Public service delivery dilemma
and economic growth challenges in the MENA Region

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Abstract. The present paper investigates the impact of public service quality on economic growth in 15 MENA countries over the period 1996-2018, through the use of panel data analysis, including Fixed Effects Model, Random Effects Model and Hausman test. The Hausman test favors the fixed effect model, which clarifies that the government effectiveness index exerts a highly significant positive impact on economic growth in 15 MENA countries. While the government spending (freedom from government) exhibits a statistically insignificant positive effect on economic growth in the selected countries. Based on these findings, it could be concluded that the ideal reconciliation between delivering high-quality public services and keeping public spending low and efficient, is the perfect recipe for the MENA region’s economic success. It is also recommended that MENA governments should foster their cooperation with the private sector in the delivery of education and health care services, besides tackling administrative reforms in alignment with the goal of providing efficient public goods and services. Furthermore, anti-corruption policies should be knitted, taking into serious consideration the promotion of institutional quality and optimization of government size.

Keywords: the quality of public service provision, economic growth, MENA countries, panel data analysis.

JEL Classification: H40, O43, O50, C23.
1. Introduction

The quality of public services has been hitherto considered as the key underlying factor that steers nations towards a brighter economic future. Indeed, the provision of high-quality public services is commonly viewed by economists as one of the necessary ingredients of the recipe for economic success. According to Lips, A.M.B. (1998), Public service delivery can be perceived as “the relationship between the administration and its environment, in which the administrative organization supplies public products, services, and information”. Furthermore, Esfahani (2005) defined the public service efficiency as “the amount of output per unit of an input used in the process, and added that the effectiveness is the degree to which the outcomes achieve the goals set for the activity”.

There are two conflicting points of view about the public expenditure. On the one hand, the neo-liberal economists stated that the government spending on specific areas (such as education, health, and social security) should be reduced as far as possible, but this will generate the exclusion and marginalization of poor people, and on the other, many agreed that the public spending should be increased, but this will crowd out the private sector (Skerritt, 2012). In general, an effective government achieves the idyllic blend of taxation, public spending and public service quality, to respond to citizens’ expectations (Matthew Andrews, 2008); because it is axiomatic that all residents have the right of equal access to efficient public services (Pretorius and Schurink, 2007). The looming problem of inefficient public spending is often caused by political and economic myopia (Sarte, 2001). For instance, many developing countries have kept the improvement of public service delivery off the political agenda for a long time (Shen and Zou, 2014).

The present study provides a further illustration of the links between the quality of public service delivery and economic growth, and attempts to advance beyond the existing literature, by shedding more light on the intrinsic role played by ‘government effectiveness’ and ‘freedom from government’ in fostering economic growth. Moreover, it sheds light on the Middle Eastern and North African countries that have embarked on substantial reforms of their public services and administration apparatus for enhancing the quality and availability of public service delivery, as well as improving productivity and promoting economic growth, but economic agents, foreign investors and international organizations state that the public service delivery remains inefficient and sands the wheels of growth, and this obvious fact leads us to investigate empirically the public service quality-growth nexus using a panel data analysis over the period 1996-2018. For this purpose, the remainder of this paper is organized as follows:

Section 2 presents a theoretical and empirical review on the quality of public service provision and economic growth, section 3 discusses the quality of public service delivery and economic growth in the MENA region, section 4 introduces the data and analyzes the empirical results and finally section 5 concludes the paper.
2. Theoretical and empirical review on the quality of public service provision and economic growth

A growing body of research has highlighted the essential role played by the quality of public service delivery in enhancing the growth prospects, as well as it is broadly perceived that the public spending on infrastructure, education and health care is a prerequisite for sustained economic growth (Irmen and Kuehnel, 2009). Many basic public goods (i.e., good roads and drainage, portable drinking water, steady electricity supply, etc.) are considered as fundamental investments that can boost the potential growth rates (Akpan and Effiong, 2012; Heritage Foundation, 2014).

Also, the efficient delivery of public goods and services is a crucial underlying factor for human capital formation, and hence it is an incentive to boost productivity and economic growth (Ghatak, 2010), for instance the labor force quality relies on the quality of education, which in turn counts on public spending (Fisher, 1997). Moreover, the dominance of education and R&D expenditures in the public spending composition reflects the government’s willingness to boost growth prospects; additionally, the actual government spending contributes to shape the future economic growth (Mandl et al., 2008). Bartik (1991) claimed that the public services exhibit a substantial role on bolstering economic growth through affecting the business costs, for example a well-developed infrastructure and public education are generally unpriced, lowering the costs of production and private inputs. Also, Easterly (1997) argued that the public spending is the major source of finance for investments that are conducive to higher growth rates.

Furthermore, higher economic growth in turn heartens delivering better public services, because it prompts economic agents to call for sound institutions and high-quality public services (Subramanian, 2007). It is assumptive that all segments of society should reach high quality of basic goods and services, otherwise, the full participation of individuals in the growth process will be impeded (Muralidharan, 2007), because the misallocation of public investment may exert a counteractive effect on the regional growth and poverty reduction (Ollé and Moré, 2005), likewise a substantial and abrupt reduction in public spending engenders numerous risks to the most vulnerable sections of the population, and provokes negative public reactions (D’Arcy, 2012).

Usually, the ineffective public sector is associated with various issues like task evasion, corruption, misallocation of resources, bureaucratic impediments and delays (Ghatak, 2010). Thus, enhancing the quality of basic public goods and services is doubtless welcome, and even more it acts as a catalyst for inclusive growth (Muralidharan, 2007). Also, the efficiency of public expenditure hinges on the government’s ability to convert public resources into socially and economically valuable outputs (Grigoli and Ley, 2012).

Oftentimes, a large proportion of public expenditure is driven into inefficient and unproductive directions, and over and above that, the increased government spending shifts resources away from the private sector and suppresses it, reducing the extent of freedom in the economic environment (Erdal, 2004). Generally, taxes are the main source of financing
public spending, but they outweigh the production costs and decrease the firms’ profits, they also crowd out the private sector through transferring some of this sector’s resources to the government’s grip (Onakoya and Somoye, 2013).

In addition, using higher taxation in fueling the increased public spending definitely generates an opportunity cost similar to the private consumption or investment that would have happened if the resources had hitherto been left to the private sector (Heritage Foundation, 2014). Thus, the use of tax revenues in financing the government spending should not cause economic distortions (Skerritt, 2012).

As well as, the state must ensure that the private sector operates in a more effective manner, but it should not act to supersede the market mechanism. Moreover, leaving room for free competition between public and private sectors to deliver services can reduce the incentives for engaging in corruption (Kulshreshtha, 2008).

Otherwise, the withdrawal of government from the market mechanism will lead to lower productivity and higher debts in the foreseeable future (Heritage Foundation, 2014).

An effective government is keen to enhance the efficiency of public spending (especially on education, health and infrastructure) and provide high-quality public goods and services without hindering the private sector development (Matthew Andrews, 2008), it can also hear and better answer the citizens’ needs, as well as it enjoys an enhanced self-respect among its citizens (Cristina, 2014).

The difficulty of gauging the quality of public services was often deemed to be the biggest snag to research on public service delivery (Banerjee et al., 2007). For this reason, Daniel Kaufmann and his colleagues introduced the government effectiveness index which measures “perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government’s commitment to such policies”, and it is scaled between -2.5 and +2.5, where a higher score indicates better government effectiveness (Kaufmann et al., 2008).

The government effectiveness index encompasses all features of government spending and associated policies, and it refers to the ability of government to find effective ways to handle issues properly even under changing circumstances, and hence it is the best index that can act as a proxy for the quality of public service provision (Jalilian et al., 2007; Andrews, 2008; European Commission, 2013).

In 1995, Heritage Foundation and Wall Street Journal introduced the Index of Government Spending (Freedom from Government), which is one of the ten components of Economic Freedom Index, it indicates to the extent of freedom from burdensome public expenditures, and it is scored on a scale of 0 to 100, where higher scores reflect lower level of public spending and greater freedom from government (Heritage Foundation, 2014; Cebula, 2011).
Many ‘good governance’ proponents incline more towards small government in regard to public goods provision, because the increased government size associated with inefficient government intervention induces further corruption and wasteful rent-seeking behavior (Alesina and Angeletos, 2005; Andrews, 2008).

Decentralization raises many questions about the responsible party for providing public goods and services, and the best way of exerting pressure on policymakers to serve the citizens’ needs (Hewett and Montgomery, 2001). Moreover, decentralization can be a potent strategy for enhancing public expenditure management, strengthening the decision-making process and moving it closer to those potentially affected by decisions, because this strategy contributes to building close ties between local governments and their constituencies; further, the genuine proximity to the electorate persuades the local authorities to provide high-quality public services (Okojie, 2009; Shen and Zou, 2014). As well as, the decentralization process gives citizens access to information and empowers them to feel more involved in service provision and in control processes, and thus it holds public service providers more accountable and helps them escape the corruption trap by putting them under strict scrutiny, and consequently this process will properly align politicians’ incentives with those of the population as a whole (Okojie, 2009; Ghatak, 2010; Xu, 2013).

In contrast, some opinions indicated that the decentralized political system encourages governments and sub-governments to slough off their responsibilities, and it leads also to the capture of public resources by local elites (Hewett and Montgomery, 2001; Okojie, 2009). Sometimes, decentralization and flattening of hierarchies drive many local governments in necessitous areas to spend much less than required for delivering high-quality public services. Such a situation will further increase the inefficiency of delivering public goods and services. Additionally, the lack of minimum measures needed to provide core public services, makes the decentralized system more vulnerable to predation by the growing chorus of voices against inequality, as a result of large provincial divergence in economic development (Shen and Zou, 2014).

Therefore, a promising decentralization process requires careful reconciliation between resources and financial obligations at each government level (Shen and Zou, 2014). Governments often pursue decentralized systems to mollify regional resentment from provinces seeking more autonomy (Okojie, 2009). Wherefore, greater local autonomy must be tied up with a qualified staff and vigorous performance, over and above that, policy makers should establish a proper and efficient division of labor between various levels of government and allocate relevant financing tools to match spending responsibilities (Shen and Zou, 2014). Furthermore, altering the contractual structure of employment for improving the employees’ performance in the public sector could exert positive influence on the efficiency of public service delivery (Muralidharan, 2007).

In general, efficient decentralization enhances democratic institutions that enable people to lobby for their rights that may be vulnerable to the risk of corruption (Okojie, 2009).
Corruption is a two-edged sword, on one side it boosts the potential growth rate through enabling economic agents to circumvent the cumbersome public sector, but on the other side it hampers economic growth by weakening the efficiency of government spending and destroying the productivity cells (Dzhumashev, 2014). Moreover, the pervasive corruption distorts the composition of public spending and lowers the quality of public service delivery and thus frustrates the growth prospects (Deininger and Mpuga, 2004).

Mauro, P. (1998) demonstrated that countries with widespread corruption attempt to reduce their social spending, thereby decreasing the growth rate. Thence, designing and implementing effective anticorruption strategies can enable countries to plug corruption loopholes in the public sector, and hence provide high-quality public goods and services (Kulshreshtha, 2008).

Méon and Sekkat (2005) indicated that the negative growth effect of corruption will be intensified in a prosaic governance framework. Furthermore, Freytag and Pehnelt (2006) pointed out that good governance is deemed as an intrinsic criterion in determining the foreign investment decision-making process, multilateral and bilateral aid flows. Additionally, the quality of public service delivery is also influenced by many other factors (i.e. the pre-existing infrastructure and institutional background, staffing levels and more) (Deininger and Mpuga, 2004). More precisely, the poor institutional quality bolsters the poor provision of essential public services, aggravating economic and social stress (North, 1990; Easterly, 2001).

Also, Grigoli and Ley (2012) stated that spending on education and health could be ineffective in a feeble institutional context. In the same vein, Dzhumashev (2014) argued that the institutional quality is the major driving force behind the efficient public sector and effective public spending, and hence it propels the public inputs towards enhancing productivity and competitiveness. It is also worth noting that the delivery of quality public goods and services gives a clearer impression of dignity and good governance (OECD, 2008).

Moreover, the past ignorance of institutional importance in the public sector caused the current quality of public services (Kulshreshtha, 2008). For instance, most developing countries suffer from misdirected public sector and wasteful pursuits that represent an enormous hurdle to effective service delivery. Quite often, such cases are linked with insufficient impetus for public officials to provide high-quality services and goods. Thence, these developing countries must gear their strategies towards promoting their institutions for enhancing transparency and accountability, which decrease the service delivery bias (Kulshreshtha, 2008).

The impact of public service quality on economic growth has received a great deal of attention from economists especially in last decades, and the table below summarizes the empirical studies that have investigated this impact.
Table 1. Empirical evidence on the impact of public service quality on economic growth

<table>
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<th>Authors</th>
<th>Sample</th>
<th>Empirical approach</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jalilian et al.</td>
<td>96 countries</td>
<td>OLS regression</td>
<td>Government effectiveness contributes positively to GDP per capita growth.</td>
</tr>
<tr>
<td>Fayissa and Nsiah</td>
<td>28 African countries</td>
<td>OLS estimation</td>
<td>Government effectiveness has a salient positive influence on the Sub-Saharan Africa’s economic growth.</td>
</tr>
<tr>
<td>Zhuang et al.</td>
<td>33–37 developing Asian economies</td>
<td>OLS panel regression</td>
<td>Government effectiveness is highly and positively associated with the real per capita GDP growth.</td>
</tr>
<tr>
<td>Grigoli and Ley</td>
<td>34 countries</td>
<td>Panel data analysis</td>
<td>Government effectiveness is positively correlated with economic growth.</td>
</tr>
<tr>
<td>Fayissa and Nsiah</td>
<td>27 European Union member states</td>
<td>OLS estimation</td>
<td>Government effectiveness displays a positive effect on accelerating economic growth.</td>
</tr>
<tr>
<td>Siaghi and Mutu</td>
<td>20 emerging economies</td>
<td>The first-differenced GMM estimator</td>
<td>Government effectiveness substantially raises the rate of economic growth.</td>
</tr>
<tr>
<td>Aourie</td>
<td>32 Sub-Saharan Africa countries</td>
<td>The System Generalized Method of Moments (System GMM)</td>
<td>Government effectiveness exerts a significant positive impact on economic growth.</td>
</tr>
<tr>
<td>Lipari</td>
<td>172 countries</td>
<td>OLS cross-sectional regressions</td>
<td>Strong government effectiveness delivers high rates of economic growth.</td>
</tr>
<tr>
<td>Freytag and Pehnelt</td>
<td>127 developing countries</td>
<td>Tobit estimation</td>
<td>Government effectiveness appears to significantly accelerate the debt relief process.</td>
</tr>
<tr>
<td>Campbell</td>
<td>10 randomly-selected countries</td>
<td>OLS panel regression</td>
<td>Government effectiveness seems to affect economic growth negatively and insignificantly.</td>
</tr>
<tr>
<td>Reinkik and Svensson</td>
<td>771 Ugandan establishments</td>
<td>OLS estimation</td>
<td>Poor public capital significantly lowers the firms’ productive investments.</td>
</tr>
<tr>
<td>Hong</td>
<td>288 Chinese prefecture-or-above-level cities</td>
<td>Panel data analysis, fixed effects model</td>
<td>The presence of crude oil induces local governments to deliver fewer public services.</td>
</tr>
<tr>
<td>Rajasalu</td>
<td>European Union member states</td>
<td>Pooled ordinary least squares (OLS) technique</td>
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</tr>
<tr>
<td>Cebula et al.</td>
<td>OECD nations</td>
<td>Fixed-effects estimation</td>
<td>Economic growth is significantly positively influenced by government spending index.</td>
</tr>
<tr>
<td>Chakaya and Somoye</td>
<td>Nigeria</td>
<td>Three-stage least squares (3SLS) technique</td>
<td>Public capital spending enhances the Nigeria’s prospects for economic growth.</td>
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<tr>
<td>Cebula</td>
<td>OECD nations</td>
<td>PLS and P2SLS estimations</td>
<td>Government spending (freedom from government) has a negative and insignificant impact on growth rates.</td>
</tr>
</tbody>
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Source: Constructed by author.

3. The quality of public service delivery and economic growth in the MENA Region

3.1. Economic growth in the MENA Region

MENA region’s economic growth has been characterized by sharp fluctuations. In general, the MENA oil monarchies have succeeded to bolster their growth rates, particularly the GCC countries have skillfully utilized the increased oil revenues to feed the growth requirements such as infrastructure modernization, human capital formation and R&D, moreover these countries have made valuable contributions to the manufacturing and services sectors (Iradian and Abed, 2013). Likewise, Morocco, Egypt, Jordan, Lebanon and
Turkey have boosted their growth prospects through strengthening the tourism sector, developing the human capital and pursuing macroeconomic stability (Nabli and Véганzonès, 2004; Anthony O’Sullivan, Marie-Estelle Rey and Jorge Galvez Mendez, 2011).

The region, as a whole, has been far below its enormous potential, and even more it has hardly missed outstanding opportunities to keep up with the pace of globalization by failing to diversify its export base away from oil and to attract substantial inflows of FDI into the non-oil sectors (Askari, 2006). Furthermore, the inability of the oil-exporting MENA countries to diversify their economies, made them more vulnerable to predation by the 2008 financial crisis, as shown in the figure below. It is also observed that the economic growth of GCC countries has been shrunk by the financial meltdown, because of these countries’ close ties with global financial markets (World Bank, 2010).

In 2011, a first-of-its-kind phenomenon known as the Arab Spring has swept Tunisia, Egypt, Yemen and Syria, causing cracks in some surrounding countries like Lebanon, Jordan and Algeria, further this unexpected turmoil has caused a growth collapse in the worst-hit countries (Anthony O’Sullivan, Marie-Estelle Rey, and Jorge Galvez Mendez, 2011). Moreover, the manufacturing and tourism sectors in Egypt and Tunisia have been hardly slashed due to the escalating rebellion and security threats (World Bank, 2013).

Additionally, the Arab Spring has unveiled a number of economic, political and social problems that have been hidden all these years, besides highlighting other crucial issues such as political pressures, inequality and high unemployment and poverty traps (House of Commons, Foreign Affairs Committee, 2012).

In general, the deeper institutional reform will be the key building block for establishing a vigorous economy. Likewise, creating more jobs, reviving the agricultural sector, relying on renewable energies, will without doubt catalyze the MENA region’s long-term growth potential (World Bank, 2010; IMF, 2013a).

The Arab Spring uprisings caught the international community completely by surprise, unleashed political instability and toppled longstanding dictators. The devastating consequences of these upheavals nullified all the achievements made in war-torn countries over the last few decades, and millions of people sank ever deeper into the pit of poverty and became reliant on international humanitarian assistance for survival. Not only did uprisings quickly become brutally violent in Libya, Syria, and Yemen, but they also facilitated external interventions in Libya, Syria, and Yemen, and what Lynch (2016) argues is that foreign interventions brought these countries to the brink of chaos and destruction through supporting and arming rebel groups. The Arab Spring was a highly visible aspect of hidden cracked models of government in the MENA region, especially when macroeconomic performance of Arab Spring countries showed an overall positive image and indicated that authoritarian governments were able to deliver economic development, and most MENA countries have intensified their efforts towards the achievement of the Millennium Development Goals (MDGs) and have made a noticeable
progress in cutting the proportions of hunger, reducing child mortality rates and expanding primary school enrollment (Iqbal and Kiendrebeogo, 2016). Further, it is worth noting that expenditure inequality was fairly stable with a slight dip in most MENA countries, and inequality of opportunity has indeed lessened in Egypt and some other MENA economies (Hassine, 2012; Hassine, 2015; Assaad et al., 2016), therefore it can be said that there was a broad sharing of the benefits of growth in these countries.

The Arab uprisings started in Tunisia in December 2010 and began to sweep through the Arab world in early 2011 in ways that defied all previous predictions and analysis. The Arab world entered an era of chronic political instability and black unrest in the aftermath of the Arab uprisings. The public opinion surveys by the Arab Barometer revealed that the average protestor was highly educated, male, young, living in urban areas, and having a middle-class background. There were vigorous protests against injustices, discrimination, poor service delivery, government failure and corruption. On the eve of the Arab revolts, scholars, civil society activists and journalists began analyzing what may have caused the Arab Spring. High income inequality threatens political stability and often results in conflicts because it makes political consensus between higher- and lower-income groups so difficult, and instability, in turn, could frustrate future investments, disrupt growth and have damaging effects on human development (Burger et al., 2016).

Some economists have even gone further and dealt with the 'paradox of unhappy growth' which describes the case in which an increase in growth rates does not automatically result in an increase in citizens' happiness (Arampatzi et al., 2015), this paradox interprets conflict as stemming from a broken social contract between government and citizens. This paradox describes the situation of Arab Spring countries, albeit at varying levels. Given the complexity of the Arab Spring and its tragic aftermath, analyzing data on subjective wellbeing and its determinants can provide consistent information and a more solid basis for understanding and explaining transitions occurring across the MENA region. The years preceding the Arab Spring masked a growing middle-class squeeze, this class worries about its future, finds itself working more for less, becomes far less willing to accept privations, and feels more angry than happy (Dang and Ianchovichina, 2016).

Even prior to the events of the Arab Spring, life dissatisfaction became rampant among the middle and working classes in Arab Spring countries. In turn, life satisfaction in these countries has been negatively impacted by several factors such as poor public service delivery, deteriorating labor market conditions, pervasive corruption connected to the use of influential personal connections with powerful elites (wasta) to gain privileged access to resources and opportunities including employment, and these are mostly the same factors that implied social contract has been broken (Arampatzi et al., 2015). Protestors maintained high levels of participation, insistently demanded political change greatly supported political change, and continued to proclaim their grievances and grudges against the broken social contract in Arab Spring countries (Tunisia, Egypt, Libya, Yemen, and Syria), while participation rates in protests against authoritarian regimes were lowest in Algeria, Jordan, Lebanon, and Morocco, because the majority of people didn't care about protesting.
3.2. The MENA Region’s government effectiveness

**Figure 1. The government effectiveness indicator by region, 2002, 2009, 2014**

The graph above shows that the MENA region has failed to narrow the government effectiveness gap with its American, European and Central Asian counterparts. Moreover, the MENA region is in danger of falling further back, because it has lagged behind other countries in enhancing good governance in general and improving government effectiveness in particular over discrete time periods, and even more it’s still stuck in the bottom half of the government effectiveness scale and it is worthwhile to note that the MENA countries can draw on the experience and best practices of comparable European, Latin American and Asian countries that continue to deliver high-quality services and better respond to the needs of their citizens.

**Figure 2. Government effectiveness in the MENA countries, 1996-2014**

The graph above shows that the MENA region has failed to narrow the government effectiveness gap with its American, European and Central Asian counterparts. Moreover, the MENA region is in danger of falling further back, because it has lagged behind other countries in enhancing good governance in general and improving government effectiveness in particular over discrete time periods, and even more it’s still stuck in the bottom half of the government effectiveness scale and it is worthwhile to note that the MENA countries can draw on the experience and best practices of comparable European, Latin American and Asian countries that continue to deliver high-quality services and better respond to the needs of their citizens.

**Source:** World Bank Governance Indicators, the data are available online at: http://info.worldbank.org/governance/wgi/index.aspx#reports (accessed 01/06/2018).
UAE clearly outpaces the other MENA nations in terms of government effectiveness indicator, as a result of its intention to provide high-quality services and enhance the related policies. Moreover, the UAE government has made significant strides forward in the field of e-government in order to facilitate serving citizens and reinforce the government’s credibility through enhancing transparency and accountability. Likewise, Bahrain, Turkey and Oman are considerably above the regional average, due to their efforts in improving the quality of public service delivery. Whilst, most of the remaining MENA countries still occupy the negative field reflecting the terrible public sector performance and the delayed efforts aimed at upgrading the level of government effectiveness, especially Yemen and Syria.

3.3. The government spending (Freedom from Government) in the MENA Region

The graph above clearly shows the six regions’ government spending scores in the 2016 Index of Economic Freedom. More particularly, the Middle East and North Africa region has come in fourth place, and the reduction of the state’s role in the economy is clearly the greatest challenge facing the MENA countries, while the last two places have been occupied by North America and Europe, respectively. Moreover, this graph illustrates that the more developed regions are characterized by low government spending scores, for instance most European countries continue to increase spending on education, R&D, health care, unemployment insurance and pension payments, because of their goals of providing high-quality services to their citizens (Heritage Foundation, 2016).
As is clearly visible in the graph above, Iran, Morocco, Bahrain and Tunisia have recorded the highest government spending scores; likewise, these countries have significantly exceeded the regional average, due to the wise management of public expenditures as compared to other MENA countries. Whilst, Turkey, UAE, Syria and Egypt have fluctuated up and down around the average regional government spending; however, a significant progress has been achieved by UAE in reducing the public spending and reconciling it with the delivery of high-quality services. Whereas, Algeria, Jordan, Kuwait, Lebanon, Oman, Saudi Arabia and Yemen have trended below the regional average in recent years, as a result of their failure to curb excessive public spending (Heritage Foundation, 2013).

In general, government spending has expanded in most MENA countries, because it has been steered by consumption expenditures and subsidies, and the underlying cause behind this is the attempt to quell the social unrest and alleviate the high prices of imported goods, and it is worthwhile to note that the large oil revenues continue to fuel the broad-based public expenditures particularly in oil-abundant countries (IMF, 2013b).

4. Data and empirical results

4.1. Data

This study investigates the impact of public service quality on economic growth in 15 MENA countries (Algeria, Bahrain, Egypt, Iran, Jordan, Kuwait, Lebanon, Morocco, Oman, Saudi Arabia, Syria, Tunisia, Turkey, United Arab Emirates and Yemen) throughout the period 1996-2018 using the following variables:

GDP – GDP growth (annual %) is used as a proxy for economic growth, from the World Development Indicators database.

GE – Government Effectiveness which measures the quality of public services, and it is obtained from the World Bank Institute’s Worldwide Governance Indicators database (WGI).

GS – Government spending (freedom from government) compiled by the Heritage Foundation jointly with the Wall Street Journal.

POPD – denotes the population density (people per sq. km of land area), from the World Bank’s World Development Indicators (WDI).

4.2. Data analysis tools

The panel data estimation is employed in order to test the effect of public service quality on economic growth in 15 MENA countries using Eviews 8.0 software package. Because the panel data analysis has several advantages, such as controlling for both observed and unobserved heterogeneity, increasing the degree of freedom and reducing the collinearity problems, hence improving the efficiency of econometric estimates (Hsiao, 2003), there are three main models as follows:
Pooled OLS Model indicates that all the data are pooled in the OLS regression; moreover, it assumes that all coefficients are the same across countries and time periods (Wooldridge, 2002; Brooks, 2008).

\[ y_{it} = \alpha + \beta x_{it} + u_{it}; \quad \{ t = 1, \ldots, T; \quad i = 1, \ldots, N. \]  

Where: \( \alpha \) denotes the intercept term;  
\( \beta \) is a \( k \times 1 \) vector of parameters to be estimated on the independent variables;  
and \( x_{it} \) is a \( 1 \times k \) vector of observations on the independent variables;  
\( u_{it} \) is the disturbance term.

**Fixed Effects Model** assumes that the intercept differs across cross-section units (Brooks, 2008). In other words, it recognizes only the within-group variation (Allison, 2005).

\[ y_{it} = \alpha + \beta x_{it} + u_{it} + v_{it}; \quad u_{it} = u_{i} + v_{it} \quad \{ t = 1, \ldots, T; \quad i = 1, \ldots, N. \]  

\( \mu_i \) denotes the individual specific effect  
\( v_{it} \) represents the remainder disturbance that varies over time and entities (Brooks, 2008).

**Random Effects Model** assumes that a random variable (which differs across cross-section units but is constant over time) is added to the intercepts for each cross-sectional unit (Brooks, 2008).

\[ y_{it} = \alpha + \beta x_{it} + \omega_{it}; \quad \omega_{it} = \epsilon_i + v_{it} \quad \{ t = 1, \ldots, T; \quad i = 1, \ldots, N. \]  

\( \epsilon_i \) measures the random deviation of each entity’s intercept term from the ‘global’ intercept term \( \alpha \)

**Hausman test**

This test is usually used in order to choose the appropriate model between fixed and random effects models, and the Hausman statistic is given by:

\[ H = (\hat{\beta}_{FE} - \hat{\beta}_{RE}) (Var(\hat{\beta}_{FE}) - Var(\hat{\beta}_{RE}))^{-1} (\hat{\beta}_{FE} - \hat{\beta}_{RE}) \]  

Which is distributed as \( \chi^2 \) under the null hypothesis with \( k \) degrees of freedom, and  
\( \hat{\beta}_{FE}, \hat{\beta}_{RE} \) represent the vectors of parameter estimates of the fixed effects and random effects models, respectively;  
\( Var(\hat{\beta}_{FE}), Var(\hat{\beta}_{RE}) \) represent the variance-covariance matrices of FE and RE estimators, respectively; there are two hypotheses as follows:

H0: \( \alpha_i \) is not correlated with \( x_{it} \).  
H1: \( \alpha_i \) is correlated with \( x_{it} \).

If the null hypothesis is rejected, the fixed effects model is favored (Wooldridge, 2002; Maki, 2011).
4.3. Analysis of empirical results

Table 2. Summary statistics

<table>
<thead>
<tr>
<th></th>
<th>GDP</th>
<th>GE</th>
<th>GS</th>
<th>POPD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>4.443077</td>
<td>-0.075806</td>
<td>67.00553</td>
<td>169.2185</td>
</tr>
<tr>
<td>Median</td>
<td>4.373000</td>
<td>-0.072916</td>
<td>68.20000</td>
<td>67.19619</td>
</tr>
<tr>
<td>Maximum</td>
<td>17.32000</td>
<td>1.477285</td>
<td>92.10000</td>
<td>1768.740</td>
</tr>
<tr>
<td>Minimum</td>
<td>-10.47967</td>
<td>-1.275783</td>
<td>10.90000</td>
<td>7.014976</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>3.088630</td>
<td>0.521619</td>
<td>12.13428</td>
<td>339.1734</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0.443051</td>
<td>0.040842</td>
<td>-1.010669</td>
<td>3.401419</td>
</tr>
<tr>
<td>Sum</td>
<td>1044.123</td>
<td>-17.81436</td>
<td>15746.3</td>
<td>26919035</td>
</tr>
<tr>
<td>Sum Sq. Oev</td>
<td>2232.274</td>
<td>63.66823</td>
<td>34454.32</td>
<td>14.07758</td>
</tr>
<tr>
<td>Source:</td>
<td>Author’s computation using Eviews 8.0.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The table above shows the descriptive statistics for all the variables included in the empirical study, covering 15 MENA countries over the period 1996-2018. As can be readily seen from the data, GDP has an average of 4.44 and a maximum value of 17.32, reflecting that specific countries in the region enjoy substantial economic growth, also the average of government effectiveness is -0.07, which means that almost all countries in the MENA region suffer from low-quality public services, and the maximum value of 1.47 belongs to UAE, which is keen to deliver world-class public services to its citizens and residents, while the mean of government spending index (67) points out that the region as a whole is classified as ‘Moderately Free’ in terms of government spending.

Table 3. Regression results for 15 MENA countries

<table>
<thead>
<tr>
<th>Dependent Variable: GDP</th>
<th>Coefficient Estimates (P-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pooled OLS Model</td>
</tr>
<tr>
<td>Independent Variables</td>
<td>Constant (0.013157)</td>
</tr>
<tr>
<td></td>
<td>4.611321 (0.0000)***</td>
</tr>
<tr>
<td></td>
<td>GE (0.0000)***</td>
</tr>
<tr>
<td></td>
<td>-0.001729 (0.5315)</td>
</tr>
<tr>
<td></td>
<td>0.649036 (0.0000)***</td>
</tr>
<tr>
<td></td>
<td>POPD (0.0669) *</td>
</tr>
<tr>
<td></td>
<td>0.000219 (0.0880) *</td>
</tr>
<tr>
<td></td>
<td>R-squared (0.1315)</td>
</tr>
<tr>
<td></td>
<td>0.205118 (0.260910)</td>
</tr>
<tr>
<td>Prob (F-statistic)</td>
<td>0.000000 (0.381964)</td>
</tr>
</tbody>
</table>

Significant at 1% (***, 5% (**), 10% (*).

Source: Author’s computation using Eviews 8.0.

Table 3 epitomizes the main findings of the following models: Pooled OLS, Fixed Effects and Random Effects. As expected, the government effectiveness index and government spending have a positive influence on accelerating economic growth in all regressions, except the pooled OLS which reveals that there is an insignificant negative relationship between government spending and economic growth. Likewise, the population density...
Public service delivery dilemma and economic growth challenges in the MENA Region

appears to be positive in all models. The next step involves applying the Hausman test which is worthy in selecting between fixed and random effects models.

<table>
<thead>
<tr>
<th>Correlated Random Effects - Hausman Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equation : Untitled</td>
</tr>
<tr>
<td>Test period random effects</td>
</tr>
<tr>
<td>Test Summary</td>
</tr>
<tr>
<td>Period random</td>
</tr>
</tbody>
</table>

Source: Author's computation using Eviews 8.0.

The Hausman chi-square test statistic is significant at the 5% level of significance (Prob (0.048 < 0.05)), on this basis, the null hypothesis can be rejected, in other words the Hausman test suggests that the fixed effects model is the most suitable one, so we focus on it in this empirical study.

The fixed effects model clarifies that the government effectiveness index displays a highly significant positive impact on economic growth in 15 MENA countries, and this is consistent with theory, that highlighted the intrinsic role played by efficient public service delivery in boosting economic growth. While the government spending (freedom from government) exhibits a statistically insignificant positive effect on economic growth in the selected countries. Likewise, the population density has a significant positive relationship with economic growth. Moreover, the probability (p) of the F statistic is equal to zero which means that the model as a whole is statistically significant, further it confirms the joint impact of explanatory variables on economic growth.

To sum up, the provision of high-quality public services is deemed a catalyst for the MENA region’s economic growth. In addition, the ideal reconciliation between delivering high-quality public services and keeping public spending low and efficient, is the perfect recipe for the MENA region’s economic success.

5. Conclusion

This study examines the impact of public service quality on economic growth in 15 MENA countries (Algeria, Bahrain, Egypt, Iran, Jordan, Kuwait, Lebanon, Morocco, Oman, Saudi Arabia, Syria, Tunisia, Turkey, United Arab Emirates and Yemen) over the period 1996-2018, through the use of panel data analysis, including Fixed Effects Model, Random Effects Model and Hausman test. As expected, government effectiveness and government spending (freedom from government) exert a positive influence on economic growth. According to Hausman test, the fixed effects model is the most suitable one, and it clarifies that the government effectiveness index displays a highly significant positive impact on economic growth in 15 MENA countries, and this is consistent with theory. The government spending (freedom from government) exhibits a statistically insignificant positive effect on economic growth in the selected countries. To sum up, the provision of high-quality public services is deemed a catalyst for the MENA region’s economic growth.

Based on these findings, it could be concluded that the ideal reconciliation between delivering high-quality public services and keeping public spending low and efficient, is
the perfect recipe for the MENA region’s economic success, and it is worth noting that many promising policies and practices can be drawn from the experiences of other developing countries that succeeded to advance on the effectiveness ladder, especially those with similar political systems. Moreover, tangible results could have been extracted from understanding access problems to public services.

It is also recommended that MENA governments should foster their cooperation with the private sector in the delivery of education and health care services, besides tackling administrative reforms in alignment with the goal of providing efficient public goods and services. Furthermore, the anti-corruption policies should be knitted; taking into serious consideration the promotion of institutional quality and optimization of government size, and it is worthwhile to note that these goals can be achieved progressively.

References


Hong, J.J.Y., 2014. How resource endowments affect the provision of public services: Evidence from China.


