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**GOOD GOVERNANCE, ECONOMIC EFFICIENCY AND SOCIAL BENEFITS:
AN EMPRICAL ANALYSIS**

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ABSTRACT:

There is a rich and growing literature viewing debates about all aspects of good governance as a multi-dimensional concept. The central question in this paper is whether a government implementing its new transport plan in a high density city, should interact with non-governmental technocrats such as environmental scientists, academics, city planners, economists, as well as non-technocratic inhabitants directly impacted by the plan. Does a government which fails to do so really achieve a sustainable transport plan with shared and transparent methods? Rietveld and Stough (2004) argue that a sustainable transport policy is a social construct. We elaborate upon this view and analyze an actual mega transport action plan under the public choice perspective. There are many studies showing cases where governance quality was enhanced by more closely matching services with citizen preferences, and by moving governments closer to the citizen they are intended to serve. On the one hand, the economic cost of a new project should be analyzed in terms of alternatives regarding sustainability and the efficient use of the economic resources. On the other hand, each tax payer should be understood as a genuine stakeholder. They should have the right from the beginning to ask about the financial issues of a proposed mega transport plan, and before the approval of such a project know about the level of potential external funding required and their potential future tax burden. This study tries to develop a model of equity and economic efficiency through which to examine whether and how a new bridge project across the Bosphorus in Istanbul will affect the vital interests of citizens, and what will determine their reactions. We provide valuable information regarding the awareness or consciousness of the inhabitants concerning the reasoning about the economic efficiency of the planned third bridge. The paper organized as follows: Section I presents a literature overview on the subject. Section II presents the model, Section III concerns the research methodology and finally we give our results in the conclusion part. The results will be presented in the conference.

KEY WORDS: *good governance; public choice; sustainable urban transport policy; externalities; pareto optimality.*

JEL: C83; D61, D62; Q56; Q58;

Introduction

Istanbul is located on the Asian and European coast of the Bosphorus. For many years the severe congestion road traffic has been a major problem for the city. The congestion has many reasons. First, the population in Istanbul has been growing at a significance rate, not only because of the new births but also because of the immigration. Second, most of the work places of Istanbul are in the European part of the city, which causes unbalanced traffic circulation from the Asian to the European side of the city. The intra-city transportation system of Istanbul consists of mixed roadway, maritime and railway transportations, among which road transportation is the most used. Both in Istanbul and in Turkey generally the

dominant use of the road transportation over other modes is greater than that of the world average (Economic Association of Re-establishment, 2004). This preference helps explain a lot of accidents, congestion and pollution, and the role of limitations of mobility for progressive wealth creating economic development.

Istanbul Bosphorus roadway crossing is currently realized by two bridges, the Bogazici and the Fatih Sultan Mehmet. The Turkish government has announced its plan to construct a third bridge across the Bosphorus close to the strait's northern entrance, in the region of the Garipçe and Poyrazkoy villages. The project involves a new roadway and will be completed in 4 to 5 years, and is set to cost about 6 billion dollars. This new bridge will be the strait's longest, at a length of nearly 1.3 kilometers; it will be connected to a new 260 kilometer long motorway that will traverse Istanbul and across the neighboring provinces of Kocaeli and Sakarya. The Minister of Transport claims this proposed highway would only minimally harm the environment. For the highway sections within city's provincial boundaries, 16 percent of the land is in private hands and 48 percent is forest: 222 buildings would be expropriated.¹

When we look at the Istanbul's traffic situation there are real problems. There are nearly 2.5 million vehicles in use, and many new cars are added to the traffic every day. (Turkish Statistical Institute Report, 2010) The two bridges are massively inadequate to handling the current heavy traffic congestion, especially in peak rush hours when people are going to and coming home from work. There have been many discussions about the dire need for a third bridge (Gerçek, H., Yayla, N.,2001; Öncel A.G.,Ersoy M.Ş.2005). One of the strongest voices of opposition to this project has been the Istanbul Chamber of Architects. They warn that a third Bosphorus bridge in Istanbul would negatively affect the Thrace and the Southern Marmara region: The arguments critical of the government's decision to build this third bridge may be categorized as follows:

First, the new bridge will have a large negative impact, destroying a large urban green area. It is important to acknowledge here that Istanbul is already a city exceeding its natural ecological boundaries, and that this is largely the result of the two existing bosphorus bridges and ring roads leading to them. Approximately 75 percent of the new route is made up of forest areas and water reservoir to the north of the city. Given the circumstances, it is fair to conclude that large-scale construction, the concomitant settlement and more traffic congestion will choke the city. Secondly, new roads and new settlements will create more pollution, and new illegal settlements will be constructed in forest areas. New roads will almost certainly pollute the forest and water depots. Despite all this, the government claims support the idea that the new bridge will reduce the traffic congestion. Even in their third argument they report that all scientific studies show that bridges increase the traffic load (Kubat et al.2007). Furthermore, with all the inconveniences of this urban sprawl drinking water will become more

¹ Two years ago, the Ministry for the Environment and Forestry had rejected plans to convert the Gokturk area northeast of Istanbul into a dump, as the area was close to water and mineral deposits. There was also a legal case concerning this area, which has tens of thousands of oak trees. Nevertheless, 50.000 of them were chopped down by the municipality to make way for the plans by the Istanbul Environmental Protection and Waste Management Ltd.

expensive and the air will be more polluted. Finally, the social cost of this project will be high because of the increase of population in these new extended areas. (Alpkokin et al.2005;3839) This will bring more unemployment. Overall, while this 6 billion dollar project will reduce the living standards of the city, it will benefit some sectors such as construction, car industry, and logistic sector.

It is important to mention that another major project, the Marmaray Project (a Japanese-Turkish consortium) is currently underway. A 1.6 kilometer railway tunnel is being dug 60 meters below sea level underneath the Bosphorus. Many researchers, academicians and politicians think that a new bridge project costing more than dollars 6 billion dollars is a misuse of time, energy and money which will not resolve the congestion problem at all. They believe the alternative Marmaray project is well designed and planed and could remedy the traffic crisis. (Oven, V.A and Pekdemir, D. (2002).

The final transport system we must take into account is Metrobus, a high level city bus service which began in 2005. It runs along 11 km of the main highway through Istanbul. There are 14 stations and the buses pass over the bridges between Europe and Asia.

A new road transport project in any high-density city, understood as a complex system, can fundamentally directly affect the actual movement of vehicles, green space area, weather and water quality of environment. Briefly, the physical and geographical conditions of the city are under threat. On the other hand, the economic cost of the new project should be analyzed in terms of alternatives regarding its sustainability and the efficient use of the economic resources.

Rietveld and Stough (2004) argue that sustainable transport policy is a social construct, defined as

“The maintenance of mobility and accessibility at some socially predetermined level subject to selected social and environmental constraints, e.g., maintaining predetermined levels of environmental residuals”.

The central question to be addressed is whether the government and its institutions, in implementing their plan, interact with non-governmental specialists or analysts of the subject such as environmental scientists, academics, city planners, economists or individuals. Does the government, through its institutions and regulations, really achieve sustainable transport with shared and transparent methods?

Actually, each tax payer as a simple citizen or in the main concerned citizen should have right to ask from the beginning about the financial issues of a mega transport action plan imposed by the applicant. Similarly, each tax payer should know before the approval of a mega transport action plan about the level of potential external funding required for the project, and responsibility in regards to the potential future tax burden.

An important reason why one cannot do without public authority is that it provides a basic level of justice and equity in society. Coase (1937) and North (1990) highlighted the economic importance of institutions through the concept of “transaction costs”. We already

mentioned justice equity and economic efficiency; together all three are important key factors for the realization of a friendly environment and sustainable transport policy. Rietveld and Stough (2004) and Gomez-Ibanez (1997) have in detail defined the essence of equity principles in transport.

“All persons should have equal access to transport services. However, the positive effect on income distribution is smaller than one often thinks because high-income recipients may also be intensive users of public transport“. Rietveld and Stough (2004). This equity analysis leads us to think about that there could be two faces of Pareto – Optimality in sustainable transport policy issues: First, it may be useful to identify and compare positive and negative externalities among the transport services users. Second, it may be useful to compare the principal transport action plan (Third Bosphorus Bridge) with other alternative on-going action plans.

I- Literature Review

Istanbul is not unlike a vast number of metropolitan cities which due to rapid population growth and highway dependency have failed to create sustainable transport policies. The city's average population density is around 90 persons/ha, with an annual growing rate of 4.5 percent. The current population is more than 10 million, which is expected by the end of the 2030 to be around 16 million. At present 65 % of the total population and 73 % of the total jobs are located in the Western part of the city (Alpkokin et al.2005; 3839-40). Two Bosphorus highways connect the European and Asian side. The first bridge was constructed in 1973 and the second in 1988, and both are overloaded in peak hours. (Ciraci et al. 1996) Buses and minibus are a dominant form of mass transit, serving around 6 million passengers on a network of 6100 kilometers. The rail system is with a total length 97 kilometers is insufficient. The construction of metrobus lines remains just a partial solution to the growing problem. See (Caliskan, N.2005)

Many researchers (Borgstrom,Elmqvist,Angelstam 2006) contend urban green spaces provide numerous important ecosystem functions for urban citizens and that efficient management of these urban green spaces is important for their well-being. About half the world's population today lives in urban landscapes and it is estimated that the urban population will increase to five billion by 2030 (United Nation 2008). Green spaces play a key role in the sustainability of cities (Chiesura, 2004; Jim, 2004). In the next decades, the rapid increase of large urban agglomeration in the developing economies will constitute a real threat to the viable global environment and sustainability of ecosystems (Berkowits et al. 2003). There are many studies documenting how urban growth causes land exploitation, decreases the amount and quality of green space and leads to parcels fragmentation (Schwartz 1997, Young and Jarvis 2001, Stenhouse 2004, Sandström et al. 2006b). It is established that urban green areas may significantly reduce air pollution (Beckett et al. 1998, Jansson and Nohrstedt 2001, Yang et al. 2005), reduce noise (Berglund et al. 2004) and enhance health, and create valuable recreational and cultural values for urban people.(Ulrich 1984,Vandruff et al. 1995). Verhoef (2006; 273) claims”... there is even no consensus on the question of whether external benefits of road transport might compensate for the external costs.” In point of fact there is a no

commonly accepted definition or exact interpretation of externalities. But we know that externalities are an important source of market failure and may easily interfere with optimal resource allocation (pareto efficiency).

The concept of Pareto optimality is an underlying factor in a great number of areas of economics. The allocation of resources in an economy is Pareto optimal, often called Pareto efficiency, if it is not possible to change the allocation of resources in such a way as to make some people better off without simultaneously making others worse off. The theory of externalities is often applied in environmental and transport economics.

II- Model

In this study, both the existing transport alternative (Metrobus and Marmaray) and proposed new bridge's possible benefits are discussed. In this context, sustainable transportation policy should do two things -- give the maximum expected benefit over the long term, and be chosen by the central government because of its minimum environmental effects and other costs (Winston, 1999). Therefore, in terms of cost-benefit analyses, in the study the initial presumption is that the railways maximize the social benefits. In particular, Marmaray is an ongoing project whose foundations were laid in 2004. This tunnel under the Bosphorus will unite the European and Asian sides of the city with an economical commuter line. In these equations j symbolizes the people who live in the region and t the relevant time frame.

$$U_{Newbridge,jt} = MAY + \varepsilon_{Njt} \quad (1)$$

$$U_{Metrobus,jt} = MAY + \varepsilon_{Rjt} \quad (2)$$

$$U_{Marmaray,jt} = MAY + \varepsilon_{Mjt} \quad (3)$$

In this theoretical framework the ranking of projects according to their expected value is going to be done by the inhabitants of the region and the administrators. The error term $\varepsilon_{j,t}$ shows the project's unexpected effects on the former. Under the normality assumption, when the benefits are calculated and the projects ranked, the specific transportation project will be chosen which gives the most expected benefit over the long run. When the rational expectations approach comes into consideration, the error term's expected value is zero. Under this approach, the central governments' projects and the people of the regions' expected value will be equal. The project's expected values are then sorted as follows:

$$E(U_{Marmaray,jt}) > E(U_{Metrobus,jt}) > E(U_{Newbridge,jt}) \quad (4)$$

The equation (4) should be written as the condition which maximized the public's benefit. In order for equation (4) to be valid, parameters such as environmental pollution and other unexpected damages should be incorporated into the project. It is essential that those damage which do arise should not be simply a correlation of the error terms, but rather must be sorted as follows:

$$\varepsilon_{Mjt} < \varepsilon_{Rjt} < \varepsilon_{Njt} \quad (5)$$

If the equation (5)'s condition does not realize the central government's transportation project does not maximize the social benefit. Under these conditions, the value of the equation (4) needs to be changed. With this type of change the welfare of the people of the region increases. Consequently, the project should be constituted according to the equalities (4) and (5), well before the application for long term sustainability.

III- Research Methodology

Our report will present our findings from a survey we conducted of inhabitants of Istanbul about an important public issue. Statistical tests are going to be applied to explain and demonstrate the awareness or consciousness of the inhabitants concerning the reasoning about the economic efficiency of the planned third bridge across the Bosphorus in Istanbul. For Sariyer and Beykoz, the samples will be calculated.

Participants

The participants in this study were in the main students, public transport users and private car or transport users, and inhabitants of Sariyer and Beykoz districts. The reason that we focused on the opinions of people living in this area derives from the point raised in the introduction about the nature of theory of public choice. We consciously focused on those whose everyday lives would be directly influenced by the negative externalities of an ongoing government action.

Data Collection Methode and Instrument

The primary data of this study were collected through a structured, undisguised questionnaire. It was pre-tested in a small pilot survey in order to preclude any vagueness or misunderstandings. Necessary modifications were made in the construction and sequencing of the questions based upon comments of those interviewed. Part one presents a profile of respondents and concentrates on demographic facts such as the gender and socio-economic class of respondents; and whether they were aware prior to the interview of the ongoing discussion about the cost-benefit results of the government's new transport project.

IV-Conclusion and Finding

This study tries to examine whether and how the proposed new bridge project will affect the mostly involved citizens and what will determine their reactions. We provide valuable information regarding the awareness or consciousness of the inhabitants concerning the reasoning about the economic efficiency of the planned third bridge across the Bosphorus in Istanbul. The result will be presented at the conference.

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