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Will Consolidation Improve Sub-National Governments?

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and

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Abstract

Local government size varies dramatically around the world. In Sudan, Côte d'Ivoire and the United Kingdom municipalities average more than 125,000 people. Those in many European countries have less than 10,000 people. Countries often consider consolidation of local governments as a means to lower service delivery costs, improve service quality, enhance accountability, improve equity or expand participation in government. The paper reviews a number of theoretical arguments and empirical findings concerning the size of sub-national governments. Countries should not presume that amalgamation will solve the problems because benefits and costs are situation specific. Success depends on many factors including getting incentives right for the various players and managing the transition properly. The effects on costs must be examined in terms of all changes occurring with consolidation, including geographic size.   Size economies appear service specific and are most likely to result for infrastructure intensive services such as water and sewerage. Size economies are less likely for services such as education that are provided in numerous small production units near the population. Also, the potential for savings depends on other factors, such as willingness to eliminate redundant workers. Consolidation reduces the potential for local government competition, which appears to enhance service quality but not necessarily overall government size. There is some evidence that citizens are more willing to be involved in larger governments, but trust may fall with government size. Larger governments can improve regional planning by handling problems with a broader geographic perspective and giving the government more influence with national policymakers.

1. Introduction

Governments throughout the world are seeking ways to deliver public services more efficiently and effectively. Consolidation of local governments is one option often discussed, although the expectations frequently differ. For example, some expect service delivery costs to fall, others hope for more even or equitable provision of public services and others anticipate better planning across a metropolitan area. Various political motivations may be reasons for the change as well. This paper is intended to identify the issues involved in deciding whether consolidation will on net yield positive economic benefits. The basic conclusion is that no single policy advice can be given on whether consolidation is a good idea, with the facts and circumstances of each case determining whether consolidation or not is beneficial. Many factors that are specific to the circumstances of each place can affect the potential gains from consolidation including the goals expected from consolidation, the structure of government existing prior to consolidation, local demographics (for example, population size and density), the set of responsibilities assigned to local governments, and the homogeneity of preferences within the area.

The number and size of municipalities differ widely across countries and the differences could have important implications for whether consolidation would be desirable and beneficial. In many cases, and particularly in some Eastern Europe countries, the number of local governments has grown rapidly (see Table 1). Croatia had 120 cities in 1993, but the number had grown to 643 cities and municipalities by 1998, with an average size of 8,800. Excluding Budapest, Hungary's more than 3,000 municipalities, many of which were formed during the 1990s, average only 2,800 people.[1] Municipalities in some other countries, such as Switzerland (average 2,100) and France (average 1,500) are also very small. As a general rule, the local governments in these countries have very limited responsibilities. On the other hand, local governments in countries such as Lithuania and Yugoslavia are responsible for nearly 50,000 people and in England and Wales, 126,000. Compulsory amalgamations in the United Kingdom and Sweden led to the larger local governments. The geographic size also varies from less than 20 square kilometers in countries such as France, Slovakia, and the Czech Republic to more than 1000 square kilometers in Sweden and Lithuania. Similarly, the number and size of municipalities differ substantially among developing countries (see Table 2).

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[1] The number of local governments did not expand rapidly in all East European countries, as evidenced by Bulgaria and Poland.

Table 1: Average Population and Geographic Size of European Local Governments

Country	Average Population in Local Governments	Average Area (Km)
United Kingdom	126,128	533
Lithuania	66,300	1,166
Yugoslavia	49,500	487
Bulgaria	35,000	432
Sweden	30,040	1,595
Netherlands	27,559	60
Denmark	18,760	150
Belgium	16,960	na
Poland	15,561	130
Macedonia	15,800	209
Slovenia	10,300	106
Albania	10,000	77
Finland	10,870	730
Norway	9,000	710
Croatia	8,800	104
Romania	7,600	81
Italy	7,105	38
Estonia	5,713	178
Germany	5,575	na
Spain	4,930	60
Ukraine	4,600	56
Latvia	4,300	115
Austria	3,421	na
Hungary	3.242	32
Switzerland	2,468	na
Slovakia	1,900	17
Czech Republic	1,659	13
France	1,580	15

Source: Adapted from World Bank (2002) and Swianiewicz (2002).

Table 2: Average Population and Geographic Size of Selected Local Governments

Country	Average Population	Average Size (sq. km.)
Sudan	293,400	17,400
Côte d'Ivoire	221,769	3,740
Nigeria	204,267	1,206
Kenya	191,916	3,344
Somalia	142,464	7,591
Uganda	86,222	775
Angola	77,822	7,510
Rwanda	76,700	236
South Africa	69,842	1,771
Ghana	26,410	301
Algeria	21,124	1,546
Mali	15,124	1,771

Source: en.wikipedia.org/wiki/wikipedia, http://lcweb2.loc.gov/frd/cs/continent_africa.html

The level of government that is making decisions on whether to consolidate differs across countries. In some cases the national government considers whether to mandate consolidation, often across the nation, and in other cases a local decision is made that would only affect governments within a single local area. The level reflects different decision-making processes, diverse expected goals from consolidation and differing political motivations.

The decision of whether to consolidate may differ from the decision on the optimal size of local government. An important reason is that there can be significant transition costs in moving from the existing government structure to the consolidated government, both in terms of establishing a new political structure and in undertaking the technical steps of broadening service delivery operations from a city to a region. Thus, it is possible that a larger government would be appropriate if government were being designed from a clean slate, but the larger government would not be efficient in given the costs of moving from the existing structure to the larger one.

The decision on whether to consolidate differs from the decision on whether and how much to create a devolved government structure in a country. A relationship exists between these factors since the potential cost side gains from consolidation depend on the set of services that are devolved to the local level, but the deciding factors need not be the same. No attempt is made here to address devolution issues.

The paper is divided into six basic sections after this introduction. The first section is a brief summary of recent government consolidations in several different countries. The next four sections address basic motivations for consolidation: effects on the costs of service delivery, effects on the ability to deliver the services that people demand, effects on the ability to engage in regional planning and the equity implications. The paper ends with a brief summary and some conclusions. The paper is written as though these various elements of the consolidation decision are separable in order to allow a tractable discussion. In practice, the issues may not be so easily divisible.

2. Recent Experiences with Consolidation

Many countries have either consolidated or considered consolidating local governments during the past 50 years, but some have rapidly expanded the number of governments as well. Essentially every Western and Northern European country reduced the number of local governments during the second half of the twentieth century in consolidations that were generally forced by the national government. More than three-fourths of the local governments were eliminated in countries such as Sweden, Denmark, and the United Kingdom, resulting in local governments that are large by European standards. The Nordic country reductions happened around 40 years ago and in the United Kingdom the consolidations were around 20 years ago. The declines were more modest in places like France and Switzerland; Italy increased the number of local governments. East European countries have had a more mixed experience during the past 15 years, with countries like Hungary, Croatia and the Czech Republic significantly

increasing the number of local governments. In some of these cases, such as Hungary, this represented a movement back to the many small local governments that had existed until the 1970s. East European countries like Bulgaria and Romania did not experience the same fragmentation, even though the number of local governments had also been reduced in some cases.

The United States has had very limited experiences with consolidating general-purpose governments and the number of these governments has actually increased over the past 50 years. Lexington, Kentucky, and Nashville, Tennessee, are two exceptions, where the cities inside the county were combined with the county government in order to reduce confusion about service responsibility and in hopes of lowering costs. Neither the state governments nor the national government were heavily involved in these decisions and the vast majority of local governments in Kentucky and Tennessee have not followed by consolidating. Consolidation of horizontally equivalent general-purpose governments has been very uncommon.

U.S. states have been more aggressive in encouraging local governments to combine school districts, particularly during the middle part of the twentieth century. The number of school districts was reduced from 67,355 in 1952 to 14,851 by 1982 and has slowly declined in subsequent years. On the other hand, the number of special purpose local governments for non-education purposes has tripled during the past 50 years. In total, the number of U.S. local governments has risen since 1967.

A number of recent examples of government consolidation exist around the world, including in Jordan, Sudan, Zimbabwe, Latvia and in the greater Toronto area. The first four were mandated or encouraged by the national government and the latter was the result of provincial decisions. A brief description of these consolidations is provided in this section. Also, the use of voluntary associations in Hungary is discussed.

The New City of Toronto was created on January 1, 1998 by the provincial government, despite strong opposition.[2] Slack (2000: 14) provides a preliminary assessment of the merger. It is clear from this example that whether amalgamation is a success or failure depends heavily on the intended goals. She observes "The stated rationale was to save taxpayers' money by replacing six lower-tier governments and the metropolitan level of government with one municipal government..." However, the author notes that a previous decade of government reports indicates that the need for service coordination was a more pressing issue.

Slack's research indicates that cost savings are not likely to result and service coordination has not been accomplished because many problems, such as transportation and poverty, extend beyond the consolidated city's boundaries. Evaluated on either the stated objective or the need for coordination, the Toronto amalgamation appears to be a failure. Nevertheless, Slack observes that amalgamation has resulted in several benefits

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[2] As indicated in Slack (2000), politicians, citizen groups and local municipalities (referenda in lower-tier Metro Toronto Municipalities ranged in opposition from 70 percent to 81 percent) opposed the amalgamation.

including equalization of service delivery and a better bargaining position for Toronto at the provincial and national level.

Mandated by 1988 legislation, the two types of rural councils in Zimbabwe were amalgamated into 57 Rural District Councils in 1993.[3] The reform was undertaken in the context of decentralization, as the Rural District Councils were to take on additional responsibilities not already assigned to the local level. Roe (1995: 833) uses the thoughts of program implementers to define another objective; "...the initiative is much more about reforming local government in a way that promotes economic development at the district level by capitalizing on the scarce administrative and technical skills within the local authority." Zimbabwe presents an interesting case from the perspective of public choice as the two different types of rural councils represent vastly different populations with varying needs and resources. The rural councils represented primarily white, commercial farming interests. Rural councils were also permitted to levy property taxes and provide local services. The district councils represented predominantly black, communal interests. District councils did not collect their own revenues and most local services were provided by central government agencies. Amalgamation of the two diverse authorities presented opportunities for sharing scarce skills and resources and for providing more equal levels of services between commercial and communal areas.

In order to provide the new districts with the tools necessary for success, the Rural District Councils Capacity Building Programme (RDCCBP) was established to facilitate institutional, human resource and capital development. With a well-established set of goals and a "learning by doing" philosophy the RDCCBP operated from 1996-2001 and "was largely successful in meeting the set objectives." (Musekiwa, 1996: 12) In spite of the success, recent political and economic problems experienced by Zimbabwe have placed added strain on the local districts leaving "most local authorities...on the verge of bankruptcy." (Musekiwa, 1996: 12)

A Presidential Decree to consolidate local governments in Sudan was issued in 2003, but it was never approved by Parliament. The number of municipalities in northern Sudan was to be reduced from 309 to 80. The goals were similar to those in Zimbabwe. Providing services more evenly by combining urban areas with the surrounding rural areas was one of the expectations. Also, 105 municipal responsibilities were articulated in the Decree, though none are listed directly in the Constitution. The new list could lead to additional municipal functions. Limited cost savings were anticipated from the consolidation because many of the existing local councils would have been eliminated with the hope of saving the expenses from operating the councils.

Jordan consolidated governments in 2001 and reduced the number of municipalities from 328 to 99 plus Greater Amman. Cost containment was a key factor in the decisions to amalgamate governments. Municipal expenditures had been rising very rapidly, leaving a number of municipalities unable to meet some of their expenditures, including their payrolls. The lack of a hard budget constraint was allowing the number of local employees to proliferate. The national government provides most of the funding

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[3] World Bank http://www.worldbank.org.zw/rdccbp1.pdf

for local governments and hoped to slow the growing demands placed on its budget by reducing the number of local governments. At this point the consolidation appears to be little more than renaming groups of three or four municipalities as one municipality, even in some cases where the municipalities did not have contiguous borders. Often the group was renamed using the name of the largest municipality, but the subsumed municipalities frequently serve as branch offices. The expected benefits have not been realized thus far, given the nominal restructuring that has taken place and given that local political structures have not been redeveloped.

Beginning in 1998, Latvia encouraged local governments to amalgamate with the intent to reduce the number of local governments from 542 to 102 (see Dillinger, 2003). No local government would have had a population under 4,500 and the average would have risen to about 23,000 people. The stated goal was "to establish administrative territories with local (and regional) authorities able to develop economically and provide quality services to inhabitants (see Dillinger, 2003:11)." The central government offered local governments grants equal to five percent of their budget if they consolidated quickly, with the grants falling to four and then three percent in later years. Local officials generally did not anticipate the benefits espoused by the government and as a result opposed amalgamation, as by 2003 only 21 governments had been eliminated through amalgamation. The government has since abandoned the amalgamation plan.

Rwanda is currently developing a plan to reduce the number of districts from 106 to 30 and of sectors from 1545 to 416. The districts will serve as the basic level of local government. They will have an average population that is relatively large on international standards (greater than 270,000) but the geographic area will be modest, particularly on African standards. The consolidations will occur in the context of a broad based decentralization of government. Thus, the combined territorial reforms and consolidation are intended to increase accountability of government, expand people's participation in government, and enhance planning and service delivery.

Rampant fragmentation of local self-governments occurred in Hungary beginning in the early 1990s (see Peteri, 2005). A total of 3115 local government existed by 1991 and the number had risen to 3,177 by 2002 and the average size is only about 3200 people. Further, the local government sector is large, expending about 12 percent of GDP. Amalgamation of local government was not seen as a viable political option given the memories of forced regional structures from the 1970s. Instead, legislation was passed to allow voluntary associations, with careful protection of municipalities always a key element. Associations can be in a variety of different forms including local councils agreeing to deliver services jointly, one local government delivering services for others, and commonly elected councils. About 90 percent of local governments participate in some type of association, though most are established for a single purpose (most frequently for education).[4] Multi-service municipal associations are much less common, though at least 166 local governments participate for more than one service. The central government has provided some small grants to encourage associations, particularly for

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[4] Single purpose districts are common in Slovakia for services such as solid waste, water supply, sewerage, and tourism.

education and childcare. The government has also supported associations in other ways, such as by assisting local governments in purchasing school buses.

Contracting out of services is also an alternative to direct consolidation. French local governments often contract with private companies to deliver water and sewer and German municipalities contract with counties for private and secondary education (World Bank, 2003:16). Hungarian local governments frequently contract with companies that provide solid waste collection and disposal.

Contracting out and associations can be good options in many countries, but have their disadvantages (see Swianiewicz, 2002). Contracting out requires a developed market to deliver the services or another government with the capacity to deliver services on behalf of other local governments. Associations normally entail significant political costs of getting agreement and ensuring cooperation. Further, accountability and transparency are more difficult to achieve through associations. Given these disadvantages, associations are less likely to occur unless prompted by incentives provided at the national level.

3. Consolidation and the Costs of Delivering Government Services

This paper follows the approach used by Dowding et al. (1994) in dividing the discussion on the appropriate size of government into supply-side and demand-side effects. This section is an examination of the supply side issues and the following section addresses the demand side concerns. The supply-side issues are primarily those associated with the extent of size and scope economies.

One common argument in favor of consolidation is that larger governments can provide services at lower unit or per capita costs or deliver better quality services at the same cost by capturing economies of scale. Alternatively, indivisibilities in production, which are most likely to arise for very small units of government, can be offset with a larger scale. The recent decision to consolidate governments in Jordan was based heavily on the expectation that costs could be reduced. For example, additional water may be treated at the same plant for little additional total cost (that is, marginal costs are lower than average costs), thereby permitting unit costs of treatment to fall. Also, consolidation of municipalities may result in more efficient administration and elimination of redundant employees. This section examines the extent to which costs can be reduced by consolidating local governments.

The concept of scale economies as used in economic analysis has a very precise meaning. The extent of scale economies or diseconomies is determined by examining how a proportionate increase in all inputs affects output, while holding all other factors constant. Increasing returns to scale exist when the output increase is more than proportional; decreasing returns occur when the output change is less than proportional; and constant returns are observed when the change is exactly proportional. This concept, though useful for some purposes, may be limited in certain applications, such as for evaluating the effects of amalgamation, because all input factors may not change

proportionately. Labor and some forms of capital may be scalable but key environmental factors such as land area, population density, and geographical attributes may vary widely across consolidated areas and cannot be (or will not be) scaled in proportional amounts. Thus, the issue of whether consolidation will lower costs must be examined in a broader context than what economists mean by economies of scale.

Amalgamation by definition entails creating a larger service district with more land *and* population and likely with somewhat different service delivery conditions. Thus, the issue with amalgamation is neither measuring whether providing additional services to the same population lowers unit cost nor whether delivering the same service to a larger population in the same geographic area entails lower per capita costs. In the case of water provision, for example, the treatment of more water may yield scale economies but these must be balanced against the cost of delivering the water to a greater area (which entails more piping or conforming to existing piping systems). Thus, the potential for costs savings must be evaluated in the context of all changes that occur. The likely result is that amalgamation in some places and for some services results in lower costs and in other places and for other services does not. This makes generalization of the results very difficult.

Service delivery conditions, such as population density, can be very important to the cost structure facing a community or the quality of services that can be delivered and therefore to the potential for cost savings from consolidation. Suppose a government goal of short response times for police and fire services exists when governments are consolidated. Achievement of lower cost service delivery is more feasible in a more densely populated area where fewer service locations and staff are needed relative to a more sparsely populated area with the same number of people.[5] Also, mountainous areas may require different service methods and costs than flatter areas or along the shore. Differing service conditions are less likely to be a concern when densely populated areas with relatively little land are combined but could be very important to service delivery when relatively large amounts of land with different attributes are consolidated.

In light of the scaling difficulties, a more relevant measure is economies of size. Although economies of scale require proportional scaling of all factors, economies of size are evaluated by examining changes in the size of the jurisdiction (which entails population and geographic changes) and proportionate increases in inputs. Based on thinking in terms of size economies, researchers can answer whether large local governments are able to provide services at lower costs than small local governments using some input factor, such as population, as the determinant of size. Although there is no longer a need to scale all input factors with this measure, land area, population density, and geographical attributes must still be accounted for in considering the effects of consolidation on costs.

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[5] Of course, the high cost of delivering services in the less densely populated area may exist whether it operates independently or as part of a consolidated government.

Conceptual Measurement of Size Economies

Both conceptual and empirical analysis can be used to examine whether size economies can be expected to result from consolidation. Hirsch (1968) provides a useful categorization of local government services according to their potential to reap size economies. Horizontally integrated services are ones that use separate production plants at the same level of the production process to produce the same service, and include education and police and fire protection. Once a municipality has reached the size where it can use the individual plants efficiently, economies of size are limited for these services, as increases in population and land area simply require more production plants. For example, if the target student-teacher ratio in a primary school is 25 students per teacher, adding a small number of students may produce very small size economies as more students are added to existing classrooms, but ultimately more teachers must be hired and new classrooms must be procured and few economies result. Hirsch thought that 80 to 85 percent of government expenditures are dedicated to horizontally integrated services but an analysis of 1999 U.S. local government data suggest that the share may be 65 to 70 percent today.

Vertically integrated services are those that require production at several different stages, and these appear to represent about 15 percent of government expenditures. Vertical services include water and electricity, both of which require production of a service and distribution of the service to users. Economies of size are more likely in *production* of the services, as treating more water at the same facility could result in lower per unit costs. However, it is important to keep in mind that amalgamation not only creates a larger population but also a larger land area and gains from treating more water may be offset by the added cost of distribution over a wider geographic area.

Circularly integrated services are goods and services that complement each other in production, and are therefore best produced in close proximity. These services can be complementary in the sense that resources can sometimes be shared in their production. Central administration is a good example of circularly integrated services and these services in total account for slightly less than 10 percent of municipal costs in the U.S. Size economies from consolidating administrations are possible as long as it is politically feasible to discharge redundant personnel and the added costs of managing a larger administration do not offset size gains.

In a test of the Hirsch hierarchy, Ladd (1994) recently argued that those services entailing large capital costs (often vertically integrated services), such as sewage plants or transportation systems, are more likely to benefit from greater size. Services that are more labor intensive, such as most horizontally integrated services including fire protection and education, are apt to have constant or even increasing per capita costs as the number of people served increases. Ladd examined the effects of population growth in the U.S. and found evidence that per capita spending rises with population in the city, but primarily because of effects from increased population density. Increased density causes higher costs because of the horizontally integrated services, greater congestion of

public goods, and changes in environmental factors such as poverty levels and age distribution. Also, there is a tendency for local spending to rise as a share of total provincial and local spending, meaning larger cities tend to take on relatively more responsibility. This represents a shift in the responsibility for service delivery rather than an increase in the cost of producing government services. Thus, increasing demand for services, rather than higher costs of producing services, explains much of the effect reported by Ladd. Further, Ladd's work is not directly useful for analysis of size economies since she studies the effect of population growth in a city rather than changes in both city geographic size and population size, as occurs with consolidation.

Empirical Measurement of Size Economies

This section uses two approaches to summarize selected literature on the gains from economies of size. The first approach is to evaluate the extent of size economies for selected individual services. A single service approach is appealing because most research is conducted service by service. This is possibly because, as noted by De Borger and Kerstens (2000), it is often easier to determine appropriate input and output measures for individual services than for the government as a whole. Further, analysis of individual services allows realization that most size economies will be service specific.

Service-specific information can be useful for purposes such as designing the cost minimizing service district. Size economies could be exploited with the creation of special service districts or could be completely captured by perfectly mapping each service to its cost minimizing size. It seems plausible that the preferred size for a school district would differ from the preferred size for a fire or waste management district, and the services could be produced at lower costs by selecting a district that is mapped to each service. However, perfect service mapping is unlikely to be an achievable or desirable goal for policymakers. One reason is that the cost minimizing size is likely to change over time with the cost characteristics for producing a particular service, causing the political and administrative costs of redrawing districts and resizing service production to be prohibitive. Also, a different size jurisdiction for delivering every service would be confusing for service recipients. Nonetheless, special service districts to capture economies of size from selected services, such as water and sewer, may be useful in some cases.

The second approach compares local governments as a whole using a global measure of efficiency. This approach contributes to the size discussion as it is used to determine if size economies can be expected across the entirety of government. The presence of size economies or diseconomies provides a good starting point for inquiries into whether resizing local government can capture cost gains.

Unfortunately, the empirical research on the relationship between government size and costs has primarily been conducted in developed countries and the results may not be perfectly transferable to developing countries. For example, the potential lack of skilled managers in developing countries could make larger local governments relatively more efficient because the most skilled people are only available for the largest areas.

There is no way to test such hypotheses given the existing state of the literature so results from developed countries are provided here. Empirical research is provided for one horizontally and one vertically integrated service as examples of the extent of economies and then for global efficiency.

Size Economies in Education

The relationships between school district and school size and costs will be examined as examples of the issues surrounding economies of size for horizontally integrated services. As noted previously, large economies of scale are not expected with the consolidation of horizontally integrated services and literature in this area suggests that there are definite bounds to efficient size. In addition, when economies of size are determined to exist, important considerations such as increased travel costs for students and parents have often not been taken into account.

Researchers have been examining size economies in education for over 30 years. Early evidence, summarized in Fox (1981), estimated cost minimizing size for high schools to be over 1000 pupils and for school districts to be as many as 30,000 pupils. However these studies suffered from methodological problems that have been at least partially addressed by more recent literature. A summary of size literature for US schools since 1981 can be found in Andrews et al. (2002). The authors determine the usefulness of research based on how a series of factors are taken into consideration including 1) unit of analysis, 2) outcome measures, 3) whether the influence of demand was taken into account, 4) factor price measures, 5) correction for omitted variables, and 6) functional form.

Selection of the correct model for estimating size economies is necessary to producing results that can be used as a basis for making policy decisions. Cost functions are commonly used in the recent education size literature to estimate the minimum expenditure level necessary to achieve a certain level of student performance given environmental, physical, and input quality factors. Economies of size are determined by observing the percentage increase in costs for a particular percentage increase in student population.

A series of methodological issues arise in estimating cost functions and several of these are presented here.[6] The proper unit for analysis depends on the question being asked. School districts should be examined if the issue is the lowest cost size government but many are also interested in other issues such as the lowest cost size school. Most of the recent literature is focused on determining the lowest cost district; meaning district level data are analyzed. Enrollment or average daily attendance is normally selected as the measure of district size.

A number of factors including outcomes, voter demand, and input quality must be taken into account when the cost function is estimated. An outcome measure must be

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[6] See Andrews et al. (2002) for a more detailed discussion.

included in the cost function so that it is possible to address the costs of delivering education while holding outcomes constant. Average test scores are commonly used; however, Duncombe et al. (1996) find that demand is more correlated with outcome measures at the upper (advanced achievement) or lower (basic proficiency) end, suggesting the average test score measure is not the best outcome measure. Graduation rates and dropout rates are also possible measures.

Accounting for voter demand when estimating cost functions can be important because actual expenditures made by school districts need not represent the cost of delivering services. Voter demand may lead to greater or lesser expenditures, and these expenditures may be for items that are not reflected in higher test scores (such as nicer buildings). Substituting a demand equation into the cost equation to get a reduced-form expenditure function is one means to ensure that demand is properly considered in the analysis (Ratcliffe et al.1990; Downes & Pogue 1994). Studies have also treated outcomes as endogenous using demand variables as instruments (Downes & Pogue, 1994; Duncombe et al, 1996; Reschovsky & Imazeki 1997, 1999).

Input quality must be included since both the quality and quantity of teachers could be important to determining the costs of achieving a certain set of outcomes. This is commonly accomplished by including an input factor price, such as teacher's salaries, to proxy for quality of education. Recognizing the possibility of omitted variables has led the literature to several different approaches including panel data methods (Downes & Pogue, 1994), efficiency frontiers (Deller & Rudnicki, 1992; Duncombe et al., 1995), and linear programming (Duncombe et al., 1996). Finally, functional forms range from simple linear and log-linear to translog cost functions.

Four studies (Duncombe et al. 1995, 1996; Reschovsky & Imazeki 1997, 1999) are identified as most closely meeting methodological criteria. Results from these studies suggest that total expenditures fall until there are about 6000 pupils in the district and operating expenditures fall until there are about 3500 pupils. The cost minimizing sizes for instructional and transportation expenditures are significantly lower, ranging from 1200 to 1800 pupils. It should be noted that none of the above studies takes into account opportunity costs of increased travel for parents and students, which can be substantial (Kenny 1982). Failure to include these costs probably leads to an overstatement of the gains from larger size when all costs are taken into account. As might be expected, economies of size over all ranges were found only for school administration.

As with all consolidation decisions, factors other than the potential for lower costs play an important role in decision-making. Even in the case of school administration, where the size gains are fairly apparent for larger sizes, issues associated with managing a larger administration (for example, depleted employee morale because of a perceived lack of access to management) may offset the gains. In the case of overall school or school district size, the issues are even more complicated. Indeed, diseconomies of large size can set in as the size of schools and school districts rise.

Another consideration presented in Andrews et al. (2002) is the effect of size on student achievement. For example, parents are often more involved in neighborhood schools, and parents are a very important input in education. Thus, consolidation could lower the quality of education if it effectively eliminated neighborhood schools. On the other hand, larger governments may be able to deliver services that are not cost effective in smaller places. The ability to offer more specialized courses in the schools is an example. Although there are many methodological issues to address in this literature, there seems to be a general consensus that smaller schools and districts lead to better outcomes, especially for minorities and those from low socio-economic backgrounds. Lee and Smith (1997) estimate that optimal achievement occurs in high schools with between 600 and 900 students.[7] But, the results suggest that the effects of consolidation on service quality must be addressed based on issues that are likely to be very country and culture specific.

A related issue is whether school inputs influence education performance, and particularly whether schools and school resources are more important in predicting future success than are families.[8] Hanushek and Luque (2002) analyze the role of schools on performance using data collected from more than 40 countries. The research suggests that providing students with more resources generally increases performance, with the relationships being similar in developing and developed nations.

Size Economies in Water Services

Local public services that can be categorized as vertically integrated normally have two separate dimensions: production and distribution.[9] For example, water is treated and distributed to consumers through pipelines. Production may also involve several steps, such as collection and treatment of water, and normally occurs at a small number of production facilities. The impact of consolidation on costs depends on the relative size of these factors, which can often have offsetting effects. Size economies are likely to exist for production, as more water can be treated at the same plant at declining marginal cost. However, distribution costs, which depend heavily on population density and terrain, tend to increase with size.

Consolidation of water districts can increase distribution costs in two ways. First is the need to expand the infrastructure including piping, water towers and other parts of the distribution system, and to make infrastructure compatible across systems. Second are the operational costs of pumping water through the system. Both costs can rise with increased distance from the water source. Boisvert and Schmit (1997) weigh production economy gains with the diseconomies of distribution for rural water systems.[10] They

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[7] As noted in Andrews et al. (2002) this analysis does not include any school-input data and the results should be treated with caution.

[8] See Heyneman and Loxley (1983).

[9] Note that horizontally integrated services, such as education, often differ in that the user goes to the point of production to consume the service, or the service is often produced at the user's location, such as with police and fire protection.

[10] The analysis uses data from 37 rural water districts in New York.

note that distribution costs, not treatment costs, account for the largest share of expenditures and as a result conclude that cost advantages from consolidation only exist in the most densely populated areas.

Kim and Lee (1998) in a study of urban water service markets in Korea find that consolidating the water districts of the Seoul Metropolitan Region would lead to substantial cost savings. However, the authors note that such gains would not be expected in low population density and lesser-developed areas. The authors conclude that flexibility in designing the best-sized water district and the means of service delivery is a key to low cost provision of water services. They caution that the large potential savings from consolidation in the Seoul region would be substantially eroded if there were significant costs of integrating the water districts or if changes in economic resources such as population or employment occurred. Kim and Lee also note that integration may cause conflict among localities if benefits are transferred without compensation.

Using panel data for French local communities, Garcia and Thomas (2001) find gains to consolidation among 53 privately operated and 3 publicly operated municipal water systems. The marginal gains from consolidation are found to be highest when two systems are merged, with the additional savings diminishing until the optimal level of five is reached. Beyond this point there are diseconomies from consolidating districts, although the cost increases are not significant. Density is an important consideration as creating a combined service district is less profitable in low population density areas. The authors conclude that their model provides evidence that merger of water districts is generally profitable. Interestingly, Garcia and Thomas find that it is more cost effective to produce and pump additional water in response to an increase in demand rather than to provide the water by fixing losses through repairs and maintenance. Provided that water conservation is an important local goal, an alternative to the market mechanism is needed to reduce water losses. Government planning to achieve local environmental goals is discussed further in the regional planning section below.

The above evidence indicates that caution should be exercised when consolidating vertically integrated services for the purpose of realizing cost savings. Economies of size, although likely to occur over a much broader population range than in the case of horizontally integrated services, are not a given. Size economies in the production of vertical services are very probable but distribution costs are nearly as likely to rise. As a result, the potential for economies from consolidation must be examined on a case-by-case basis. The best candidates for consolidation are areas with high population densities and short distances from the service source to consumers. Indeed, at times the distribution costs are so sizable that a proposed merger can be disregarded with little analysis. For example, a recent report on the merits of amalgamation in Latvia (World Bank, 2003) observes that large distances separate the water supply and sewage networks of many small Latvian municipalities. As a result, it is argued that the distribution costs from consolidating these systems outweigh any potential savings from larger scale production. The report also notes that cost savings for purchasing large quantities of

inputs, such as chemicals, could be realized through cooperation, and do not require consolidation.

Government-Wide Economies

The potential costs savings from consolidating governments extend beyond the size economies for each service to include the potential for economies of scope (or diversification). Scope economies refer to the economies, to the extent they exist, from delivering multiple services together. Such economies, or diseconomies, could arise for a variety of reasons such as shared inputs in the production of some services or one service being partially a byproduct of another. For example, information obtained through collection of utility fees could be used in enhancing police and fire protection or in collecting taxes. Also, computer and engineering capabilities may be useful for numerous functions. The expected economies from circularly integrated services may be scope economies as well as size economies.

Scope economies are important to a consolidation decision if they grow with the size of government or if larger local governments can be assigned a greater set of responsibilities (perhaps because a certain size must be attained before it is reasonable to consider transferring some responsibilities to local governments) that would add additional cost savings. Both Zimbabwe and Sudan appear to have assigned greater expenditure responsibilities to the new, consolidated governments, perhaps suggesting an implicit notion of economies of scope.

Unfortunately, very little research has been conducted on the presence of economies of scope and there is nothing in the empirical literature on scope economies that adds any light to whether consolidated governments will gain even greater scope economies. Grosskopf and Yaisawarng (1990) provide one rare piece of literature in this area. The authors found scope economies between police and fire protection, evidencing that it is lower cost to produce these services together than to produce them independently.

Two other types of research have directly sought to determine whether costs are lower across all government services. First, a relatively limited set of work has focused on the costs of delivering all services across different sized governments. One likely reason for the paucity of research in this area is that it is difficult to separate demand side and supply side effects. For example, larger governments may potentially choose to deliver higher service levels than smaller governments because the need for police, fire, water, sewer and other services grows with population size and density. These demand side effects should not affect decisions on whether consolidation will be cost reducing.

Burnham et al. (1993) provide one example of research across multiple government services. The study based on UK data finds that population size was not an important factor compared with others in affecting government performance. Some services were found to have economies of scale while others had diseconomies. The

same study found that larger units in Germany (though still small by UK standards) were more effective.

Second, the question of cost minimizing size has also been approached using global performance measures. Selection of a measure of government performance is the first step in such an analysis. Blank and Lovell (2000) identify three possible measures. Efficiency is providing the maximum amount of service at a given level of resources. Effectiveness requires matching service delivery with the government's stated objectives. Productivity change measures the improvement or decline over time of the ratio of service provision to resource use. Efficiency is the most common measure of performance evaluated in the literature. The reasons are that measures of efficiency do not require the same degree of interpretive subjectivity, as effectiveness and productivity measures are susceptible to operating environments such as climate or topography.

At first glance performance measures may appear to have little significance in the amalgamation decision. However, identifying the governments that are operating efficiently as well as the underlying causes of inefficiencies enables decision makers to evaluate whether or not amalgamation would improve the situation. If government inefficiencies exist because size or scope economies are not being exploited, amalgamation is likely to improve performance. Conversely, combining poorly performing governments may only aggravate the situation if inefficiencies are caused by under-qualified staff or lack of citizen participation.

The general approach has been to investigate the relationship between efficiency and size of the local government unit, where efficiency is providing the maximum amount of service at a given level of resources. Efficiency measures are a comparison between ideal and current performance.[11] The ideal is normally established as the best practice and governments are assigned an efficiency rating relative to this best practice. There are two caveats to measuring efficiency in this manner. First, efficiency is a relative measure with governments assigned an efficiency level relative to others in the data. Second, it is difficult to include measures of service quality in the analysis. For instance, consider a case where the number of students being served at a particular school is used as the output measure and the number of students increases by an amount that is small enough that input costs do not rise. The school now appears to be more efficient because it is serving more students at the same cost. However, the additional students in the classroom may lower the quality of education, and this effect is not captured in the efficiency measure. A book edited by Blank (2000) provides an overview of the methods used and challenges faced in assigning efficiency measures.

Efficiency is measured by costs in the studies presented below. If a government is not producing at the efficient level, it can improve its performance in two ways: reduce the amount of waste (technical efficiency) or improve the allocation of inputs (allocative efficiency). Efficiency rankings can be used to inform the discussion of economies of size in two ways. First, one can evaluate whether smaller governments operate as efficiently as larger governments, given resource and service levels. For example, it is

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[11] An introduction to methods for measuring public sector efficiency can be found in Lovell (2000).

possible that salary limitations prevent small governments from hiring qualified personnel resulting in lower efficiency. Conceição Sampaio de Sousa and Ramos (1999) find that technical efficiency is indeed lowest among small municipalities. One might also suspect that government officials in small localities are subject to stronger political pressure from individuals that might cause them to alter input allocations. Second, a direct measure of scale efficiency can be used. Scale efficiency is the ratio between efficiency measures calculated using constant returns to scale and variable returns to scale technology (De Borger & Kerstens, 2000).

Empirical evidence on the relationship between size and efficiency is sparse. Using data for 589 local governments in 1989, De Borger & Kerstens (2000) find that Belgian municipalities, with an average population of 16,700 (at that time) and a maximum of 485,000, are generally too large. The authors note that this result is consistent with most past Belgian studies.[12] Conceição Sampaio de Sousa and Ramos (1999) find that Brazilian municipalities are too small. Given the limited amount of evidence, continued research in this area is necessary to provide reliable insights for policymakers faced with the question of whether or not to amalgamate.

Results from De Borger and Kerstens indicate that income level, local government financing, political indicators, and citizen participation are significant indicators of efficiency. Efficiency was lower among municipalities with higher per capita incomes. The authors argue that this might be because government officials and taxpayers in higher income municipalities have lesser incentives to monitor spending. Given a greater fiscal capacity, it is not as difficult for government officials to increase revenues. Also, the opportunity cost of monitoring expenditures is higher for taxpayers as they forfeit a high wage by taking time to observe government activities. Intergovernmental grants are found to decrease efficiency and imposition of a local income tax contributes positively to performance. De Borger and Kerstens note that previous literature provides an explanation for these findings. Citizens are likely to notice comparatively higher local tax rates and seek an explanation.[13] In addition, people will hold local officials more accountable for resources that are directly raised in the community. With the use of block grants, the costs of inefficiency are distributed across a broader population.[14] Further, local voters may be unaware that block grants have been provided so they are less effective at holding officials accountable.

Political indicators such as number of coalition parties or presence of the socialist party were found to have negative and positive effects respectively. Little evidence for the significance of political factors is found in Greek or US studies.[15] Using education level of adults as a proxy, De Borger and Kerstens find citizen participation to have a positive effect on efficiency.

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[12] Vanden, Tulkens and Jamar (1993) and Vanden (1997).
[13] Spann 1977.
[14] De Groot and Van der Sluis (1987), Silkman and Young (1982), and Wyckoff (1990).
[15] Athanassopoulos and Triantis (1998), Hayes and Chang (1990), and Liner (1994).

Several other studies have been conducted on local government efficiency though these may not be used to directly address the relationship between size and efficiency of government. A study of 172 Greek municipalities found that high fees and charges as a percent of income improve efficiency while more grants, greater population density, and political parties that are similar to the central government party decrease efficiency.[16] Technical efficiency was found to decrease with high levels of median income and increase with education and suburban location in a 1998 study of United States municipalities.[17]

Fried and Klein (2000) use both statistical analysis and case studies to apply efficiency measures to policy.[18] The authors begin by using inputs and outputs to determine the performance of 290 regions in the United States relative to their region of interest, Albany-Schenectady-Troy, New York. Five different model specifications were used to determine efficiency ratings. Using the best practice methods the same services could be provided in this region for less than half the cost.

From the five specifications a set of five potential "role model" regions was ultimately selected. These regions were identified as operating sufficiently more efficient than Albany-Schenectady-Troy to provide valuable policy insight. From the five regions Fried and Klein sought to identify the reasons for superior performance by examining operating practices that might be transferable. In particular, using the "role model" region of Indianapolis, Fried and Klein identified several practices that make the city more efficient including: 1) privatization of city functions spearheaded by a private sector advisory board, 2) activity based costing for operations such as road repairs, 3) shifting responsibility to the neighborhood level through organizations such as crime watch groups, and 4) a commitment to improving infrastructure.

In sum, the role of efficiency in questions of amalgamation is twofold. First, efficiency studies can be used to determine if increasing size is likely to improve performance. Unfortunately, at this point the research has conflicting results that fail to evidence whether larger governments have greater or lesser efficiency than smaller governments. Second, discovering the causes of inefficiency allows decision-makers to observe problems that will not be solved through amalgamation. In this case, complementary changes in operations may be needed to ensure that the objectives of amalgamation are accomplished.

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[16] Athanassopoulos & Triantis 1998.

[17] Hayes, Razzolini & Ross (1998).

[18] The case study approach is less technical in that it does not use statistical evidence to identify the causes of increased efficiency; it merely identifies those regions that are more efficient. The case study method involves local officials more intimately as they are called upon to narrow the list of perspective "role models." This involvement may be crucial for successful implementation of new policies as officials have more input and may be less resistant to change. Another advantage of the case study method is that it specifically identifies existing "role models." Those responsible for writing policy and implementing change are then able to contact counterparts for further information and advice. It appears that the best approach may be a combination. Once the "role models" are identified and evaluated by local officials, statistical analysis should be conducted to determine the causes of the increased efficiency.

In addition to informing decisions on cost reduction, the efficiency literature is valuable in that it seeks to explain other possible reasons for inefficiency at the government and service level. These causes of inefficiency must be taken into account when evaluating whether or not amalgamation will improve government performance. The way in which local governments are financed, income and education levels, and political structures have implications for efficiency, but may also impact other objectives of consolidation. Political and equity issues are considered below.

Transition Costs

The economies of size literature can be useful for establishing a reasonable expectation of the costs before government is consolidated and the costs that can be expected after a consolidated government has fully transitioned to an operating structure. The problem is that there may be a significant transition between these two and there may be significant transition costs that must be borne in moving the existing governments to consolidated governments. The obvious point must be made that consolidation only reduces costs if expenditures of the combined governments are lowered. Local governments are frequently very labor intensive, meaning the number of staff must be reduced if consolidation is to have a significant effect on expenditures. The number of employees can be reduced through layoffs or by attrition. The latter is politically less difficult but means the cost savings will only accrue over a significant time (the transition is long) and the staff losses may be inconsistent with where redundant people are located. Layoffs are faster but much more politically difficult to undertake and more likely to engender political opposition to consolidation. Also, significant costs of eliminating staff may exist, such as the need to pay severance or retirement benefits.

The transition may also include many new costs. For example, office systems must be combined, including the monetary costs of merging systems (computer, phones, filing, etc). The physical costs can be large in some situations, such as if there is need to link sewer and water systems or new government buildings. The costs of new elections for city council are another example.

A more subtle and difficult task is to take two (or more) groups of people in each of the many offices of government with different working cultures and move them to where they work as one coherent team. Significant time and monetary costs may be borne to develop a government that operates as a coherent single unit. The mergers of many large businesses have demonstrated the difficulties of combining office cultures.

4. Do Consolidated Governments Meet Service Demands?

The effects of amalgamation on the ability to deliver the services that people demand must also be understood. A loss in economic efficiency exists to the extent that the services provided are inconsistent with the services that people want. Proponents of more fragmented governments argue that smaller governments and governments that are closer to the people should be better able to provide the tax/service delivery package that

citizens want. Further, the existence of many local governments seems more likely to allow for the differentiated services that a heterogeneous population demands since each government can deliver a different set of services. Alternatively, corruption may be more important for small governments because the person allocating the benefits is closer to the person receiving them (see World Bank, 2003).

A reasonable expectation is that the service levels demanded by the median voter will be produced if service levels are decided by voting. If individual demands exist along a continuum, everyone except the median voter will be dissatisfied, with some wanting more of the service and some wanting less. Assuming that everyone in the municipality receives the same services, small local governments offer the potential for provision of different tax/expenditure packages across places, thereby reducing the degree of dissatisfaction by people, relative to large municipalities.[19]

Thus, the expectation of many has been that the efficiency losses from people receiving the wrong set of public services can potentially be kept smaller through disaggregated governments – consolidation would increase efficiency losses. Also, the hope is that the competition between many small local governments, for people, tax base, economic development and so forth, could bring the same market forces to bear in the delivery of public services that exists in provision of private sector goods and services. The potential for residents to move is expected to place pressure on local governments to deliver the services that people demand, to deliver them efficiently and to reduce taxes to benefit charges. The ability of people to move around the region may be much more limited in many developing countries than in countries like the United States.

Of course, people are not without some options to alter their service delivery package even with a consolidated government. Those wanting more can often supplement their receipt of government services with more private services. For example, more locks and burglar alarms can be placed in houses where better safety is demanded and fire alarms and fire extinguishers can be added in houses where additional fire protection is sought. Children can be provided tutors or sent to private schools if more education is demanded. Fewer options are available to reduce service levels if government is delivering more services than are demanded. Those wanting less must still pay the taxes even if they do not want all of the services. Financing service delivery with user fees is one means to lessen the dissatisfaction of people who are demanding few services since low services demanders can opt out of buying the services.

On the other hand, larger local governments may be able to provide more services and this could increase interest in local governments and expand participation in local politics, both by citizens and by prospective council members (see Swianiewicz, 2002). The argument has been made that Northern European local governments undertake more functions than Southern European governments because of the difference in size. Of course, national governments may use small size as an explanation for not devolving more service responsibilities to local governments. On the other hand, citizens in small

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[19] In practice, service levels often differ inside many governments. For example, higher quality services may be offered in the higher income neighborhoods in the city.

communities have a greater incentive to participate because their vote has relatively more weight and because they are closer to the politicians (see Denters, 2002). Denters finds that trust in local government is negatively related to size of local government based on analysis using data from Denmark, Netherlands, Norway and the United Kingdom.

Tiebout (1956) developed a conceptual framework based on the idea that "consumer-voters" register their preferences for public goods by choosing where to live. The chosen community would be the one that most closely matches the individual's preferences. It is anticipated within this framework that a larger number of choices is necessary for an individual to find an optimal or exact match for her preferences.[20] Thus, consolidation could limit the competitive forces that would otherwise come into play. Factors including moving costs, employment opportunities and lack of knowledge regarding local government revenues and expenditures may prevent a person from locating in the optimal tax-service community and act as a limitation on the Tiebout effect. A great deal of literature has followed Tiebout's article, exploring both the implications and testing them empirically.[21]

It is very difficult to empirically decompose the efficiency gains that result from competition between local governments and determine whether more local governments lead to greater competition that causes enhancement of efficiency. Although there have been a number of studies, the results have been mixed, causing Dowding et al. (1994) to conclude, "there seems no generalisable deduction that either consolidation or fragmentation is always best." A few examples of the research are summarized here.

Relationship between the Number of Governments and Consumer Satisfaction

Two streams of research have been used to determine whether more local governments cause service delivery to be more efficient on the demand side: examination of service satisfaction and estimates of whether populations with more local government options live in more homogeneous areas. Survey data have been used to determine satisfaction rates, with the evidence suggesting, though not strongly, that satisfaction levels are higher in smaller jurisdictions, for example, in police services.[22] On the other hand, Derksen (1988) uses Dutch survey data and finds that the proxy for local government quality, administrative capacity, is trivial in determining satisfaction. Newton (1982) also finds size to be irrelevant in terms of effectiveness and democracy.

Lyons and Lowery (1989) argue that previous work is of questionable usefulness because it makes use of aggregate data or data from surveys that were designed for different purposes. The authors collect survey data specifically for addressing Tiebout implications including whether citizens in smaller jurisdictions are more satisfied. Surveys were taken in matched pairs of communities in two metropolitan areas, one with

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[20] It is also assumed that there is a cost minimizing size for local government and that individual location decisions result in municipalities of this size.

[21] See Dowding et al. (1994) for a survey of the literature.

[22] See Ostrom and Whitaker, (1973, 1974); Ostrom and Parks, (1973); Ostrom et al., (1977, 1978); Ostrom, (1983a, 1983b, 1985); Parks and Ostrom, (1981); Parks, (1985)

consolidated government and one without.[23] The authors find the evidence to be mixed. The mean dissatisfaction level was higher in the five consolidated communities, but among matched pairs of communities, individuals in the consolidated areas were more satisfied in three of the five cases. In addition, citizens living in the fragmented system were less informed about the scope of local service provision, attributing almost three extra services to the local municipality. The authors note that people have less capacity to hold governments accountable by comparing tax levels and service provision when there is a lack of knowledge of which government is responsible for which services. Finally, Lyons and Lowery find that the feeling of efficacy and levels of voice activity are higher in three of the five consolidated communities. The authors note that results that appear contrary to the Tiebout predictions might be driven in part by other analysts' misconceptions that consolidated governments provide a uniform tax-service package to all individuals within their jurisdiction. Lexington, the consolidated municipality, offers several packages through "Partial Urban Services Districts" each of which has its own tax base.

Mouiritzen (1989) uses Danish survey data and finds evidence in favor of greater satisfaction with smaller governments. The increased satisfaction was attributed to smaller communities being more homogeneous and individuals feeling that democracy and participation were better served. These are outcomes that would be expected within the Tiebout model.

The issue of satisfaction with government services has also been addressed by directly examining whether populations inside each government become more homogeneous as the number of governments rises. The expectation is that more homogeneous populations translate into greater satisfaction because governments will be better able to meet the more narrowly defined needs of residents. Dowding et al. (1994) note that a greater number of governments almost certainly guarantees more homogeneity of tastes within each government. Evidence is found in the literature that homogeneity within each government, as measured by populations that are more alike based on age, income, race, and education, rises with the number of governments. Whether the greater degree of homogeneity leads to more efficient resource allocation is not clear from the literature reviewed by Dowding et al., but they note that more efficient resource allocation seems to be a reasonable assumption.

While the above research has sought to discover if there is greater homogeneity with more government units, others have observed that in many instances people with different demographics, and by assumption tastes, choose to live in the same communities. Given the observed heterogeneity, the question asked is whether this phenomenon is consistent with the Tiebout theory. In other words, are measures of age, income, race, and education appropriate for representing the service demands of

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[23] Telephone interviews were conducted in the urban Kentucky areas of Louisville-Jefferson County (population 685,004 with almost 100 incorporated municipalities) and Lexington-Fayette County (population 204,000 with one city-county government). Education was not included in the local services considered, as both municipalities had a consolidated school system. Tests were preformed to determine if the differences in means were statistically significant.

individuals? If these measures were appropriate, amalgamation of vastly different populations would be expected to have significant negative impacts on welfare. On the other hand, if demographics are not strong indicators of service preference, the negative impact of merger may be small.

Bradford, Malt and Oates (1969) suggest that a citizen's production of "things of primary interest" depends both on services received and socioeconomic variables. Schwartz (1993) builds on this work by developing a model in which citizens locate in a community based on individual-specific commodities. The consumed commodities such as safety or knowledge are produced at the household level. This production depends in part on community characteristics that are partially determined by the provision of government services. For instance, a government service such as sanitation affects the community characteristic of water quality. Water quality then enters into the household's production function of a commodity, health, and the individual receives a given satisfaction or utility level. In this model, individuals may differ in productive abilities or have different production functions (due to demographic characteristics), but demand the same level of government service. The model also allows for "cross" effects, as the level of police service and education may both contribute to the same community characteristic of crime or safety.

The model has several important results. First, a community in equilibrium may be composed of a heterogeneous population. This means that research on homogeneity may not be a good indicator of whether many governments are more efficient because homogeneity on the basis of demographic characteristics may not be a good proxy for service demands. Still, there may be widely different demands for public services (on the basis of unobservable characteristics) and more local governments may allow these demands to be met more efficiently.

Second, the community characteristics, which enter as inputs into a household's production function, may be affected by more than one government service activity. Finally, a government service may have an effect on more than one characteristic. Further empirical testing in Schwartz (1997) finds that for a crime safety measure and high school reading test pass rates, both the "own" and "cross" effects are significant. Additional effects add complexity, as reducing one service impacts multiple community characteristics. However, the recognition of multiple effects allows policy-makers more flexibility since the cost of increasing some services (police protection for example) may be lower than increasing others (education for example), but still achieve the same goal of crime safety.

A synthesis of the literature suggests that Tiebout arguments are not as contrary to amalgamation as it might first appear, though the case seems to lean towards smaller governments. First, the evidence is mixed on whether larger consolidated governments or smaller fragmented systems produce more satisfied populations, though it generally points to greater satisfaction in smaller jurisdictions. Second, there may not be a complete loss of tax-service choices under amalgamation as many consolidated governments continue to offer more than one service package. Finally, when government

services affect community characteristics, which in turn enter as inputs into household production functions, it can be shown that efficient service provision can occur in a heterogeneous jurisdiction.

Competition and Government Size, Service Level, and Productivity

Consolidation is expected to reduce competition between governments. There is a sizable literature exploring the relationships between the level of government competition and government performance. Research has analyzed the extent to which competition has affected the size of government, the quality of services delivered, and the efficiency with which resources are allocated. This research is reviewed in this section.

Theoretical research has suggested that competition could increase or decrease the size of government. Research, such as that of Tiebout, argues that competition between governments for tax base and residents provides a discipline that limits the size of government, so the expectation would be that more governments in an area would lead to smaller government in total. Anderson and Tollison (1988) provide an opposing argument, suggesting that governments not subject to competition will act as monopolists. As monopolists they are expected to reduce output and extract economic rents from interest groups. Interest groups will seek fewer wealth transfers from the monopolist government, which effectively reduces the cost to the taxpayers.

Taylor (2000) presents a well-organized survey of the empirical evidence on how government competition affects the size of government. She divides the size literature into two sections, size of the public sector and size of individual governments. The overall effects on public sector size are particularly valuable in the cases where consolidation is undertaken at the national or state level. However, the usefulness of this literature in decisions of amalgamation is limited to the information on how competition, in this case vertical, affects the size of government.[24] In this research, central or state government share of revenues is the most common measure of decentralization, and by assumption, vertical government competition.

Evidence that competition between levels of government affects government size is mixed. Studies applying cross-country data find no evidence that competition affects size.[25] Conversely, Grossman and West (1994) to find that government size is inversely related to the level of decentralization, use Canadian time-series data.[26] The opposite is found in Grossman's 1992 analysis of Australian data.

There is some evidence that more horizontal competition between governments reduces the size of government. At the state or provincial level, studies of total government find some evidence that competition reduces the size of government when a

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[24] Results relating vertical competition to government size should be treated with care as there are additional factors, including increased accountability, that also have an effect on revenue and expenditure decisions.

[25] Oates (1985), Hell (1991), and Anderson and Van Den Berg (1998).

[26] Also see Marlow (1988), and Joulfaian and Marlow (1991).

distinction is made between general-purpose and special-purpose government (Nelson, 1986).[27] Competition has a dampening effect as state and local governments are larger in states with fewer general-purpose governments per capita. The relationship is not found for special-purpose districts.[28] At the county or metropolitan level, competition among general-purpose governments decreases the local public sector but special-purpose government competition increases government size.[29] Several studies focusing on the education sector find that per pupil spending is higher in areas with less competition, which runs counter to other research on special purpose districts.[30]

For evaluating more isolated consolidation projects, the unit of most interest is the individual local government. In general, competition does not appear to limit the size of individual local governments. Forbes and Zampelli (1989) and Santerre (1991) find larger governments in areas with more competition. Eberts and Gronberg (1990) find that competition reduces spending on fire, police, parks and sanitation, but the result does not hold when size is measured as local tax revenues. Schneider (1989) finds a reduction in municipal employment with increased competition; a relationship is not found for wages. Consistent with the public sector results above, Brokaw, Gale, and Merz (1995) find that competition limits per pupil education spending.

Taylor (2000:4) concludes, "the evidence on competition and government size is best described as inconsistent." Evidence that competition affects the size of the overall public sector is found at the state and local level. There is some evidence of an effect when the national government or individual governments within the public sector are examined, but it is far from consistent. The mixed results may be attributable to the proposition that government size is a poor indicator of performance.[31]

Competition could also have an effect through the quality of services provided. Due to the difficulties in measuring service quantity and quality, researchers have almost exclusively limited their studies to education, where outcome data are more readily available. The evidence in this area is consistent and convincing, with studies finding that competition induces higher test scores, wages, graduation rates, and years of education.[32]

Competition also could encourage governments to allocate their resources more efficiently. Arguing that efficient governments maximize property values, Grossman, Mavros, and Wassmer (1999) find that US cities become more efficient as the number and population of competing suburban cities increases. Hayes, Razzonlini, and Ross (1998) find similar results for Illinois governments. The remaining evidence from the

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[27] Also, see Oates (1985), Grossman (1989), and Di Matteo (1995).

[28] Nelson (1986, 1987).

[29] Eberts and Gronberg (1988), Zax (1989), and Eberts and Gronberg (1990). The authors suggest that failure to capture economies of scale account for public sector increases associated with competition among special-purpose districts.

[30] Bell (1988), Hoxby (1994a), and Kenny and Schmidt (1994).

[31] Brown and Saving (1999).

[32] Borland and Howsen (1992, 1993, 1996), Hoxby (1994a, b), Zanzig (1997), and Dee (1998).

education sector concludes that increased competition, whether public or private, enhances efficiency.[33]

In sum, greater competition appears to offer some positive efficiency benefits which could be lost if the governments in an area were to consolidate. There are not consistent results indicating that competition reduces the size of government, but this is at least partly because expenditures and revenues are not adequate measures of government performance. Competition does appear to increase the quality of services, at least in the education sector. This competition can be either from the public or private sector, suggesting that amalgamated governments could consider privatization of schools as a mechanism to increase the quality of primary and secondary education. Finally, governments facing higher levels of competition use their resources more efficiently. To the extent that consolidation limits competition, one would expect to find less effective use of resources.

Tiebout and Public Choice

The Tiebout literature generally envisions government taxation and service provision under the assumption that the goal is to maximize citizen wellbeing. In this case, governments simply provide the services that people want in the most efficient manner to attract the optimal number of citizens (assuming that there is a cost-minimizing size). However, public choice theory indicates that a broader perspective is appropriate. "The key innovation of public choice analysis is to see policymakers as economic agents with their own agenda and operating under a set of institutional constraints." (Chrystal 2000: 4)

In a public choice framework, the benefits and pitfalls of consolidation are evaluated by allowing the government actors to have individual preferences and agendas. Jackson and Garrett (2000) explain that "...public choice focuses upon the *processes* through which public policy decisions are made and the *processes* through which public policies are supplied and implemented (118)." In the case of amalgamation there are numerous potentially important processes including research, political debate, policy formation, public acceptance, and policy implementation. The order, timing, and importance of the processes are likely to vary across situations but some characteristics may consistently contribute to the effectiveness of an amalgamation decision.

Before considering specific process outcomes, it is useful to define the set of economic agents. These agents can be classified into four broad categories: politicians, bureaucrats, public service providers, and citizens. Public service providers include teachers and police and fire personnel. Several process applications are considered below; however, it is important to note that the purpose of this discussion is not to provide an exhaustive introduction to public choice theory and applications but rather to provide an additional framework for evaluating amalgamation decisions. Understanding

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[33] Husted and Kenny (1996), Grosskopf et al. (1999, 2000), Barrow and Rouse (2000), Duncombe, Miner, and Ruggiero (1997), Dee (1998), and Couch, Shughart, and Williams (1993).

the perspectives and motivations of the agents involved in the process of amalgamation allows for a more precise evaluation of objectives (stated and real), implementation (have the necessary resources been committed), and outcomes (original objectives versus actual results). Public choice also highlights the importance of bureaucratic incentives. For instance, bureaucrats opposed to amalgamation might take actions contrary to the stated objectives if they believe it is in their best interest.

Within public choice literature, politicians are normally assumed to have a preference for longevity in office and bureaucrats are characterized by a desire to increase benefits, such as pay and prestige, by enlarging the budgets they are responsible for managing. For example, the consolidation of governments in Jordan appears to have been based in part on the belief that local political leaders were seeking to increase employment as a means of expanding their political base. Taken together these characteristics, among others, have led to the Leviathan/hegemonic public choice where the public sector is seen as too large and generally inefficient (Cullis and Jones 2000). However, Cullis and Jones (2000) present a 'new' public choice suggesting that the application of public choice analysis need not lead to a Leviathan effect. For example, institutions such as a powerful media or political competition may create a strong system of checks and balances. In addition, government actors may indeed value the public interest.

Public choice helps us understand when consolidation will be viewed favorably within the local political context. Stephens and Wikstrom (2000) consider twentieth century city-county consolidations in the United States and develop a list of 14 factors important for a vote in favor of amalgamation. In terms of citizens the important factors are size, minority population, representation, relative dominance of the central city, exclusion of "hot button" issues such as education and zoning and differing tax/service districts.[34] This last factor is consistent with the Tiebout arguments presented above as citizens are more likely to support amalgamation if they will have choices between tax and service packages (urban versus general service districts) post-amalgamation.

From the local politicians and bureaucrats' perspective, consolidation is more likely to be acceptable if there are a small number of government units being merged, numerous official positions in the amalgamated government, and opportunities to maintain employment and political party positions.[35] It is also important that the political leadership be aligned in favor of amalgamation or at least support the right of voters to decide the issue. For public service providers and employees in general, the process by which jobs are eliminated is important. Elimination through attrition is most favorable for amalgamation since it means that no current employees lose their jobs. But, of course, this means there is little potential for immediate cost savings.

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[34] Populations of about 200,000 are more likely to support amalgamation with smaller jurisdictions approving the consolidation about one half of the time and larger populations only approving amalgamation in one out of four cases. Minorities are likely to oppose amalgamation if it weakens their political position. District representation is more popular than at large election, especially for outlying regions.

[35] More government units mean more elected officials concerned with protecting their influence. Also, more government units increase the likelihood of socioeconomic diversity, making it harder to garner public support in wealthier neighborhoods.

Two general factors important in determining success are the presence of a crisis situation (fiscal, in service provision, or in the local economy) and the requirement for majority support. A single area-wide majority is much more plausible than a requirement for majority support in multiple jurisdictions. From the Stephens and Wikstrom (2000) conclusions alone it is apparent that concessions made to achieve amalgamation through popular vote (job elimination through attrition, defining multiple service districts, avoiding controversial issues such as education, etc.) may limit the immediate and long-term benefits of consolidation.

These political and bureaucratic objections to consolidation could lead to a less efficient consolidation than might otherwise occur. For example, Wintrobe (1997) suggests that bureaucrats use strategies of 'selective efficiency' to influence government action; "...bureaucrats control their [political] masters' choices by being efficient at the things they want to do, and inefficient at those they do not." (431) In these instances, alternative delivery mechanisms could be identified in hopes of obtaining the same benefits that are expected from consolidation, but without the efficiency losses. For example, local governments might choose to deliver services by cooperating together and potentially could generate benefits that are comparable to those expected with consolidation.

Steiner (2001) considers cooperation and mergers between municipalities in Switzerland. He finds that mergers tend to occur in "poorly performing" small municipalities while cooperation between local authorities takes place among all types of municipalities. Possibly more important, cooperation does not appear to be a precursor to amalgamation. Cooperation and merger decisions appear to be made independently. In cases where merging governments is cost prohibitive or politically undesirable municipalities may be able to more effectively deliver services by cooperating. Of course, the structure of the cooperative venture may also pose political problems and a third party may reduce the ability of citizens' to monitor activities. However, cooperation is generally perceived as a less severe measure and may be a more feasible option.

Amalgamation may be mandated at the national level rather than being implemented as the result of local choice. For example, the recent consolidations in Jordan, Sudan, and Zimbabwe were based on national decisions and involved governments across the countries. Political incentives are involved when consolidation occurs through mandate, though at the national rather than the local level described above. For example, political leaders at the national level had to make the decision to reduce the number of local officials (at least over time).

The valuable lesson from public choice is the importance of different economic agents and their incentives. The motivations and goals of these agents must be carefully considered when the consolidation is designed and the design must be intended to offset perverse incentives and to build on positive incentives. For example, the Jordanian consolidations may prove to be an unsuccessful means of limiting growth in costs if the

incentives to add employees are not changed for the new political leaders. Amalgamation objectives are more likely to be achieved if they are realistic, clearly stated, and given appropriate support in the form of resources and personnel. Also, the objectives of different actors in the public choice model may make it desirable to identify means such as cooperation as options for achieving consolidation-like benefits.

Political Competition and Government Performance

Earlier, competition among governments was found to affect service quality and resource allocation. Given the public choice argument that politicians are seeking to maximize their own objectives, one might expect political competition to have an impact on government performance. Indeed, Grossman and West (1994) find that increasing vertical government competition through greater decentralization leads to more collusion among local governments. Transfers from higher levels of government are used as instruments to punish local jurisdictions that offer services at too low a tax price. In this case, local governments are larger than they would be under competitive circumstances, although the overall effect of decentralization is to reduce government size. In the above scenario, the actions of bureaucrats and political leaders do not offset all of the benefits from decentralization and increased competition, but they do limit the benefits.

Lassen (2001) presents an alternative view. His argument is that citizens will be more willing to supply revenues for government services and governments will be larger when governments are more transparent and citizens can punish unwanted behavior. Applying 1995 data from 62 democratic countries, Lassen finds that greater political accountability is associated with higher general government tax revenues. In addition, more monitoring activity has been associated with greater efficiency (cost, technical, and allocative) in police departments and public schools.[36]

Theoretical studies have provided another argument for competition to increase government size, as concentrated political power has been associated with monopolistic behavior and smaller government.[37] Amalgamation, in this case, would lead to inefficiently low levels of government service provision. Despite this efficiency loss amalgamation can be defended on other grounds. For instance, Baber and Sen (1986) find that concentrated political power leads to smaller increases in debt-financed spending prior to an election.

As with the case of government competition, there is not a consistent effect of political competition on government size. More competition may reduce government spending as jurisdictions compete for residents. On the other hand, increased competition may create more transparency and consequently cause citizens to vote for tax increases, as they are more confident that money is being spent in a desirable manner. The tendency for highly politically concentrated governments to behave in a monopolistic

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[36] Davis and Hayes (1993), Hayes and Wood (1995), Hayes, Razzolini, and Ross (1998), Grosskopf et al. (2001), and Duncombe, Miner, and Ruggiero (1997).
[37] Anderson and Tollison (1988), and Rogers and Rogers (1995).

manner may create disadvantages as government service provision is reduced as well as advantages because there is less of an incentive to spend excessively prior to an election.

5. Regional Planning

Enhanced regional coordination provides another potential reason for consolidation. Promoting economic growth, managing problems with broad geographic effects, and increasing political influence are all potential benefits from a larger, better coordinated area. There may also be a desire to improve an area's cohesion by including all area residents in the same government unit and increasing the consistency of the area on a set of objectives. From an economic growth perspective, proponents of amalgamation argue that a firm choosing between numerous locations would prefer to interact with a consolidated government because of the uniform regulations and the need to obtain information and negotiate with only one entity. Dealing with environmental goals, such as air quality, water management, or preserving wildlife habitat, is an example where the solutions are normally best identified at a broad geographical level. Even the consolidated government, however, is likely to be too small to internalize many environmental problems. Also, a consolidated government, representing a larger constituency, might increase political influence at the national level relative to small municipalities.

Regional planning benefits are potentially achievable through cooperative efforts between municipalities and may not require consolidation. As noted above, efficiently operating governments may often be able to achieve the necessary coordination but there can be significant political obstacles to the required degree of coordination. Consolidation is a brute force means of getting smaller areas to work together to accomplish the goals. But, of course, consolidation means that the negotiations for various policy objectives must take place within the single government rather than between various governments. Alternatively, a regional government can be established to deal with regional issues while more localized concerns are handled with more fragmented local governments. This section examines some of the benefits from regional planning through a consolidated government.

Economic Growth

Becker (1996) argues that regional governments might be better able to manage for economic growth because of the larger tax base, increased jurisdiction size and greater legal powers. Fleischmann and Green (1991) note that consolidated governments often have a separate department specializing in economic development. This one large department has an advantage over several smaller governments without an agency devoted specifically to economic growth.

Empirical evidence on the impacts of regional planning and consolidation on economic growth is sparse. Domazlicky (1996) considers growth at the regional level using state government employment and gross state product as measures of size and

economic growth. He finds that at the aggregate state level government size has little effect on economic growth. Carr and Feiock (1999) examine economic development in nine US city-county consolidations from 1950 to 1993, using the attraction of new business as the measure of economic development. They found no significant changes in the number of business locations. Though not absolutely conclusive, these results call into question the justification of amalgamation on economic growth grounds.

Carr and Feiock (1999) provide several caveats to their results. First, consolidation might enhance the benefits of economic development even if it does not attract new firms. The reason is that the consolidated government precludes small local governments within the region from competing with each other to attract firms. The competitive process could reduce tax revenues or create additional expenditures. Thus, the benefits occur as lower costs of attracting firms that were coming to the area anyway. Support for this perspective can be seen in other research suggesting that local business organizations play an important role in defeating or weakening consolidation measures (Marando 1974).[38] More recently, Burns (1994) finds evidence that local manufacturers and real estate developers have been in large part responsible for creating local government fragmentation.

Second, the consolidations may not have occurred across a large enough geographic area or a sufficiently large set of services. Durning (1995) notes that concessions are often made in order to gain political support for amalgamation. Examples of such concessions are excluding existing municipalities and school districts from the charter. Also, special service and tax districts may be created. The resulting consolidated government may lack the authority or ability to undertake planning and coordination efforts.

Internalizing Spillovers

The delivery of some services creates geographic externalities that accrue across areas that are much larger than individual municipalities. Environmental, water, sewer, and transportation are examples of such policy issues. Similarly, tax spillovers exist in many cases. For example, people living in one area may pay wage, sales, or excise taxes in places throughout the region. Both types of spillovers cause officials to make poor decisions on the extent of services to provide. The spillout of benefits causes governments to underprovide services and the spill-in of tax revenues causes governments to overprovide services. Coordination between smaller governments, a consolidated government or a regional government above the municipalities is necessary to address these concerns adequately and ensure that service levels are set properly. The goal is to internalize all externalities within the area making the decision.[39] Alternatively, the situsing of tax revenues can be structured to increase the likelihood that tax revenues accrue to the government where the taxpayer is located. For example, local sales tax

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[38] Existing business also often objects to attracting new business because of the increased competition for labor and other resources.

[39] Other options exist, such as national or state grants to account for the geographic spillovers that occur between governments. For example, see Inman and Rubinfeld (1996).

revenues can be collected at the retail level rather than at the manufacturing, import, or wholesale levels.[40]

Environmental policies are a case where a consolidated government can help in internalizing the externalities. Carolan (1990), though not arguing for amalgamation, presents five advantages to regional planning: 1) consistency; 2) efficient management of resources; 3) liability sharing; 4) political power; and 5) managing public opinion and education.[41] The notion is that regional level goals are much more likely to be achieved with consistent laws and regulations designed to meet a particular objective. Opposition to regional environmental issues is contained within an amalgamated government whereas separate governments must individually justify their involvement in environmental planning. More efficient management of resources is possible as information, expertise and resources are tapped for the entire region. Further, establishing what resources are available is likely to be a less costly task within an amalgamated area, as there is one source of information and there is also no incentive to misrepresent such resources. Sharing liability, costs, and resources becomes advantageous in the event that the region's environmental management policy (such as siting landfills) generates legal opposition. Also, legal considerations, such as whether one government must take the lead or whether there must be "mutual authority" for all entities are mute points in a consolidated government.

The effective use of political power to obtain project funding from other levels of government increases as the number of people influenced by the project rises. Regional planning also allows for a coordinated public information campaign. Environmental planning issues, such as siting facilities or requiring lower emissions, are often controversial so one unified campaign, making use of area-wide expertise and resources, is more likely to generate public support.

Greater Political Influence at the National and State Levels

Consolidating governments and creating a larger constituency allows for more influence at higher levels of government as officials now represent more people and resources. The increase in political influence is most effectively used when combined with careful regional planning. As in the environmental case, a project intended to benefit a region is often more likely to receive national funding than a project benefiting a smaller jurisdiction. Furthermore, disagreements over the appropriate course of action are settled within the amalgamated government, allowing for one set of objectives to emerge and be presented to national and state political leaders. This regional plan is easier to evaluate at higher levels of government than many fragmented, separate proposals. Of course, increased political influence with higher levels of governments may come at the expense of individual political influence for solving more localized

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[40] Of course, there are other implications to decisions on where to collect tax revenues, such as administrative costs.
[41] Also, see Roberts (1994).

problems. Also, the role of intermediate governments may be circumvented to some extent as the consolidated government grows and internalizes more of the issues.

6. Equity Goals from Amalgamation

Consolidations in several countries appear to be motivated in part by the goal of equalizing service delivery across an area – in the case of Zimbabwe combining predominantly white areas with mostly black areas and in Sudan combining areas that were primarily rural with those that were mostly urban. Policy makers could have several expectations from such changes. First, there may be recognition that the areas with greater service delivery capacity could help enhance service delivery in the areas with fewer skills. In this case, consolidation is intended to allow the scarce managerial resource available in the better serviced areas to be used across the region. Second, the consolidation may be intended to redistribute financial resources from the higher fiscal base community to the lower capacity area. In both cases, the intent is to require the stronger community to subsidize the weaker.

The basic issue is whether requiring local subsidies is good government policy. And related to this, can higher fiscal capacity areas be required to subsidize other places? Economists have generally concluded that redistribution is better funded at the national than at the local level. But, in the case of some consolidations, the national government may be seeking to improve public services in the least served areas without devoting national resources. When this arises, the higher income area would need to raise taxes on itself or accept lower quality service provision in order to have resources to enhance service delivery in other parts of the consolidated area. The richer areas may not choose to do this in a number of cases. A more likely outcome is that the better funded area continues poor service provision in other parts of the region, at least if the better funded area maintains political control. The rhetoric may say service delivery is improving when in practice it is not. Also, the better funded parts of each region will have widely different capacities across the country, so some will be able to raise services significantly in the nearby poor areas and other will not. Again, the national government will have a greater capacity to ensure that similar levels of services are delivered across the country.

Alternatively, higher income residents may seek to avoid the cross subsidies that are implicit in these forced consolidations. The better funded area may seek to keep tax rates low in the consolidated area and to obtain services through the private sector. For example, higher income individuals may seek to underfund publicly available schools and then send their children to private schools. Should this prove difficult, high-income individuals may move out of the new, consolidated government and form an enclave just outside the consolidated area.

7. Conclusions

It would be more satisfying and easier if a simple yes or no answer could be provided on whether consolidation of local governments is good policy. Unfortunately, as with many difficult, complicated issues, there is no single prescription that fits all places. Many factors that vary with the country and the region in question can affect the decision on whether the outcomes will be positive. These factors include the existing structure, responsibilities, and revenue sources of local governments, the service delivery conditions including geography and topography, the homogeneity and types of service demands, the availability of skilled municipal workers, the existing variability in service delivery across the country, the political strength of local leaders and bureaucrats, and so forth.

We can assert that gains from consolidation are not a certainty, so countries should not immediately leap to consolidation as the solution to perceived problems. More careful analysis of objectives and realistic outcomes is appropriate before this step is taken. The potential cost savings must be carefully and realistically evaluated in terms of the actual setting where consolidation will take place to determine whether there will be real savings -- and if there will be savings, how the redundant employees and other inputs will be eliminated from government. These generalizations can be made. First, the extent of size economies will be lower than may be anticipated – bigger does not always imply lower costs and can imply higher costs. The traditional means of producing many public services -- using many small facilities near people (such as schools) and employing labor-intensive technologies – do not lend themselves to economies that extend to wide geographic areas. Some other services, of course, offer a greater potential for economies.

Second, there are likely to be significant transition costs and time spent in moving from the existing government structure to a new, larger government. Some of these costs will be in terms of additional expenditures and others will be in the form of poor service delivery and citizen dissatisfaction that will arise in moving to an operating, merged government. There may even be political implications of moving to a larger government, such as fewer individuals being elected as mayor and city council members.

Third, consolidation involves different actors with different individual goals and motivations. Decisions to consolidate should not be made under the assumption that the goals are altruistic and that the various actors will do whatever is necessary to make the consolidation plan succeed. The consolidated government will not be perfectly efficient and focused on attaining the expectations of the electorate or the national government. The involved people, local and national bureaucrats, local and national politicians, and service deliverers, may thwart or enable the consolidation, depending on the design. They will to a very real degree determine whether it works or fails.

The anticipated disadvantages of consolidation will not always be as great as some have thought. A significant concern has been a loss of satisfaction with the delivery of public services because government will be less able to recognize what people

want and will be less able to provide the differentiated package of services that people seek. A loss in well being is more likely to occur in an area with widely different expectations from government, but, a properly designed consolidated government that offers several different packages of public services and finances many of the services with user fees will be better able to meet the varying service demands than one that offers a single set of tax financed services.

Competition between governments increases the quality of service delivery and the effectiveness with which government delivers services. Consolidation reduces these benefits and other means must be found to offset these effects. Governments need to think creatively about means to improve service delivery and government efficiency. The set of options is much greater than either consolidation or fragmented government. Use of the private sector to deliver services should be carefully investigated. Privatization of public services has the potential to offer cost savings because firms can deliver services to multiple municipalities at the same time. The private sector is already frequently employed to provide specialized components of public services, such as construction and engineering, and in many cases to deliver entire services.

A number of other public sector options exist. Governments can work together in a variety of ways. For example, Bartone and Weist point out that Monterrey, Mexico delivers sanitation services with a metropolitan wide authority, Chile uses voluntary clustering of municipalities and Turkey has a greater metropolitan model. These experiences illustrate that countries can be successful with a variety of different structural models. This set includes a consolidated government, a cooperative arrangement between governments and a single service delivery district. As noted above, perfectly mapping every service may create considerable uncertainty and confusion on the part of citizens, but specialized systems for services with area-wide effects or for services with economies of scale should also be considered when decisions on restructuring government are being made. This may be preferred in some cases to consolidation.

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