Efficiency of Public Sector Organizations: Perspectives from Theories of Bureaucracy

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Abstract

Economic insights on the provision of public goods and services by public sector organizations went hand in hand with probing questions on the efficient allocation of resources within them concerning neo-classical assumptions on the theory of firm (Coase, 1937; Alchian and Demsetz, 1972). The rationale behind the unprecedented divergences from the neo-classical firm postulations on the basis of not-to-operate at the efficient production frontier has attracted attentions of researchers working not only on the private firms but also on the public sector. This paper investigates theoretical underpinnings of efficient allocation of resources within public sector organizations on the basis of a variety of arguments. Before examining the (in) efficient usage of resources in the public sector that is mostly based on the theory of bureaucracy, methodological and practical challenges to measure the efficiency performances of public intuitions are visited. Subsequently, institutional framework on the public provision of goods and services is scrutinised referring particularly to the discussion on incentive schemes and efficiency.

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I.   INTRODUCTION

Economic insights on the provision of public goods and services by public sector organizations went hand in hand with probing questions on the efficient allocation of resources within them concerning neo-classical assumptions on the theory of firm (Coase, 1937; Alchian and Demsetz, 1972). The rationale behind the unprecedented divergences from the neo-classical firm postulations on the basis of not-to-operate at the efficient production frontier has attracted attentions of researchers working not only on the private firms but also on the public sector.

This paper investigates theoretical underpinnings of efficient allocation of resources within public sector organizations on the basis of a variety of arguments. Before examining the (in) efficient usage of resources in the public sector that is mostly based on the theory of bureaucracy, methodological and practical challenges to measure the efficiency performances of public intuitions are visited. Subsequently, institutional framework on the public provision of goods and services is scrutinised referring particularly to the discussion on incentive schemes and efficiency.

The outline of this paper is as follows: section II explores the theoretical framework for the efficiency of public sector organizations, section III illuminates the efficiency of government output based on the theory of bureaucracy including earlier sociological and economic researches to the contemporary debates, section IV demonstrates the institutional foundations of the allocation of resources in the public sector referring chiefly to the incentive-efficiency dichotomy and section V concludes.

II.   THEORETICAL FRAMEWORK FOR THE EFFICIENCY OF PUBLIC SECTOR ORGANIZATIONS

Efficiency analyses of public provision of goods and services have often been intellectually stimulated by competing views on the function and boundaries of state intervention into the economic sphere. Although provision of social services by governments became a significant phenomenon during the modern age especially after the establishment of nation states (Rosanvallon, 2000), discussions on the appropriate role of governments in the society are as old as Plato's *The Republic*. The

accumulated literature on this particular theme can be mainly classified into two streams as Besley (2011) points out clearly below:

"(...) One emphasises government in the public interest. It outlines the range of activities that government can undertake to improve the lives of its citizens. Government provides underpinnings of the market system by establishing property rights and a means of adjudication through the courts. (...) The logic behind this has been developed at length and provides the modern theory of state from a welfare economic point of view.

At the other extreme are accounts of government seen mainly as a private interest. Government can be a focus for rent seeking in which the power to tax results in private, wasteful efforts to capture the state which then rewards the powerful at the expense of citizens at large (...)" (Besley, 2011: 1-2).

Even though efficiency of public provision of goods and services forms a relatively younger literature in the microeconomics, the economics of public sector organizations has already become a distinct branch namely Public Finance within the discipline of economics for many years. Besley's (2011) noteworthy taxonomy above would be extremely helpful to grasp the fundamentals of this particular sub-division of economics. Due to the fact that this research is carried out to investigate the efficiency of public sector organizations, this section will deal with the efficiency literature afterwards. So as to examine an extensive literature on the economics of public sector, Musgrave and Musgrave (1989) can be visited. As a final point before moving towards to the central arguments, albeit this research takes the efficiency analysis of public institutions into the centre of its analysis, it needs to be stated here that further objectives of public sector organizations such as fairness, equality, consumer protection, poverty reduction and creating employment opportunities (instead of providing employment benefits) are still valid and preserve their significance.

Increasing awareness among the decision makers in the governmental bodies in relation to the efficient allocation of resources within public sector organizations has encouraged and expanded academic inquiry for the last three decades in this particular field (Duncombe, Miner, and Ruggiero 1997). The motivation behind this growing

sensitivity between government authorities is highly associated with the fact that inefficiencies may "suggest that public service resources could be better used elsewhere in the economy, or that more outputs could be generated within the public services without additional resources" as well as "undermine the public's support for tax funding of public services" (Smith and Street, 2005). Thus, researches attempting to measure the efficiencies of public sector organizations have been used as policy-reflection papers alongside with their academic contributions and insights even though they haven't received sufficient attentions as put forward by Duncombe, Miner, and Ruggiero (1997).

The major concern of the studies on this area of research is "to measure the relative efficiency of different public organizations providing the same public service" (Pedraja-Chaparro et al., 2005). Pedraja-Chaparro et al. (2005) puts forward two different approaches for the measurement. In the former approach, a set of partial measures of performance is developed with the aim of understanding the behavior of the organization. On the other hand, the latter one aims to define a "general index" to reveal the efficiency of the organization. Therefore, the first method indicates local efficiency performances, whereas the second one sets forth global efficiency indicators. The most common and methodologically accepted efficiency indicators are mostly departing from the second cohort of indicators using a variety of approaches including parametric, semi-parametric and non-parametric models (Stone, 2002).

Measuring efficiency performances of public sector organizations is noticeably harder than their private counterparts as they "produce goods that are provided either free at the point of use or at a price that is not determined by market forces"(IFS Report, 2002) as well as the "non-tradable nature of goods and services" supplied by them (Pedraja-Chaparro et al., 2005). Accordingly, price mechanism in the public sector does not function well enough *vis a vis* the conventional market procedures that are expected to ensure and sustain the efficient allocation of resources. That is to say, "signaling" in the market mechanism is highly probable to be substituted by the discretionary actions of the players in the political arena that would cause inefficiencies as far as the production process is concerned.

In addition to the inherent problems of the public sector concerning political manipulation on the provision of welfare services, ill-defined nature of property rights

within them lead actors in the public service to act in reluctant ways on the allocation of resources. And accordingly "the allocation of public resources is governed by a political process which usually does not follow the price mechanism" (Kang, 1997). The political and social constraints, in lieu of market based constraints, on the publicly provided goods and services result in inefficient allocation of resources as well. Besides, the lack of competition and the "monopolistic nature of public production" prevent the actors in the public sector organizations to be cautious about the efficient usage of resources compared to their competitors in the private sector (Pedraja-Chaparro et al., 2005).

Over and above the previous arguments on the nature of public sector outputs that would cause inefficiencies, the objective function of public sector organizations needs to be touched in this section as well. Unlike private companies, public organizations are assumed to take the "equity goals" into consideration as one of their fundamental functions in the modern societies corresponds to the redistribution of income (Tullock, 1997). Thus, while conducting efficiency analysis on publicly run institutions and proposing policy recommendations, one should be careful about the contradicting nature of the efficiency-equity dichotomy in the objective function of public institutions (Pedraja-Chaparro et al., 2005).

As indicated in the preceding paragraphs, outputs produced in the public sector organizations either in police, post office, health sector and courts is questioned concerning their performance in productivity and efficiency. Chong et al. (2012) claimed that the reasons behind the lower productivity and efficiency figures in public sector can be summed up as "inferior outputs, including human and physical capital, technology, and poor management". Moreover, Lewis (2004) and Bloom and Van Reenen (2007) stated that the poor public sector management is mostly motivated by lack of incentives, supervision and monitoring. Consequently, the statements on poor management in the public sector encourage comprehensive investigation on bureaucracy that backbones the organizational structure in the public sector organizations.

The economic insights on the bureaucracy studies are mostly centred on the fundamental question investigating to what extent efficient or inefficient usage of resources are linked to the managerial performances of bureaucrats as well as are

comprised predominantly of budget size (Downs, 1965; Niskanen, 1971), slack maximisation (Migue and Belanger, 1974) and expenditure choices (Williamson, 1964) models. Moreover, since Migue and Belanger (1974) extended Niskanen (1971)'s assumption of technical inefficiency in the public sector by incorporating allocative inefficiency into the model, the number of empirical researches measuring both technical and allocative efficiencies of public sector organizations have boosted apparently. That is to say, the aforementioned papers on the economic theory of bureaucracy had paved the way for the current empirical researches to conduct efficiency analysis on public sector organizations.

Following the erstwhile theoretical approaches to the efficiency of public sector influenced mostly by the theory of bureaucracy, empirical papers first started with Hayes and Chang (1990), Davis and Hayes (1993) and Grosskopf and Hayes (1993) employing parametric techniques as well as Chalos and Cherian (1995) and Duncombe, Miner and Ruggiero (1997) that opt for conducting non-parametric methods. And currently, these studies become a distinct area of research (Stone, 2002; Pedraja-Chaparro et al., 2005). To these researches, efficiency of public sector institutions is highly contingent upon certain institutional and environmental factors that vary between organizations (Kang, 1997), which apparently encourages to examine the determinants of possible inefficiencies in the Turkish public higher education by taking the earlier literature into consideration.

III. ECONOMIC THEORIES OF BUREAUCRACY and EFFICIENCY OF GOVERNMENT OUTPUT

Public sector employees, who are also called as bureaucrats, form the backbone of the major part of public sector analyses particularly when the allocation of resources in the public sector organizations is questioned. Hence, the efficient or inefficient allocation of resources to provide certain services to the public has often been examined on the basis of budget choices made by bureaucrats (McNutt, 2002:124). This section critically summarises the fundamental insights and discussions on the bureaucracy starting from Weberian (1947) analysis and Niskanen's (1971) theory of bureaucracy to public choice interpretation of it and ending up with current debates on the relationship between politicians and bureaucrats.

Earlier Research on Bureaucracy

The preliminary researches on the bureaucracy that were mainly intensified around sociological paradigms are inspired from Weber's (1947) seminal work centred principally on German example. In his piece, Weber's first and foremost aim was to put forward certain set of ideal characteristics for each and every bureaucratic mechanism including profit-maximising firms (McNutt, 2002:124). Moreover, he was also trying to create the most appropriate way of management in organizations to assure that a staff can enhance her technical competence as well as apply it to the certain practical cases. Weber's (1947) ideals for a well-functioning bureaucracy can be enumerated as "hierarchy, unity of command, specialization of labour, employment and promotion based on merit, full-time employment, decisions based on impersonal rules, the importance of documentation and a separation between the bureaucrats' work-life and private life". These aforementioned characteristics still influence modern conception of bureaucracy and stimulated the formation of vast literature in this particular area of research (Aucoin, 1995: 157).

Following the early sociological analysis of bureaucracy introduced by Max Weber, economic insights on bureaucracy initially commenced with the works of Tullock (1965), Downs (1965) and Niskanen (1971). All three authors were in search of figuring out the modes of "relations between people within an organisation in receipt of a recurrent block of funds" (McNutt, 2002:124). And eventually, their theoretical conclusions had formed the mainstream understanding in microeconomic research for many years. In this sub-section, Downs' approach to bureaucracy is stated briefly below; Niskanen and Tullock will be discussed in the subsequent sub-sections respectively.

Downs' (1965) fundamental assumption for bureaucrats is that they are solely motivated by their own self-interests like any other agent in the society. Hence, rather than specifying public interests, they prefer to maximise their utilities when they are performing in the bureau. Furthermore, to Downs, an organization can be defined as bureau if a) it is sufficiently large b) a majority of the employment consists of full-time workers c) hiring, promotion and retention base upon some sort of assessment d) the significant share of "its output is not directly or indirectly evaluated in any markets to the organization" (Downs, 1965). And subsequently, he indicates that the "non-market orientation" for bureaucratic outputs prevents an "objective monetary

measure of profitability", which results in larger bureau sizes alongside with reluctance towards efficient usage of resources. As a final point, it needs to be stated here that Downs' preliminary analysis was rather influential on the further bureaucracy analysis particularly on Niskanen's theory of bureaucracy.

Three Models of Utility-Maximising Bureaucracy

Utility-maximising notion for managerial structures including bureaucracy has widely been used in the economics literature concentrating particularly on three different models: a) Budget Maximisation b) Slack Maximisation c) Expense Preference. The following paragraphs articulate these models separately.

Budget Maximisation

Niskanen (1971) coined the budget-maximising model for bureaucracy stating that bureaucrats are willing to increase the level of production until it reaches the largest amount of budget. The basic reason behind this attitude is that "bureaucrats do not have property rights to the fiscal residuum of the bureau" which corresponds to the difference between social costs and benefits incurred in the provision of services (Kang, 1997). That is to say, bureaucrats prefer producing the goods and services above their social optimum to utilise the remaining portion with an eye to enhance their position within the institution they work in (Downs, 1965; Niskanen, 1971).

Niskanen (1971) developed a demand function for output of bureau that is shown below on the basis of the assumption that demand and cost functions are linear.

$$MR = a - 2bQ \tag{1.1}$$

where MR is the marginal revenue of the bureau and Q represents the amount of output provided by bureau. Hence, the total revenue becomes:

$$TR = aQ - 2bQ^2 \tag{1.2}$$

and the total cost and marginal cost are narrated as:

$$TC = cQ + dQ^2, MC = c + 2dQ \tag{1.3}$$

The profit-maximising output of the bureau can be shown based upon conventional microeconomics analysis where MR=MC:

$$Q_O = (a - c)/2(b - d) \tag{1.4}$$

Niskanen's (1971) hypothesis claims that bureaucrat does not choose the point where profit is being maximised as in (2.4) but her own budget is being maximised shown below in (2.5) as long as bureaucrat's budget line permits that output level[†]:

$$Q_N = (a - c)/(b - d) \qquad\qquad (1.5)$$

The budget-maximising model developed by Niskanen received a fundamental criticism from Migue and Belanger (1974) on its very assumption that public sector operates technically efficient but may not be allocatively efficient. They criticised this assumption and relax it with the statement that public sector may both be technically and allocatively inefficient and eventually established a slack-maximising model that will be scrutinised subsequently.

Slack Maximisation

Migue and Belanger (1974) expanded the economic theory of bureaucracy by disproving the Niskanen's (1971) ironic approach stating that bureaucrats' only motivation is to increase the amount of budget they have and if this is right "then, no expenses other than those contributing to productivity are incurred since these would compete with output" (Kang, 1997). In contrary to the Niskanen's conclusions, they argue that bureaucrats will opt for the point on the budget line where marginal rate of substitution among the output of bureau and other expenses is equal to the slope of the budget line (Migue and Belanger, 1974). Therefore, the relative prices of output and other expenses become the significant subject of analysis in lieu of maximum amount of attainable output on the budget line.

The argument between Migue and Belanger (1974) and Niskanen's (1971) models of bureaucracy is examined by Wyckoff (1990) leaning on four separate empirical predictions on the basis of "utility-based model of bureaucratic choice". The author argues, "slack-maximizing and budget-maximizing bureaucracies are similar in their response to changes in cost and in their generation of 'flypaper effects', but they differ in their responses to matching and lump-sum grants". In relation to the efficient usage of resources, budget maximization causes technical inefficiency as it leads over provision and cost efficiency; slack maximization creates allocative inefficiency, due to under-provision, and cost inefficiency (Duncombe, Miner, and Ruggiero 1997).

[†] For further discussions, see Niskanen (1968, 1971) and Kang (1997)

Expense Preference

In addition to the budget and slack-maximising models, Williamson (1964) initiated expense preference model to explain why bureaucrats are inclined to produce above the expected minimum cost level, which results in cost inefficiencies in the public sector organizations. Kang (1997) argues that Williamson (1964) meant in the expense preference model, "Managers do not have a neutral attitude toward all classes of expenses. Instead some types of have positive values attached to them". Thus, so as to "enhance individual and collective objectives of managers", certain types of expenses such as staff are incurred in higher amounts even though they do not have any impact on productivity and efficiency in the organization (Kang, 1997). In other words, if this is the case, cost function of a given public institution is expected to be highly correlated with labour expenses as well as staff characteristics (which causes higher labour expenses) would have an impact on the efficiency performances.

Following the arguments put forward in Williamson's (1964) paper, De Alessi (1969) reveals an inter-temporal dynamic of bureaucrat's expenditure preferences that leads the current amount of expenditures to rise above the optimum. Unlike private companies, De Alessi (1969) argues, government favours using lower discount rates, which result in overinvestment in the public sector organizations due to the overestimation of the benefits yielded from current investments. And accordingly, managers in the government institutions have an incentive to increase the amount of present investments rather than waiting for prospective ones (Kang, 1997).

Public Choice Theory and Bureaucracy

Tullock (1965) has the pioneering work on the public choice model of bureaucracy that had an obvious impact on the Niskanen's (1971) budget-maximising assumption of bureaucrats. Prior to the Tullock's economic analysis of bureaucracy, the sociological theories were manifesting themselves in this subject inspiring from Weber's model (1947) that was reluctant to the economic behaviours of bureaucrats. According to the public choice thinkers, actors in the political sphere comprised of voters, politicians and bureaucrats perform their acts concerning conventional free market procedure, which is also known as *catallaxy*. Therefore, as far as public choice theory is concerned, bureaucrats are expected to maximise their utility levels either exploiting the monetary gains or enjoying higher status in the organization (Tullock and Buchanan, 1965).

Tullock's (1965) particular hypothesis is centred on the growth of bureaucracy and output of bureaus from a dynamic or inter-temporal perspective. In his research, he concluded, "through time, bureaucracy grows in size and did not remain at initial size" (McNutt, 2003:143). He proposed a growth function of the budget for a given bureau depending on time as follows:

$$B_{t+1} = B_t \exp(r^t) \qquad\qquad (1.6)$$

where B_{t+1} represents the budget size at time period (t+1), B_t refers to the budget size at time period t. Additionally, r corresponds to the magnitude of growth in the bureaucracy. Hence, as the time passes, the budget size is expected to grow referring to the fact that relatively older public institutions would experience higher inefficiencies as compared to their younger equivalents. This model also indicates that bureaucrats are desperately keen to increase the total amount of budget allocated to their bureaus as this increases their discretionary power over certain expenses that are more preferable to them (Williamson, 1964).

In the following discussions within public choice theory, Brennan and Buchanan (1980) as well as Mueller (1989) take one step further by incorporating tax base analysis into the budgetary preferences of bureaus. To these researchers, "if a citizen expected bureaucrats to maximise their budgets, they would constrain their ability" by imposing a limit on the tax base through certain legislative attempts (McNutt, 2002:145,146). Therefore, the extent of budget size is not merely contingent upon the preferences of bureaucrats but also citizenry constraints concerning the level of taxation are highly influential determinants of budget size in public sector organizations (Brennan and Buchanan, 1980; Mueller, 1989).

Alternative Perspectives on Bureaucracy

Over and above the models developed to illustrate the economic underpinnings of the theory of bureaucracy that became a mainstream reference point for the current literature, some theoretical alternatives will be shown in this sub-section so as to extend and expand the reasoned discussions on the (in) efficient allocation of resources within public sector.

Dunleavy's Model of Bureau Shaping

Unlike the previous papers on the bureaucracy, Dunleavy (1991) assumes that the main motivation for bureaucrats is not pecuniary gains (although they have significance) but non-pecuniary ones including "status and prestige" and the "intrinsic value of the work involved" (McNutt, 2002:150). To clarify this, he argues that: "There is always a pecuniary parameter in bureaucrats concerns (...). But this is unlikely to be a constraint which is surmounted relatively easily and thereafter is not very influential positively or negatively in structuring individual behaviour especially when officials are making policy decisions" (Dunleavy, 1991:201). Hence, bureaucrats are expected to maximise their utilities through exploiting full-control to shape their bureaus rather than maximising the sizes of their budgets.

To Dunleavy, bureaus are shaped by a number of policy-decisions consisting of major internal reorganisations to promote policy work over routine activities, transformations of internal work practices, redefinition of relations with external partners to enhance policy contacts, competition with other bureau to protect the scope of interesting work, load shedding, hiving off and contracting out functions which are seen as undesirable (Dunleavy, 1991:203-204). The main conclusion derived from Dunleavy's bureau-shaping model can be summed up in two propositions: "Firstly, budget maximising will be more likely in bureaus where the core budget makes up most or all of the program budget, i.e. in delivery, regulatory, taxing, trading and servicing bureaus. And secondly, other types of self-interested behaviour by senior bureaucrats will influence the activities of bureaus" (Dollery and Hamburger, 1995).

Bureaus with Monopolistic Power

This sub-section is devised to reveal the arguments claiming that bureaucrats benefit from the monopolistic power of their bureaus in providing the public goods to the citizens. McNutt (2003) treats the bureau to act as a private monopolistic firm that chooses to provide the given public good at 'MC=MR' in lieu of the social optimum point at 'MC=AR'. So as to exploit monopolistic profits, bureaucrats are supposed to prefer operating at the former point on the basis of "monopoly bureau output" model.

As illustrated in the Figure-2.1, instead of producing at the socially optimum level where MC curve intersects to demand curve (represents AR curve as well) as

proposed by Niskanen (1971), McNutt (2003) claims that monopolistic bureau is inclined to supply the public goods and services at point C in which higher prices are charged alongside with lower amount of provision. Moreover, relying on his conjecture, monopolistic bureau is expected to experience lower MC levels, which is not in tune with the conventional analyses on bureaucracy.
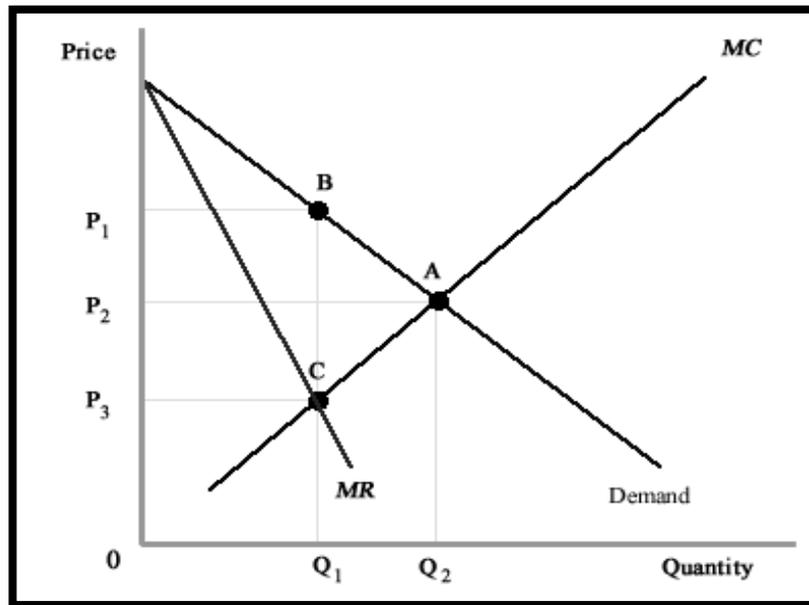

Figure-1

Bureaucrats and Politicians

The abovementioned arguments on the theory of bureaucracy were lacking of the relationship between bureaucrats and politicians who both choose and implement policies (Alesina and Tabellini, 2007). Even though the link between these two significant players in the policy-making attracted the attentions of researchers many years ago, first economic insight belongs to Rogoff (1985) who particularly focuses on the decision-making process for monetary policy. In the related paper (1985), he claims that non-elected central banker with independent and inflation-averse characteristics would enhance social welfare.

Departing from preceding literature on the bureaucracy-politics relationship based upon principle-agent models (Maskin and Tirole, 2001; Schultz, 2003; Besley and Ghatak, 2005), Alesina and Tabellini (2007) states that "bureaucrats are preferable to politicians in technical tasks for which ability is more important than effort, or if there is large uncertainty about whether the policymaker possesses the

required abilities to fulfil his task". Moreover, they conclude that the policies encompass "highly technical tasks" need to be handed over to the high-skilled public employees particularly in monetary policy, regulatory policies and public debt management. In addition to the aforementioned statements, Alesina and Tabellini (2008) extend their arguments in their following paper with certain propositions. They reveal the fact that bureaucrats are anticipated to perform better than politicians if "the criteria for good performance can be easily described ex ante, and are stable over time (...), the policy consequences touch narrowly defined interest groups and good performance can be easily formulated and assessed in terms of efficiency".

IV. INSTITUTIONAL PERSPECTIVE ON THE EFFICIENCY OF PUBLIC PROVISION OF SERVICES

Institutional framework for the public provision of goods and services starts with a generic question: "To what extent other forms of institutions may either be for-profit and not-for-profit, are capable of providing public goods and services in lieu of public sector organizations?" (Weisbrod, 1988). And accordingly, this particular question stimulates both empirical and theoretical researches so as to comprehend the possible failures/weaknesses as well as strengths of public provision of goods and services concerning particularly the efficient allocation of resources. The application of heterogeneous demands of consumers (Weisbrod, 1998) and the incentive schemes (Dixit, 2002; Burgess and Ratto, 2003;Ben-Ner, 2006) are frequently visited references in the papers working on the institutional analysis of provision of public goods and services, which have significant insights on the efficiency literature of public sector organization.

It is obvious that not only consumers but also suppliers have preferences and priorities among institutional forms including private, public and non-profit sector in relation to the provision of public services. Weisbrod (1988) argues that as long as the regulation of non-profit organizations (NPOs) is easier than regulation of outputs/production process/distribution of output carried out by public institutions in production of collective goods, than NPOs become more attractive to provide that particular fragment of public service provision. Moreover, heterogonous demands among the collective goods cause an institutional bifurcation between non-profit and public sector. That is to say, whilst public sector is more preferable in the markets

where consumers have homogenous demand, heterogeneous demands of society in particular sectors necessitates non-profit sector to meet the needs of this sort of consumer choice (Weisbrod: 1988).

The chief argument on the inefficient usage of resources within public sector is interrelated with the trade-off between incentive schemes and efficiency performances of public sector organizations. In the mainstream microeconomics literature, public organizations are seen as inefficient entities as there is a lack of appropriate incentive scheme within them. To Burgess and Ratto (2003) "explicit incentive contracts in the form of performance-related pay have always been more common in the private sector than in the public sector, but the issue of incentivising the public sector is relatively recent", hence the incentive-orientated policies are encouraged to be put into action to overcome this structural obstacle for the efficient allocation of resources. From a different perspective, Dixit (2002) argues that sharing a set of "idealistic or ethical purpose" incentivises public sector employees, and subsequently motivates efficiency performances in a better way. The reference papers indicated above enumerate a number of points that impact on the incentive structure in the public sector organizations either in a good or bad way:

a. Multiple Principals (Both)
b. Multiple Tasks (Dixit)
c. Measurement and Monitoring Problems (Burgess and Ratto)
d. Lack of Competition (Dixit)
e. Teams in production and rewards (Burgess and Ratto)
f. Intrinsic motivation (Burgess and Ratto) & Motivated agents (Dixit)
g. Consequences (Dixit)

On the other hand, Ben-Ner (2006) argues that both non-profit and public sector organizations face more obstacles for operating in the efficient levels than for-profit counterparts. That is to say, if these organizations were to produce identical goods in the same circumstances, for-profit firms would be quite advantageous to be more productive than their rivals in the public and NP sector. After stating this, he points out that several contingencies like 'size of communities, educational attainment of consumers, and extent of social capital' do influence the comparative degree of efficiency in public and non-profit organizations. On the contrary, Borzaga and

Bacchiega (2003) assert that NPOs would perform well in the provision of personal and collective goods that aren't provided by for-profit and public organizations efficiently due to two main reasons: firstly, these services usually entail market and contractual failures, and secondly, 'a certain degree of redistribution from financiers to consumers' might be needed for production to start.

In the current literature, one of the components of the comparison between NPOs and public sector organizations is contingent upon the cost efficiency of service provisions. This notion stresses the reality that means of income redistribution *per se* encompass both production and distribution costs. That is to say, if a certain institution is devised to perform redistribution, that institution will include administrative/bureaucratic costs to be able to keep up its operations. Arthur Okun (1975) clarifies this argument with "Leaky-Bucket" experiment as follows: "However, the program (for income redistribution) has an unsolved technological problem: the money must be carried from the rich to poor in a leaky bucket. Some of it will simply disappear in transit, so the poor will not receive all the money that is taken from the rich". Hence, an organization with more complicated administrative structure and bureaucracy is expected to be more inefficient than its less bureaucratic counterpart. Advocates of NPOs to supply welfare/public services are mostly triggered off this cost efficient structure of NPOs (Robinson, 1997; Hulme and Edwards, 1997). Estelle James (1990) proposed that thanks to less bureaucracy, lower staff salaries and reliance on volunteers, NPOs could offer more efficient service delivery than their public sector counterparts through reducing the costs in a dramatic way. However, one needs to keep in mind that these arguments aren't elucidating the ambiguity on quality levels of cost-reduced products and/or services.

V.   CONCLUSION

After introducing the theoretical framework on the efficiency of public sector, this paper examines the economic theory of bureaucracy that is seen as the major source of inefficient allocation of resources in the public sector organizations. Besides, alongside with the earlier Weberian (1947) and Downsian (1965) interpretation of bureaucracy, alternative perspectives on bureaucracy including contemporary debate on the efficient role of politicians and bureaucrats in the policy-making is visited referring to the recent papers of Alesina and Tabellini (2007; 2008). Lastly,

institutional framework for the provision of goods and services is presented to have a comparative understanding of public sector organizations *vis a vis* their non-profit and private counterparts.

Initially in the paper, theoretical framework working out the efficient or inefficient allocation of resources within public sector is revealed alongside with the methodological and practical challenges to measure the efficiency performances of this set of organizations. Besides, first stream of empirical papers stimulating the subsequent analyses are enumerated. An extensive literature on the efficiency of public higher education institutions is reviewed in the paper V and VI respectively. The relationship between the theoretical approaches on the efficiency of public sector and empirical findings of this research is uncovered in the paper V and paper VI through which efficiencies of public universities in Turkey are measured.

Last but not least, institutional perspective on the public provision of services is illuminated focusing firstly on the dichotomy among incentive structures and efficiency performance. Moreover, the comparisons between public and private as well as public and non-profit sectors are performed regarding to the approaches of heterogonous demand, incentive schemes and cost efficiency.

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