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Abstract: The foundation for a theory of the public economy dates back to the 18th century with contributions by Adam Smith, John Stuart Mill, David Ricardo and Leon Walras. These great economists, for the most part, dealt with the raising of revenues to fund the state activities. It was not until the 19th century that the role of the state in the private economy took shape—the concern shifted from a preoccupation of how to raise the necessary revenues to fund the state, to defining the role of the state in the private economy. Once the role of the state was outlined basically protection, it was evident that theories dealing with the distribution of the cost of provision be developed. Two theories emerged: taxation according to ability; and taxation according to benefits. In the 20th century, the pieces of knowledge developed in these two centuries were integrated into a modern foundation: Musgrave’s “The Theory of Public Finance” appearing in 1959. Since that time, the study of the public economy was associated with the name of Musgrave. Some six years later, the contribution of James Buchanan and Gordon Tullock in the “Calculus of Consent” brought a new insight into the study of the public economy. Their contribution led to a shift in the study of the public economy from purely economic focus to a study of the political process within which individuals and the state interact. This framework forms the basis of the theory of public choice.

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“I see no reason to believe either that today’s wild collection of differently organized governments that are called democracy or that the other wild collection of governments that are at the moment referred to as autocratic are the best form of government... in spite of having thought about the matter for a long time, I have no third form of government to suggest” (Gordon Tullock, “Monarchies, hereditary and non-hereditary”, in Public Choice, W.F. Shughart II and L. Razzolini (Editors, 2001: p.154).
1. Introduction

This quotation typifies the man, Gordon Tullock, known to his colleagues, students and friends as a pioneer in the study of the world we live in. Tullock, was known as a sharp and witty person, whether he was discussing economic or political phenomenon with his students and colleagues or in his writings about economic and political issues. His acumen and courage to say out loud the most daring observations not only about the world we live in but also about the status of the economic and political thought that inhibits the classrooms. His original thought process and sharp intellect led him, a “non professional economist” in collaboration with James Buchanan to a revolution in the history of economic thought. Their brain child was “The Calculus of Consent: Logical Foundations of Constitutional Democracy” (1965).

In 1986, the Nobel Prize Committee bestowed on James Buchanan, the Nobel Prize in Economics in recognition of the revolutionary thinking that underlie his writing about the role of the individual viz a viz the state. The Committee cited his contribution as “the Development of the Contractual and Constitutional Bases for the Theory of Economics and Political Decision Making”.

Students of public economics in general and public choice in particular, waited for a correction: the naming of Gordon Tullock as a co-recipient of the Nobel. Although such an acknowledgment did not come, no one then or now has embraced such an omission. Tullock’s collaboration with Buchanan which produced the “Calculus” formed the basis for the new paradigm, public choice, in the study of the State. As will be shown below, one of the paths breaking contribution of the “Calculus” was to infuse in economic analyses of the State, the constitution, the institution that sets the rules under which the political process plays out. Injecting “constitutional” rules into the study of the public economy, introduced new and provocative elements in the study of public finance.

Although Tullock is credited for insights that went beyond the Calculus as in the Politics of Bureaucracy (1965), Private Wants, Public Means: An Economic Analysis of the Desirable Scope of Government (1970); “Rent Seeking” (1980), to name a few (see the 12 Volume, Collective Works of Gordon Tullock, edited by C.K. Rowley, 2006), the focus in this paper is on Tullock’s contribution embodied in the “Calculus” to the study of the public economy.

2. The Public Economy: Two Contrasting Visions

In a rare and provocative exchange, James M. Buchanan and Richard A. Musgrave made a valiant attempt to apprise their listeners, students and researchers in the field of public economics of a two contrasting visions of the State. Musgrave, as students of public finance know was the father who gave birth to the study of the public sector as an “important field of economics”; James Buchanan along with Gordon Tullock, were the founders and architects of a school of thought; the “public choice”, that have revolutionized the economists’ thinking about the role of the State as well as the application of basic economic axioms to politics.
In November 1998, at the Center for Economic Studies at the University of Munich, James Buchanan and Richard Musgrave presented two contrasting visions of the state. The presenters were given the opportunity to comment on each other expressed views on the issue, as well as respond to questions posed to them by the audience (see Public Finance and Public Choice: Two Contrasting Visions, The MIT Press, Cambridge, Massachusetts, 2000).

Buchanan and Musgrave began their exposition with a retrospective assessment of the origins of their ideas that culminated in Buchanan’s case in the development of the logic of collective action as constraint on political actions, thus laying out the foundation of public choice; and Musgrave’s Theory of Public Finance.

In his introductory remarks, Buchanan relayed to his audience that his specialization within economics was public finance. According to Buchanan, “my understanding of and appreciation for the functioning of the market offered little or no assistance toward any understanding of the workings of the public economy” (Public Finance and Public Choice, p.16). Delving in the study of public finance, Buchanan argued, “led me to reject the conventional presumption that the state, or collectivity, was everywhere benevolent, or at least, that, it is so”, (p.17).

Buchanan attributed to Wicksell (1896) a vision of economics which corresponded to his own. According to Buchanan, Wicksell emphasized the need to examine the institutional structure through which collective decisions are made and to pay head specifically to the rules (p.18).

Musgrave began by outlying the roots of his thinking as to the nature of the fiscal state. These roots drew on a rich and diverse body of thought from the 18th, to the 20th centuries, from Locke, Bentham, Wicksell, Lindahl and Pigou, to Smith, Keynes and Buchanan and Tullock. As Musgrave put it: “my fascination with the field of economics has been rooted in its broad scope; a joining of economics, politics and social ethics” (p.30). Before enumerating the key functions of the state, he began with a few comments on the nature of the state and the methodology of fiscal economics.

To Musgrave the state is the instrument, by which the needs and concerns of the citizens are met. Accordingly, the public sector should be viewed as a complement rather than a substitute to the private economy. Thus, in the study of the public economy, the first order of business is to enumerate the functions of the state.

These two contrasting view of the state are necessary to our understanding as to how social choice theory have evolved as well as the duration of Musgrave’s Theory of Public Finance. In this paper, my task is quite modest. The aim is to put forth a brief outline of the public economy (the state) as perceived by the two schools of thought; the public finance and the public choice. The presentation focuses primarily on the views of Richard Musgrave as articulated in “The Theory of Public Finance” (1959), and James Buchanan and Gordon Tullock’s views of the state as presented in the “The Calculus of Consent” (1965) with few additions from the “Two Contrasting Visions of the State”. It is to be emphasized from the outset, that the two schools of thought; public finance and public choice have morphed beyond the original ideas put forth in these two volumes, still the contrast between the two schools of thought has remained the same (See Holcombe, 2001).
Unlike public choice, a relatively modern thesis (the 1940’s), the tenant of public finance goes back to the 18th and 19th centuries, perhaps earlier. Adam Smith (1776), John Stuart Mill (1848), and Leon Walras (1873-1876) as well as others addressed the question of state provision of certain goods hence referred to as public goods, and how to fund the provision of said goods.

Adam Smith, in his Inquiry into the “Wealth of Nations”, dealt with the role of the state, in the provision of “public” goods, and sources of revenues to finance its activities as well as the public debt. The other side of the budget, the raising of revenues was extensively covered by 19th century writers, in particular Leon Walras, J.S Mill and David Ricardo. In the 20th century, writers including Eric Lindahl (1919), A.Pigou (1929), Paul Samuelson (1958, 1966), and Richard Musgrave (1958), to name but a few, are credited in putting the public economy at the forefront in the study of economics.

Public choice, although commonly identified with Buchanan and Tullock’s “Calculus of Consent”, it has a much earlier foundation, erected on the works of Duncan Black (1948), Anthony Down (1957), although Buchanan, as well as others would attribute its birth to Knut Wicksell (1896).

To fully appreciate differences between the two schools of thought, public finance and public choice, I present below the fundamental propositions that constitute the underlying philosophy behind them.

Adhering to the historical development of these two schools of thought, I begin with the fundamental propositions of public finance. Here I confine the presentation to the role of the state in the provision of collective goods. The task of raising the necessary revenues to fund such provision is left out from the analyses, as in my view, the essential difference between the two schools of thought, lies in the way the decision making process that determine how the state interacts with its constituents, is arrived at.

2.1 Public Finance

The question that students of public finance invariably been asking is: what is the “proper” role of government? One may address this question, as Samuelson put it by asking “what is the proper role of non-government?” (See “The Collected Scientific Papers of Paul Samuelson”, (1966, 1420). But, as Samuelson had shown, if one could define a non-governmental role, there would be no reason to ask the first question. An answer to the second question would provide an answer to the first.

This answer did not get us very far, for the first question, remained at the foundation of the analysis of the public sector in the province of public finance.

How to define the role of government has and still is a subject of concern to writers in the 18th, 19th, the 20th centuries, and most likely to remain with us in centuries to come. To reflect on this issue, it is worthwhile to reproduce below, a quotation from Samuelson that reflects two views on such a role, one positive; the other minimalist role.

Samuelson quotes the American President Abraham Lincoln about the role of government:
“I believe the government should do only that which private citizens could not do for themselves”; Thomas Jefferson, another American President, was quoted as saying “government is best which governs least”. These two views, still dominate politics in the United States. These statements however, merely addressed the size of the public sector, rather than provide a framework within which such a role is to be carried out.

In the public finance tradition, the role of the state was defined in the context of welfare economics, the assumption being that the market has failed, in the allocation of resources, the distribution of resources, and insuring a stable functioning economy. Although in bits and pieces, these issues have been raised and most often addressed by the classical economists, it was not until Richard Musgrave’s seminal work “The Theory of Public Finance”, that a comprehensive view of the state’s functions been articulated.

By now, students of economics in general, and public finance in particular, are apprized with Musgrave “three branch model”. In his Theory, Musgrave divided the functions of the state among three branches: the allocation branch, the distribution branch and the stabilization branch. The separation of the state’s activities into the three branches, as Musgrave put it in “Public finance and three branch model” (2008, p. 334), was offered as a convenient way of addressing diverse fiscal functions and instruments in their institutional setting.

2.1.1 The role of the state

According to Musgrave, the first premise underlying the state functions is the “nature” of the state. The state in Musgrave’s view is defined as “what it is” rather than “what is not”. Thus, he underscores how individuals and the states are related.

“The role of the state is not that of the mercantilist court designed to protect and enrich the prince---, nor is the state an “organic” unit wherein the individual is absorbed in the whole, nor is the state a “benevolent” dictator who knows and meets the wishes of his subjects” (Musgrave and Buchanan: Public Finance and Public Choice, P.31). What the state is, Musgrave believes, is an “association of individuals engaged in a cooperative venture formed to resolve problems of social coexistence and to do so in a democratic and fair fashion” (p.31).

Given that goods differ in terms of their characteristics, some are private goods, whose provision can be provided by the market, some involve externalities that are not met by the market, but instead require a political process for their resolution, the state enters as an equally valid as the market as a mean of addressing this problem.

Among these three functions described in Musgrave’s three branch model, the function that stands out is clearly that which involves the reallocation of society resources from private use to public use. Given the “necessity” that the public sector undertake the provision of certain goods; public goods, and the so called “merit” goods, principles were established to insure that such reallocation is carried out with least amount of distortion.

The state provision of public goods did not warrant a great deal of effort to justify their provision. From Adam Smith to Samuelson and beyond, it was acknowledged that public goods by their character availability to individuals in “equal” amount, and that the “exclusion” principle does not apply, their provision falls in the province of the state. A
much more difficult problem arose in conjunction with the determination of the “efficient” level of provision, as the provision requires the transfer of private resources from private use to public use. What was needed is a mechanism for ascertaining the benefits and costs of the transfer.

In the private economy, demand and supply determine the level of provision of private goods. The demand for private goods plays a critical role in that it reveals the preferences of consumers for private goods. In the case of public sector provision, there exists no such mechanism for preference revelation for public goods. Three questions had to be addressed: what mechanism is there by which the state can determine the level of provision; what goods should be provided, and how the cost be spread among individuals members of society.

In a democratic society, the answer to these questions is found in the political process. As public goods provision involves the imposition of taxes, the allocation function had to address the question as to how to distribute the tax among members of society. This issue fell in the province of Musgrave’s “distribution” branch.

The provision of the second category of public sector goods, referred to by Musgrave as merit goods, elicited a great deal of controversy, first in term of definition; what is to be considered as merit good, and secondly, how the provision of merit goods may be reconciled with society’s preferences for such goods. To get out of the box or the “fox hole” in which this provision was placed, the concept “externality” replaced the need for the meritorious label of the good. A good that involves an externality, that could not be internalized, required action by the allocation branch.

The second branch in Musgrave’s “three branch model” is the distribution branch. There, the state function is to alter private market outcomes. This function had both supporters as well as detractors, for as Musgrave put it, there, “public finance reaches beyond the safe haven of Pareto optimality and enters the less tractable realm of distributive justice” (ibid, p.336).

Two major issues were raised about the functions ascribed to the distribution branch: the allocation of the tax burden that result under the transfer of private resources to the public sector both to provide public and merit goods, as well as, to alter the distribution of market income. In the literature, two schools of thought emerged to address these questions, the “ability to pay” (Mill, 1848, book V, chapter 11), and, the “benefit” principle advocated by several Italian writers in the 19th century, including Pantaloni, Mazzola, and Viti de Marco (See Musgrave and Peacock, Classics, 1958).

To tax people according to ability requires that individuals with same ability should bear equal sacrifice. The problem then became how to determine sacrifice. Taxing people according to benefits fared no better for the theory advocated that individuals receiving the benefit pay the tax, thus making the tax share dependent on the subjective evaluation of the benefit received. Whether the benefit or the ability schools of thought were advocated for the reallocation of private resources from private to public uses, a method was needed to determine benefits and hence tax liability. Either method, hence, required knowledge of individuals ‘utility functions.
Pigou (1929) provided the economist’s intellectual foundation for allocating the tax burden. According to Pigou, all economic activities, public or private should be designed to maximize welfare. Application of “marginal” analyses gave the allocation branch a way to solve the allocation problem. Public sector provision would be carried out to the point where marginal benefits derived from the provision of public goods maximizes social welfare. As to taxation, the principle was that, it should be distributed to equate marginal sacrifice. In this utilitarian framework, both public goods provision and the allocation of tax burden would lead to welfare maximization.

The last branch in Musgrave’s three branch model is the stabilization branch. This function, although dealt with the macro economy under the influence of the Keynesian approach to economic fluctuation (see J.M. Keynes, *The General Theory*, 1936), had a much smaller role in the study of the public economy.

Since the concern here is for the conception of the state as articulated by the two schools of thought, issues surrounding the raising of revenues (the revenue side of the budget) will not be discussed (see Musgrave’s *Theory*).

### 2.1.2 Public finance and the political process

In Musgrave’s Theory, once the three functions of the state were identified, the next step is to incorporate their activities into an overall state budget. There both expenditure of the allocation branch and taxes and spending of the distribution branch are aggregated to form the overall budget. The next question then is what mechanism is to be used to place the budget in the private economy. There Musgrave offered an analysis of budget determination through voting. This analysis, however, was less comprehensive than his analyses of the three branch model.

In “*Public Finance and Public Choice*”, Musgrave restated his views about how the state should be perceived. The state as a cooperative venture among individuals must reflect their interests and concerns. As individuals do not live in isolation, but are members of social groups, social choices, though “individually based are conditioned by group association”. Hence, efficient provision of public goods requires “political institutions and a collective process of political determination” (p.32). To students of Musgrave’s *Theory of Public Finance*, a meeting of the mind seems to have taken place in the study of the public economy.

### 2.2 Public Choice

Buchanan, in his presentation about the public choice approach to the public economy, began by underscoring the fundamentals that both theories, public finance and public choice agree on; that some constraints on the exercise of political authority—to be essential to a functioning social order, that the basic constitutional constraints are those that require “agents” of the collectivity to submit to regular election and perhaps their replacement, that all citizens hold voting rights as well as that restrictions on the authority of nonelected bureaucrats (*Public Finance and public Choice: Two Contrasting Vision*: 109-110).

Buchanan argued that differences between the two views of the public economy arise in conjunction with constraints that may be placed on political authority. In his views,
2.2.1 Conception of and limits on state actions: the *Calculus of Consent*

In the preface to their volume, Buchanan and Tullock stated that their book is about the “political organization of a society of free men”, that their aim is to analyze the “calculus of the rational individual as he faces constitutional questions.” Essentially, what was neglected in the study of the public economy was the “process” that bridges the gap between the individual calculus and group decisions.

It is worth noting at the outset, that the frame of analysis of the public economy embodied in the *Calculus* differs significantly from that in Musgrave’s *Theory of Public Finance*. As mentioned earlier, they differ in their conception of the state and about the way the individual ought to be perceived within the collectivity. From the outset, the *Calculus* posits that only the individual makes the choice and not the collectivity. Below few key elements that form the fundamental differences between the two schools: public finance and public choice are highlighted.

2.2.2 Conception of the state and the individual in the social choice model

In the *Calculus*, the state is a construct made by man; it is an artifact; that it is created by man, is subject to change. In this framework a constitutional change is judged as an improvement if it is in the interest of all parties: that if the existing “constitution” requires modifications, an improvement can be achieved only through unanimity. The social choice model views that the individual as the one, not only to make the choice, but also that his voice in the decision process is supreme. As advocated by Buchanan- Tullock changes can only be executed by unanimous consent.

Unlike the traditional public finance view of the role of the individual in the public economy, in the *Calculus* the individual is a member of the collectivity; that collective actions arise from individual actions. In such a framework, the individual will find it profitable to organize an activity collectively if he/she expects that the organization will increase the gain; that collective action would give rise to gain that could not be secured through private action (note the similarity with the public finance concept of externality). As to the cost of provision, the individual utility from engaging in collective action is maximized when his/her share in the cost is minimized.

As to the voting rules that are to be employed to arrive at a decision, clearly the individual will opt for unanimity if the share in the total cost is minimized. Most significant perhaps is the principle that in the absence of decision making cost, the individual will support always the “unanimity” rule. Moreover, that in collective choice the unanimity rule is the only rule that guarantees that external costs are eliminated.

If one were to accept the *Calculus* individualistic approach to the analyses of the state’s activities, there need not be concerns about “ethical” issues arising from collective action as the individuals will only participate in collective choice if such a choice is beneficial to them. As to the cost and benefits, the notion of the “realm of social choice” is advanced whereby the benefits derived under collective choice are tied to the cost of collective decision. In some sense, this rule replaces the individual calculus in the public finance framework where the connection between the two is lost or not apparent.
In the *Calculus’s* framework costs as well as benefits arise from collective decision. Unlike the traditional analysis involving the calculus of benefits and costs separately, the Buchanan-Tullock approach is to arrive at the benefits through minimization of the cost associated with group decisions. Two types of costs are highlighted: the cost the individual is expected to shoulder as a result of the actions of others, (externalities cost), the other is the decision making cost. These two are summed up to arrive at the cost of “social interdependence”. As to the benefits, it is that which arises from “the cost reduction from the level which would have been incurred had the activity been organized differently”. In the individual calculus then, is the minimization of these costs. Thus, in any activity the individual, in the Buchanan-Tullock framework engages in two types of calculations: the cost if the activity was left in the “realm” of private choice; the second is the expected minimum present value of total costs expected to be imposed by collective action (p.50).

In this framework, the individual behaves in the same fashion as his behavior in the private market. His ranking order for a whole range of collective activities is similar to the ranking involving market choices. Similar to the individual behavior in the private economy, the individual in the public economy compares the various ranking of collective choice to arrive at the optimal choice. Since the individual choice involves a range of activities, by comparing the various ranking of collective choice, the individual arrives at the optimal choice. That is, which activity is purely “individualistic” and which should be collectivized.

The public choice framework differs from the private market framework in another respect. In collective choice, members of a group must participate in the decision. Group decision differs significantly from the market decision in that; it requires that for any action to be taken someone other than the individual must participate. If more than one individual has to agree on a decision, there arises a cost for reaching a decision. This clearly affects the choice of the decision rule. If the cost is to be minimized, a choice rule that is less than unanimity is chosen especially if the size of the group is large. The choice of a rule then depends on two factors: the number of individual needed to take a collective action, and, secondly, on the decision making cost. These two elements of cost behave differently: under the first the cost falls as the number of individual rises, while in the second, it rises with the increase in the number of individuals needed to reach a decision. For cost minimization, the optimal decision rule is arrived at when the sum of these two costs is at a minimum.

### 2.2.3 Provision of public sector goods

In the public finance tradition, the first function assigned to the state is the provision of public goods. By definition these goods are “consumed by all”, and where the exclusion principle does not apply. In the public choice framework, what goods to be provided by the state had to meet “specific decision rules”. To arrive at such provision, the first question to be dealt with is the “identification” of those goods that would be subject to specific decision rules. Thus, the state’s activities were classified into separate categories: first, those collective activities or “public decisions” that alter or restrict individuals’ property rights, where these rights were defined and accepted by the community. The decision rule applies to this case is “closer” to that of unanimity to protect the rights of individuals that were hitherto secured.
The second category is the one that is referred to in public finance as “public” goods. Examples are defense, fire protection, police protection and the like, all of which fall in the traditional scope of the state. In the Buchanan-Tullock framework as well as in the traditional public finance; these functions are ascribed to the state. Both schools of thought agree with the premise that the cost of provision exceeds the ability of the individual or a group of individuals to pay for their provision.

The question that has often been overlooked, according to Buchanan and Tullock, has to do with the allocation, is the range of activities that would be “collectivized” and the “extent” to which they ought to be. If the decision rule falls short of unanimity, the provision of any public good will tend either to be “unduly restricted or unduly expanded”.

The departure of the “Calculus” and hence public choice theory from the traditional public finance lies not only in the framework of their respective analyses as to the perception of the state, but also, the role of the individual in that framework. In the public finance, the major player is the state whereas in the public choice it is the individual. “Constitutional” rules replaced the state’s own rules as to the goods to be provided, the allocation of costs as well as the organization of the public sector.

To be sure, the individual comes to play in that a government that fails in meeting individuals demand for public goods and or in the allocation of tax burden faces at some point voters’ rejection, to be replaced by another government. But, in that framework, the individual does not have the opportunity to choose the decision-making rule for the organization of the public economy.


The presentation in this paper dealt with few elements that are in common to these two schools of thought as well as differences between them. The presentation in the milieu it is presented cannot in any measurable way cover the richness of thought expounded by these two schools. Nonetheless, the presentation, it is hoped would inspire students of both public finance and public choice to delve further to uncover those rules that would enhance the functioning of the public economy.

As a starting point, students of the public economy should heed the advice given by Holcombe (2001) that a need exists for a spillover from one school of thought to the other. According to Holcombe, “public finance has a distinctly peripheral relationship to public choice…Yet public finance does have a close relationship to the fundamental ideas of public choice” (p.398). In the end, one should remember Gordon Tullock’s words: “The most efficient government is not the most orderly government, but the government that comes closer to carrying out the wishes of the masters” (Public Choice, 1969, 29).
References


