the state. Here, civil liberties are negatively correlated with defense spending at 5 percent significance level suggesting that when people’s civil liberties increase they will not support a higher defense spending.
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Social Protection Spending

Political system shows a negative effect on social protection spending which suggests that compared to a presidential system in assembly – elected president and parliamentary systems a higher social protection spending is supported by policy makers. This result is similar to previous findings. Executive ruling party’s orientation is positively correlated with social protection spending, but it’s not statistically significant. The coefficients of current account balance and GDP per capita are negative and significant at 5 percent level. When a country becomes richer it may be the case that its population’s dependence on social protection declines. Income inequality shows a positive impact on social protection spending. This result is consistent with the hypothesis that as income inequality increases within a country policy makers will be more motivated to increase social protection spending in order to alleviate negative effects of higher income inequality in the society. Checks and balances are negatively correlated with social protection spending at 10 percent significance level. As it’s mentioned before when checks and balances in effect increase party executives can face political restrictions which may negatively affect fiscal policy design process.

Transportation: Communication Spending

The coefficient of the political system appears to be positive, but its impact is statistically insignificant. The executive ruling party’s orientation exerts a positive and significant effect on transportation – communication spending. This indicates that compared to center parties left-wing and/or right-wing political parties are inclined to invest more in transportation – communication component of public spending. Current account balance is negatively correlated with transportation – communication spending which is similar to previous results. As the current account balance increases within a country it diminishes the economic resources that can be invested in public spending. The young and old population percentages have a negative and statistically significant effect on transportation – communication spending. Regarding the institutional variables, the corruption index shows a positive and significant effect on transportation – communication spending suggesting that when corruption level decreases within an OECD country this can positively affect transportation – communication spending.

MENA Countries

Agriculture Spending

The coefficient of political system appears as negative indicating that compared to a presidential system, in assembly – elected president and parliamentary systems agriculture spending is supported more within MENA countries. The ruling executive party’s orientation shows a positive correlation with agriculture spending suggesting that right-wing ruling parties favor agriculture spending more compared to center and left-wing parties. Nevertheless, both of these effects are statistically insignificant.

Both the young and old population proportions affect agriculture spending negatively and these impacts are significant at 5 percent level. When checks and balances increase, corruption level decreases, and executive electoral competitiveness increases within a MENA country these changes positively affect public agriculture spending. As an interesting result, when democracy level improves within a MENA country this negatively affects agriculture spending at 5 percent significance level.
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Education Spending

Both political system and ruling executive party’s orientation are positively correlated with education spending. However, both associations are insignificant. As the economic development level, measured by GDP per capita, rises this positively affects education spending at 5 percent significance level. GDP per capita growth rate is negatively correlated with education spending indicating that public education spending behaves counter to short-term business cycle fluctuations (Busemeyer, 2007). The young population percentage measures the demographic demand for public education. When young population percentage increases it will cause public education spending to increase. As the level of political rights increases within MENA countries this also positively impacts public education spending.

Health Spending

Political system appears to be positively correlated with health spending suggesting that compared to assembly – elected president and parliamentary systems in presidential systems a higher health spending is favored more. Ruling executive party’s orientation shows a positive impact on health spending indicating that right-wing party executives are motivated to invest more in public health compared to center and left-wing party executives. GDP per capita exerts a positive effect on health spending meaning that as economic growth increases within a MENA country this is likely to positively impact health spending level. Similar to the result obtained in education spending regression, the coefficient of GDP per capita growth rate turns out to be negative and statistically significant suggesting that public health spending behaves counter cyclically. As the levels of political rights and executive electoral competitiveness increase within MENA countries these changes positively affect public education spending.

Defense Spending

Political system shows a negative and statistically significant effect on defense spending indicating that compared to a presidential system in assembly – elected president and parliamentary systems policy makers favor a higher defense spending level. The ruling executive party’s orientation exerts a positive impact on public defense spending suggesting that within a MENA country a right-wing ruling party’s executives are motivated to invest more in public defense spending compared to center and left-wing parties. The coefficient of current account balance turns out to be negative at 5 percent significance level meaning that when a country runs a high current account deficit this may diminish the amount of available economic resources to be invested in public defense. Both young population and old population percentages are negatively associated with defense spending. As the levels of democracy and executive electoral competitiveness improve within a MENA country it’s likely that these changes positively influence public defense spending.

Social Protection Spending

Political system exerts a positive impact on social protection spending suggesting that compared to assembly – elected president and parliamentary systems, in a presidential system policy makers will be inclined to invest more in public social protection. Ruling executive party’s orientation has a positive and statistically significant at 5 percent level effect on social protection spending. When economic growth
measured by GDP per capita rises within a MENA country, this positively affects social protection spending. As checks and balances, and executive electoral competitiveness level increase these changes positively influence social protection spending.

Transportation: Communication Spending

The coefficient of political system turns out to be negative, however its effect on the dependent variable is statistically insignificant. The ruling executive party’s orientation has a positive impact on transportation – communication spending suggesting that right-wing party policy makers are motivated to invest more in public transportation – communication compared to left-wing and center parties respectively. When economic development, measured by GDP per capita, increases within a MENA country this positively affects public transportation – communication spending levels. Both the young population and old population proportions are negatively correlated with transportation – communication spending. Similar to previous estimation results, improvements in checks and balances, and executive electoral competitiveness positively influence transportation – communication spending (see Table 1 and Table 2).

COMPARISON OF TURKEY AND OTHER OECD COUNTRIES

In this section, the authors focus on a comparative analysis between Turkey and other OECD countries. Although in some studies including analyses on OECD countries Turkey is excluded depending on the arguments such as Turkey remains as an outlier country with respect to the other OECD countries this does not change the situation that Turkey has been a member country since 1961. Since the panel data period covers 29 years between 1980 and 2008 the authors construct the OECD sample with the 23 countries (including Turkey) which became a member prior to 1980. Valid only for this section, when OECD countries are mentioned it is meant the OECD countries other than Turkey. The figures below depict the general trends of public spending components in Turkey and other OECD countries.

When the distributions of the political system and the ruling executive party’s orientation are examined, the authors see that almost 94 percent of the 638 OECD country observations are parliamentary systems. Approximately 48.5 percent of ruling executive party’s orientation turn out to be right – wing (including conservative and Christian democratic), 37.5 percent of it is identified as left – wing (including communist, socialist, and social democratic), and nearly 9 percent of it is identified as center, during the analysis period of 1980 and 2008. As Turkey’s statistics are examined, between 1981 and 1983 the political system is identified as presidential and in the other 26 years it is classified as parliamentary. Between the years 1984 and 1999 in Turkey the ruling executive party’s orientation is classified as right – wing. From 2000 to 2002 it is identified as left – wing. Interestingly, since 2003 the orientation of the political party which also forms the acting government is defined as 0 (zero) suggesting that it does not fit the right – wing, left – wing, or center categories.

The public agriculture spending in OECD countries in Figure 2 shows a relatively steady trend with small ups and downs. In 1980, it was a little bit above $5 level. The highest level it reached was just over $6.5 in 1986. It experienced a sharp decline between 2000 and 2004 and by the year 2008 it was just over $4. When the authors examine the situation in Turkey which is depicted in Figure 1 they see a quite different picture. Between the years 1980-1996 public agriculture spending in Turkey was at rather low
Determinants of Public Spending Composition in OECD and MENA Countries

Table 1. OECD countries estimation results

<table>
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<tr>
<th></th>
<th>(1) Agriculture</th>
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<th>(3) Health</th>
<th>(4) Defense</th>
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Note: Six public spending components are the dependent variables. Fixed effects model is used in all estimations. Point estimates are reported. Standard errors are shown in parentheses. * Significant at 10%; ** significant at 5%. All regressions include a constant term and year fixed effects (not reported).
Table 2. MENA countries estimation results

<table>
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<tr>
<th>Public Spending Component</th>
<th>(1) Agriculture</th>
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Note: Six public spending components are the dependent variables. Fixed effects model is used in all estimations. Point estimates are reported. Standard errors are shown in parentheses. * Significant at 10%; ** significant at 5%. All regressions include a constant term and year fixed effects (not reported).
levels compared to OECD levels, just shy of $1. In 1997 public agriculture spending abruptly increased to around $5.5, then again it decreased to almost $2, showing a high volatility during the 1997 – 1998 period. After a humble performance of agriculture spending in 2000 – 2003 below $3, since 2004 public agriculture spending in Turkey has been experiencing a steady growth reaching almost $7, and so surpassing the OECD level by 2008.
Public education spending in the OECD countries (excluding Turkey) demonstrates a steady trend in Figure 4, shy of $20, between 1980 and 1989. Starting from 1990 a generally increasing trend can be observed. By the year 2008 the average public education spending was over $40, more than doubling its level in 1980. When Turkey is examined, compared to other OECD countries, unfortunately public education spending in Turkey has remained much lower during the whole estimation period of 1980 – 2008. This situation can be observed in Figure 3. Turkey’s public education spending trend also shows short – term volatilities. In 1980, it was at $5 level, and it reached almost $10 in 1993. It was only after 2002, Turkey could experience a steady increase in public education spending reaching almost $20 in 2008.

The public health spending in OECD countries in Figure 6 demonstrates a steady and increasing trend. In 1980 it was at the $30 level. Between 1980 and 1998 it changes in the $30 - $40 band, surpassing $40 in 1999. By the year 2008 public health spending doubles its 1980 level reaching $60. When the authors examine public health spending in Turkey they see quite a different picture. Figure 5 shows that in 1980 public health spending in Turkey was just over $1. Between 1981 and 1986 it decreased even below $1 level. It surpassed only $4 in 1997. Since 2000 Turkey’s public health spending showed a steady rise surpassing $7 in 2008. Nevertheless, with these modest spending levels, in the area of public health Turkey falls behind the other OECD countries.

Figure 8 demonstrates that between 1980 and 2008 public defense spending in the OECD countries draws a rather volatile picture. It was just above $30 in 1980. It experienced a steep jump from 1989 to 1990 increasing over $45 at the end of Cold War Era. Yet, it was below the $30 level from 1995 until 2002. Public defense spending in OECD countries was just below $40 in 2008. Turkey’s public defense spending values remain much lower compared to those of OECD countries, even though the broad trend was similarly fluctuating. Figure 7 shows that it was $5.28 in 1980. Then, it experienced a rise from $7.68 to $9.72 between 1996 and 1997. The value was at $7.32 level in 2008.
Determinants of Public Spending Composition in OECD and MENA Countries

Figure 10 explains that public social protection spending in OECD countries shows a steady and increasing trend only with small ups and downs throughout the estimation period of 1980 and 2008. It was over $107 in 1980, and it reached almost $200 in 2008. It can be argued that this trend of social protection spending explains the importance of welfare state and its implications in OECD countries. Unfortunately, as in the case of other public spending components Turkey’s public social protection spending values turn out to be much lower compared to OECD countries’ levels. This worse performance
trend can be seen in Figure 9. Public social protection spending values in Turkey remained even below $1 until 1991. It reached almost $10 in 1997. Turkey’s public social protection spending experienced a steep and steady rise starting in 2002, and it surpassed $27 in 2008, nevertheless staying much lower than the OECD level of approximately $200 in the same year.
When the authors examine public transportation – communication spending in OECD countries they find out a generally volatile movement which can be seen in Figure 12. Public transportation – communication spending in OECD countries was $11.7 in 1980. It increased to $19.37 in 1992, its highest level. By the year 2008 it was just over $17. Turkey’s public transportation – communication spending was $2.8 in 1980. It experienced a sharp fall between 1989 and 1990. Surprisingly it was at very low
levels, even below $1, from 1990 until 2001. Since 2002 it has experienced a steady increase reaching over $9 in 2008, still much lower than the OECD levels. This trend can be seen in Figure 11.

The authors want to provide a brief, comparative overview about the public spending experience in the MENA countries. The figures showing public spending values in MENA countries are not reported here due to space limitations. When the political system in MENA countries is examined, out of 377
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Figure 12.

![OECD Transportation-Communication Spending](image)

Source: The authors’ own calculations.

observations almost 78% appear as presidential, being the dominant political system during 1980 – 2008 period. Approximately 15.65% and 6.37% of the observations turn out to have assembly – elected president and parliamentary systems respectively. As the political orientation of ruling executive party is analyzed, it is seen that around 74% of the 377 observations is classified as 0 (zero). 15.12% and 10.88% of them are identified as left – wing and right – wing respectively.

The first distinctive characteristic of public spending to be noticed in MENA countries is that, compared to Turkey and other OECD countries, in all six components public spending levels are disappointingly low throughout the estimation period of 1980 – 2008. The picture seems rather grim in all public spending areas. Average public agriculture spending remains continuously below $1. In 1980 it was around $0.39, and it reached almost $0.65 which was the highest level in 2008. MENA countries' average public education spending was only $1.63 in 1980, and it could reach $2 level only in 1993. It increased to nearly $3.57 in 2008. The general trend of average public health spending is also rather disappointing in MENA countries. Average health spending was only around $0.55 in 1980. It remained below $1 until 2002, only reaching $1.62 in 2008. Public defense spending depicts a more stable trend compared to other public pending components in MENA countries. In 1980, average defense spending was around $2.91. It experienced a steep surge to $4.7 in 1991, during the first Gulf War. By 2008 it was at $2.8 level. Average public social protection spending was around $1.27 in 1980. It could only surpass $2 level in 2001. Social protection spending experienced a sharp increase from $3.18 to $5.72 (its highest value) between 2007 and 2008. Public transportation – communication spending values in MENA countries also remain much lower than Turkey and other OECD countries values. It remained below $1, only rising to $1.52 in 2008.
CONCLUDING REMARKS

In this chapter, the authors analyze determinants of various public spending components in OECD and MENA countries using a panel data estimation (with country and year fixed effects) over the period of 1980 and 2008. The authors mainly focus on partisan motivation approach and party differences theory even though they control for vectors of macroeconomic and institutional quality variables in the estimations. They primarily try to find out how the political system and the ruling executive party’s orientation within a country affect public spending functional composition and public spending components levels.

Public agriculture spending is favored more in assembly – elected president and parliamentary systems rather than in a presidential system within an OECD country. In terms of the ruling executive party’s orientation, right – wing parties (conservative, Christian democratic) support more investment into public agriculture spending compared to center or left – wing parties (communist, socialist, social democratic). An increase in current account balance negatively affects public agriculture spending since when the current account balance rises within an OECD country this reduces the size of available resources for public spending. GDP per capita which measures the economic development level within an OECD country is negatively correlated with agriculture spending. Richer countries may depend less on agricultural sector, so they do not need a high public investment in agriculture. Increases in young and old population (dependent population) percentages negatively impact public agriculture spending. Young and old population demands may not line up with higher investment agriculture.

Compared to a presidential system, in assembly – elected president and parliamentary systems policy makers are inclined to invest more in public education spending. Center and left – wing party executives support higher investment in education compared to right – wing party members. Both GDP per capita and tertiary enrollment are negatively associated with public education spending. As economic development increases within an OECD country private education choices and free market solutions may become more preferred, and it is usually the case that tertiary education is free market economy’s product. Checks and balances can be perceived as political restrictions by policy makers. It is found that checks and balances is negatively correlated with public education, health, and social protection spending. Considering other institutional quality variables, rises in civil liberties and democracy levels positively affect public education spending.

Similar to previous results, compared to a presidential system in assembly – elected president and parliamentary systems additional spending in public health is supported more. An enlargement in current account deficit again negatively affects health spending. Furthermore, when economic growth rises health component of the public spending is negatively impacted by this change. When income inequality measured by Gini coefficient increases within an OECD country policy makers raise public health spending level. An improvement in civil liberties positively impacts health spending.

The policy makers from right – wing parties support higher defense spending levels compared to left – wing and center party policy makers. Interestingly, when civil liberties increases within OECD countries this puts a negative effect on public defense spending. As an OECD country’s economic rises this negatively affects public social protection spending. As the intensity of corruption decreases within an OECD country this may positively public transportation – communication spending.

Within a MENA country compared to a presidential system, in assembly – elected president and parliamentary systems public agriculture spending is supported more. Also, right – wing party policy makers favor agriculture spending more compared to center and left – wing party executives. Increases
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in checks and balances, corruption alleviation and executive electoral competitiveness within MENA countries positively impact public agriculture spending.

Considering public education spending within MENA countries increases in GDP per capita, young population percentage and political rights positively affect public education spending. A higher health spending is supported in a presidential system compared to assembly – elected president and parliamentary systems. Right – wing party executives are motivated to invest more in public health compared to center and left – wing party policy makers. Contrary to OECD countries, when economic development increases (rise in GDP per capita) within a MENA country this can positively affect public health spending. Improvements in political rights and executive electoral competitiveness also positively impact public health spending within MENA countries.

Compared to a presidential system, in assembly – elected president and parliamentary systems policy makers favor a higher public defense spending level. Moreover, within a MENA country a right – wing party’s policy makers are motivated to invest more in defense spending compared to center and left – wing party executives. When current account deficit widens, this may negatively affect investments in public defense. Increases in democracy and executive electoral competitiveness levels may positively influence public defense spending.

Compared to assembly – elected president and parliamentary systems in a presidential system policy makers are motivated to invest more in public social protection. Right – wing party executives are inclined to invest more in public social protection and transportation – communication programs. Improvements in GDP per capita, checks and balances, and executive electoral competitiveness positively affect public social protection spending and public transportation – communication spending within a MENA country.

The results of the comparative analysis among OECD countries, Turkey and MENA countries demonstrate that throughout the estimation period of 1980 and 2008 Turkey’s public spending levels remain considerably lower than OECD countries levels only except for public agriculture spending. In MENA countries average public spending levels in all six components remain much lower than the average levels in Turkey and other OECD countries.

The empirical analysis results show that political system and ruling executive party’s orientation which are identified as partisan variables are influential on different public spending components levels and public spending composition. Furthermore, certain macroeconomic variables such as current account balance, GDP per capita, dependent population percentages turn out to have statistically significant impacts on public spending components. For example, within OECD countries GDP per capita exerts a negative impact, whereas within MENA countries it shows a positive influence. Some institutional quality variables such as checks and balances, political rights and civil liberties have statistically significant effects on public spending components.

Still, these estimation results should be approached with a cautiousness. Around 94 percent of the OECD countries observations are parliamentary systems. Regarding the ruling executive party’s orientation approximately 48.5 percent, 37.5 percent and 9 percent are identified as right – wing, left – wing, and center respectively. Approximately 78 percent of the MENA countries observations is identified as presidential systems. Nevertheless, the estimation results show that partisan variations and party differences theory are important in determining public finance composition in different country groups and geographical locations.
REFERENCES


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KEY TERMS AND DEFINITIONS

Agriculture Expenditure: The public spending level in agriculture related areas.
Defense Expenditure: The public spending level in defense and military related areas.
Education Expenditure: The public spending level in education related areas.
Health Expenditure: The public spending level in health related areas.
Institutional Quality: A measure which indicates the quality of governance and institutions in a country.
Partisan Motivation: The argument which indicates that welfare state and redistributive public finance management can be explained by partisan factors.
Social Protection Expenditure: The public spending level in social protection related areas.
Transport-Communication Expenditure: The public spending level in transport, mass communication, and infrastructure related areas.

ENDNOTE

1 Luxembourg is not included in the sample due to data unavailability.