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**DECENTRALIZATION AND LOCAL SERVICE
PROVISION : WHAT DO WE KNOW?**

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Dr. Ahmad has written extensively on public economics and federalism--his books include, inter alia: *Theory and Practice of Tax Reform in Developing Countries*, (with Nicholas Stern), *Social Security in Developing Countries*, (with Jean Drèze, John Hills and Amartya Sen), *Managing Fiscal Decentralization* (with Vito Tanzi) and more recently *Handbook of Fiscal Federalism* and *Does Decentralization enhance Service Delivery and Poverty Reduction?* (both with Giorgio Brosio

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He has published widely and his recent books include, inter alia, *Handbook of Fiscal Federalism*, 2006 (with Ehtisham Ahmad); *Il finanziamento del settore pubblico* (with Gilberto Muraro, Franco Angeli) 2006; *Cases for and against transparency/obfuscation in intergovernmental relations*, *The Economics of Transparency in Politics*, (with Albert Breton, Gianluigi Galeotti, Pierre Salmon, and Ronald Wintrobe); *Environmental Governance and Decentralization*, (with A. Breton, S. Dalmazzone and G. Garrone, 2007; *Governing the environment: Salient institutional issues*, (with A. Breton, S., Dalmazzone and G. Garrone (Eds), New Horizons in Environmental Economics, 2009; and *Does Decentralization Enhance Poverty Reduction and Service Delivery?* (with Ehtisham Ahmad), 2009.

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A. Introduction

What do we know about the results of decentralized service delivery? Verifying outcomes and results of decentralized policies is a very challenging exercise, given the large number of stakeholders involved. It is understandable that bilateral aid agencies and donors that have recommended decentralization have also stressed the importance of verifying outcomes of decentralized public policies. However, this is quite difficult to achieve in practice, especially in the developing country context. Only the more advanced OECD countries have moved effectively in this direction on a standardized basis, using the tools of performance budgeting (e.g. the UK—whereas France is the latest to do so). An approximation may be attempted to evaluate outcomes in the absence of a performance budgeting framework, but this requires the definition of a proper methodology that is common among jurisdictions and levels of government, and using information that may not be readily available. Consequently, the emerging empirical literature on the outcomes of decentralization is heavily focused on OECD countries, and particularly on the efficiency considerations of service delivery (see Ahmad, Brosio and Tanzi, 2008).

Efficiency in decentralized provision is a focal concern for economists and it should be also for citizens, but it is not always the main goal of decentralization. There are distinctive themes concerning decentralized service delivery in different parts of the world. In the developing world, the issue of poverty reduction at the local level has been at the forefront of the policy debate. In Africa, the reemergence of democratic governance has paralleled poverty reduction as an overarching goal of decentralization. In Europe, both Western and Eastern, decentralization and federalization have been sought to accommodate regional demands for autonomy based on ethnic, or cultural differences. This is the case of Belgium, Spain and some of the countries born out of the break-up of Yugoslavia. In these cases citizens may be ready to trade lesser efficiency with government closer to home..

In countries, such as Peru, decentralization is seen as a mechanism to share political power and prevent a resurgence of centralization (Ahmad and García-Escribano, 2007)—whereas in Pakistan the decentralization efforts by a military government was seen as a mechanism to bypass established political parties (Devarajan et al., in Ahmad and Brosio, forthcoming). In Bolivia, decentralization was initiated partly to redress the economic discrimination suffered by the indigenous population, but is sought now by the richest regions to protect for them the resources coming from the exploitation of natural resources.

From the stylized facts and the recent literature, including some papers included in this volume, we highlight some of the critical elements that are needed to assess properly the outcomes of decentralization with a focus also on distributional issues and poverty reduction. The paper is organized around three sections. The first section tackles definitional issues and presents the various points of view from which the outcomes of decentralization might be analyzed. The second section presents stylized trends in decentralization around the world. The third provides a review of the empirical literature.

B. Decentralization and Service Delivery: general considerations and definitional issues.

Decentralization is understood, in general, as a process through which the role and functions of the subnational governments are expanded. This expansion can take place through three main different processes—these are not necessarily in actual or suggested order of sequence.

The first process is that of political decentralization. In countries with democratic institutions at all levels, political decentralization means devolution of political authority or of electoral capacities to subnational actors. Typical examples are the popular election of governors and mayors, (previously appointed by local councils or by central authorities), constitutional reforms that reinforce the political autonomy of subnational governments and electoral reforms designed to augment political competition at the local levels.

The second process relates to fiscal decentralization. This involves a transfer of expenditure responsibilities to lower level local governments, financed by a combination of own and other sources of revenues, including transfers. Unless complete functions are devolved, the decentralization process may remain incomplete. Also, the manner in which responsibilities are assigned, e.g., by unfunded mandates; or earmarked or tied transfers, may reduce the “effective autonomy” of the local governments. Similarly, without own-source revenue at the margin, the local governments may lack incentives for proper “accountability”, as they might be able to leverage the federal government or pass on the consequences of their actions to other jurisdictions (see Ahmad and Brosio, 2006, and Ambrosiano and Bordignon, 2006). Further, with access to borrowed resources, and in the absence of credible hard budget constraints, there is a substantial risk that the costs of subnational operations may be transferred to other jurisdictions, particularly at higher levels. Even in developed countries, there are significant risks to subnational operations as the current crisis in credit markets has recently illustrated for developed countries.

The third process relates to regulatory decentralization. This does not imply an appreciable transfer of financial resources or assignments, although its impact may be considerable for citizens (i.e., regulation of car emissions). Pure regulatory decentralization is much less frequent than fiscal decentralization. In fact, there has been a substantial centralization of regulations, particularly in the field of environmental policies, health, and even financial policies.

Both fiscal and regulatory decentralization imply transfer of some decision-making power over the use of public (fiscal) or private (regulatory) resources from the central to the subnational governments. Recognition that shifting of decision-making power is the essence of decentralization is crucial to the identification and the use of proper indicators of fiscal decentralization. For example, a simple reassignment of health expenditure from the central to regional budgets does not imply *per se* an increase in the degree of decentralization if it is not accompanied by the transfer of some decision-making power relating to this decentralized expenditure.

If the reassignment is financed by tied transfers, regional budgets would show a higher amount of expenditure, but since regions have to follow centrally set instructions for the use

of these resources, *no effective decentralization takes place* (regions act simply as hierarchical subordinated agents of the central government).¹ Conversely, there can be real decentralization even if the share of regional expenditure or revenues is not changed, but if more decision-making power is devolved to regions concerning the existing resources. This poses a difficulty for empirical work—since the extent to which a spending assignment can be treated as a local responsibility depends on the financing arrangements, in particular whether tied transfers are involved.

Outcomes can be examined within single countries, where local jurisdictions have different degrees of autonomy (asymmetry). Or, if standardized information were available (even the IMF's GFS data is not complete in this regard) it might be possible to observe different countries with different degrees of decentralization. Proper analysis requires adequate data on outcomes, efficiency, and distributional outcomes. Evaluation of the outcomes of devolution would require assessments over a sufficiently long time frame, given the lags in adjusting policies and assignments.

Another relevant obstacle to the proper assessment of the outcomes of decentralization is that concurrent reforms are often involved. In many cases, decentralization requires changes of policy at higher levels of government that accompany and facilitate the process. A typical example is the reform of the civil service, or of public financial management systems. In these cases it becomes difficult to ascribe success or failure to the lower level of government that implements the reform. Education in Ethiopia provides an extremely relevant example of this difficulty. Progress in school enrolment was substantial after decentralization, and was achieved by using three distinct instruments: construction of schools, use of local languages and adaptation of school calendar to seasonality of crops. The construction of schools lowers barriers to entry by reducing the distance that children have to travel, in addition to providing the necessary expansion in capacity. In Ethiopia, construction of school premises is a typical local task, requiring use of resources and effort at the local level. The use of local languages and the school calendar lower barriers to entry, especially for poor people, and are reputed to have been quite successful in Ethiopia. They are mainly regulatory and have been initiated by the federal government, with some adaptation to local circumstances by subnational governments. Without the two regulatory measures the impact of school construction would have been much reduced.

C. Some stylized trends in decentralization of service delivery

As mentioned above, most countries have experimented with variants of decentralization reforms in the last three decades, addressing different motivations. A few have embarked in ambitious decentralization processes requiring constitutional revisions. The most notable cases have been the federalization of Belgium and of Ethiopia, the regionalization of Spain, Italy, France, and the United Kingdom. The post-apartheid constitution of South Africa presents an interesting case of a quasi-federal system. The decentralization processes in natural resource rich countries, including Indonesia, Nigeria, and more recently in Sudan and Iraq, are clearly driven by considerations to keep the country together. Noticeable

¹ Of course, this assumes that there is full information on sub-national operations, without which tied transfers could degenerate into spending others' moneys without adequate supervision.

decentralization reforms have also been introduced in almost all Latin American countries. Sub-Saharan Africa presents a wide array of decentralization processes, some instigated by donors, whereas others were political economy solutions to perceived problems of nationhood or governance. In addition to above-mentioned cases of Ethiopia and South Africa, extensive decentralization reforms have been introduced in Uganda and Nigeria.

European trends

Increasing efficiency is a motivation of the decentralization in France, and partly in Italy. In Italy, the economic divide between rich and poor regions led to a demand for autonomy from the former. A larger subnational tax autonomy had led to a demand for larger redistributive transfers by the poor regions and to an expansion of public spending. The increased tax burden is resented by the voters of the rich regions. In France, decentralization reforms were started in 1982 (with a Socialist President) with the devolution of functions and the creation, in 1984, of the decentralized public service (*Fonction publique territoriale*). The powers of the prefects *vis à vis* subnational governments have shifted from control to support. Since 1986 regional councilors are popularly elected. Following the 2001 budget reforms that led to the introduction of performance budgeting, the 2003 constitutional reform (sponsored by a center/right government) aims at increasing the role of subnational governments by introducing the subsidiarity principle, involving both policy and fiscal autonomy (*Documentation Française*, 2007).

Decentralization has also taken place in all new Eastern EU member countries. Poland, Slovakia and the Czech Republic have introduced a regional level of government, in addition to the initial focus on improved local governments—largely to benefit from the availability of EU structural funds that are made available to intermediate levels of government. In the Balkans, Croatia and Macedonia have also moved expenditure functions down to their subnational governments.

A few countries including Denmark and Norway also recentralized their system of territorial government. Higher education has been recentralized and the most important responsibility of the counties, management of hospitals, has been transferred to newly created regions. Denmark follows a typical Scandinavian trend in health care, where hospitals have been transferred to new and single-function regional entities, while the role of municipalities in primary care has been strengthened (Rico and Leon, 2005). Table 1 presents information on decentralization trends.

Table 1. Main traits of intergovernmental relations in selected countries.

Countries	Share of subnational spending in general government spending	Share of subnational spending in general government spending	Main traits of intergovernmental relations	Recent reforms
	1985	2001		
Australia		49,9	Federal system	VAT administration by center on behalf of the states
Austria	28,4	28,5	Federal but highly federally regulated system	The Constitutional Convention recently fostered debate on constitutional reform of intergovernmental relations.
Belgium	31,8	34,0	Federalization based on linguistic divides	Transformed from unitary to federal state
Bolivia		34,5	Three-layered unitary system	Powers of municipalities have been considerably increased. Provinces are presently asking substantial but asymmetrical powers
Brazil		44,5*	Federal system based on three layers of government	National coordination of sales taxes is a urgent priority
Canada	54,5	56,5	Federal system	Asymmetries (Quebec)
China		70,0	Highly decentralized system, amounting to a <i>de facto</i> federation	Recentralization of taxing power
Colombia			Three-layered unitary system	Extensive devolution of resources to provinces
Denmark	53,7	57,8	Unitary system with strong municipal government	Recentralization of higher education and health since 2006
France	16,1	18,6	Regional system	Regulatory, fiscal and political decentralization
Germany	37,6	36,1	Federal system with extended concurrent responsibilities	Reduced intensity of equalization transfers after completion of re-unification
Italy	25,6	29,7		Fiscal, regulatory and political decentralization
Mexico		23,1**	Federal system with high political and low fiscal decentralization	Fiscal and regulatory decentralization since late 1980's, with devolution to States of basic education (1992) and health care (1996)
Poland		33,3 ***	Unitary	Political and fiscal decentralization with emphasis on the local level
South Africa		49,1	The post-Apartheid constitution introduced a quasi federal system	Devolution of extensive responsibilities for education and health to provinces
Spain	25,0	32,2	Regional, quasi-federal system	Completed transition toward an almost federal system
Switzerland		67,38	Federal system	Equalization transfers from federation to cantons
United Kingdom	22,2	25,9	Regional	Introduction of regional government in Scotland and Wales

Sources: Quantitative information derives from OECD (2002), World Bank (2004) and from papers quoted in the text

* 1998 ** 2000***2005

The motivation to decentralize, or centralize, often reflects complex and not always transparent political debates. In the most cases, decentralization is a multi-step, long duration process, carried out by different political coalitions, and impacts different layers of government differently. Italy provides an example. Decentralization since 1993 has successively involved: a) the devolution of taxing powers to municipalities and regional governments; b) the popular election of mayors and of provincial and regional governors; c) the devolution of important expenditure responsibilities and legislative functions to regional governments and, d) the elimination of many central government controls on subnational units. These reforms—some of which are constitutional—have been implemented by both center/left and center/right coalitions and have reflected pressures applied by regionally-based political movements. There are still very few analyses of the impact of decentralization in Italy on effective service delivery. But given the complexity of the process, it would be almost impossible to ascribe the results to any one of these specific policy changes.

Spain has almost completed a transition to a quasi-federal system, driven by the goal of accommodating the demand for autonomy coming from the rich, linguistic regional minorities.. The process was set in motion by the 1978 constitution that granted a high level of autonomy to the historical nationalities of Navarra, the Basque Country and Catalonia, while recognizing the right of the other regions to attain a similar level of self-government (Agranoff and Gallarin, 1997, Moreno, 2002, Garcia-Milà and McGuire, 2002). Spanish decentralization has been typically asymmetric, thus providing an excellent ground for empirical analyses of the impact of decentralization.

Similarly, federalization in Belgium and regionalization in the U.K. derive from historical/linguistic/cultural divides. In the Eastern European countries, decentralization has been sponsored by the EU and by international organizations, replicating the pattern observed in many developing countries, where the consolidation of democracy, efficiency reasons, and expectation of better governance dominate. The EU, however, does not sponsor a particular model of decentralized governance, although the European Charter of Local Self-Government prescribes strict guidelines in favor of subnational autonomy for signatory countries.

Demands for more power and autonomy from local elected officials and bureaucrats are important. All OECD countries have longstanding traditions of decentralized government and thus strong constituencies in favor of decentralization.

Developing countries: Indonesia

The path towards decentralization has been more hesitant in Asian countries, with the notable exceptions of Indonesia since 2000. Indonesia had achieved some success with “deconcentrated” service delivery under the Suharto years (Shah, 1999), and the decentralized model reflects the reaction to the centralized power, and has focused more on a more equitable appropriate “sharing of natural resources.” Indonesia has a three tiered system of territorial government, and the decentralization in the post-Suharto period was focused on

the third tier of government, namely districts and municipalities, in order to preserve the unitary structure of the constitution. The sequencing of the devolution of spending responsibilities was governed by practical considerations as well as political economy (with both the Habibi and Wahid administrations relying on the support of regional interests). The success with poverty reduction is more mixed—despite the recent growth, the total number of people in poverty remains stubbornly high (fluctuating between 35 million and the current level of 37 million); the unemployment rate in 2007 was the same as in 2002; and inequality appears to have increased significantly since 2003. Adequate safety nets are needed for the urban poor and landless populations. However, these are not easy to define in Indonesia.

Although the Indonesian government has taken steps to strengthen governance institutions at the central level, including—a new budget classification and accounting system, as well as the treasury single account, these are not used by lower level governments and it is difficult to order standardized and timely information for more effective macroeconomic management. It is also important for the central government to be aware in a timely manner about the quality of the sub-national spending in key areas such as education, health and infrastructure. Given the weaknesses in reporting and monitoring of sub-national operation, the central government has reintroduced centralized cash transfers to compensate the poor for the recent steep adjustments in the level of food and fuel prices in May 2008.

China

China presents an interesting case of a unitary country and a single party-system, but where provinces enjoyed considerable de facto autonomy (Yagi, 2004, Ahmad et al., 2002). This was further consolidated in the post 1978 economic reforms, and local governments enjoyed increasing autonomy in terms of expenditure and growth promoting policies (Qian and Weingast, 1997). While the initial informality in intergovernmental relations was an element in “market preserving reforms”, declining central revenues and a fuzzy legal framework posed a threat to macroeconomic stability and future growth prospects. As a reaction, the central government moved to centralize its revenue raising powers and in 1994 established a central tax administration to manage central and shared taxes (traditionally managed by the provinces) with a view to more effective macroeconomic management, and also to reduce the growing disparities among provinces (Ahmad et al., 2002). Given the restructuring of the system of state owned-enterprises, the central government is now moving to clarify spending responsibilities across levels of government and to hold lower levels accountable for their own effectively devolved functions—together with a strengthening of monitoring and evaluation capabilities of the central government, and a standardization of budget classification and treasury single accounts at all levels of government—so that there is better comparative information on who spends what and at what time.

Indian sub-continent

The countries in the Indian sub-continent share common institutions and organizational structures that reflected the British colonial past. The Government of India Act (1935) provided autonomy to states/provinces, with the creation of separate and concurrent lists of functions (Singh, 2003). Most of these structures carried over to independent India and Pakistan, which both became federal countries, where individual states/provinces retained a unitary structure. In India, the push towards further responsibilities to responsible local government came in the 1990s, with the *panchayati raj* changes to the institutional structure.

A similar push towards local governments in Pakistan by the military government at the end of the 1990s became discredited as it was also seen as a move to bypass the political process and the main parties that were organized at the provincial level (see also Devarajan et al; and Bardhan, forthcoming). Unclear spending responsibilities, together with an absence of own-source revenues continue to hamstring the decentralization process—that is brought into severe reevaluation by the failure to improve service delivery in the sensitive tribal regions that also happen to be among the poorest in the country.

Latin America

A common motivation for the decentralization process in Latin American countries is the reaction to decades of military rule in many of the countries. In other cases, the decentralization is based on the central government's desire to share with other levels the increasing political costs of governance of complex systems. This motivation applies especially to Bolivia (at least, until recent events that signal increasing resistance of the richest regions to the sharing of resources with the poorest ones) and Colombia.

In Mexico, the decentralization process was also seen as a reaction to seven decades of virtual single party “centralized” rule. While the political power of the state governors has grown, on the fiscal side, there is a lack of clarity on spending functions, the states lack effective revenue tools, and the transfer system is opaque. The most effective poverty reduction program happens to be central, the *Progresas/Oportunidades* (see Ahmad et al. 2008 and Ahmad, this volume).

The centralization of revenues, together with overlapping spending responsibilities and extensive earmarking of transfers extend far beyond the federal countries, such as Mexico, to virtually all the unitary countries in Latin America, from Bolivia (one of the earliest countries to decentralize) to Colombia and Peru. In most cases, there are very weak governance institutions with non-standard classifications and accounting frameworks, absence of treasury single accounts and weak reporting. Brazil is an exception—while it also has overlapping responsibilities; it has the most advanced focus on own-source revenues, treasury single accounts and standardized reporting mechanisms. It also has had some success in decentralized service delivery and poverty reduction programs.

Decentralization and governance in Sub-Saharan Africa

Sub-Saharan Africa presents the most challenging context for decentralization. The concerned countries are extremely poor and with limited traditions of democratic governance. Huge ethnic, cultural and religious cleavages characterize most of them, originating a demand for strong autonomy and increasing the difficulties of the task of keeping the countries together.

Institutional arrangements and sequencing of decentralization

The institutional/legal framework of a country determines the starting point for assessing the scope for decentralization. A distinction needs to be made between federal countries, such as Nigeria and Ethiopia (or South Africa, which is a quasi-federal country), and unitary states

(e.g., Mozambique, Niger, Senegal). In addition, there are some three tier/regional systems (e.g., Mali and Uganda).

The emphasis on regional or sub-national governance in some cases has been driven by the dictates of a political compromise to solve festering conflicts, as in the DR Congo. In such cases, the emphasis is more on “co-opting regional or ethnic factions” with promises of sharing of natural resources and wealth, with relatively little focus on effectiveness of service delivery.

In the federal context, the sub-national assignments and responsibilities are typically divided between regions (states or provinces) and local governments, and may be clearly specified in the constitution or higher level laws (see e.g., Constitution of South Africa, Act 108, 1996, schedule 5 for exclusive responsibilities, and schedule 4 for concurrent responsibilities between the center and the provinces). It is interesting to note that education and health care are concurrent responsibilities between the center and the provinces in South Africa --these are not municipal responsibilities, as in many other African countries. Nigerian attempts to assign primary education to local governments were constrained by capacity limitations and the absence of clear own-source revenues and governance difficulties (more on this below).

Clarifying assignments

Overlapping responsibilities are the norm in most African states, with a gradual transfer of functions and responsibilities—such as in Uganda. This has led to contradictions between mandates (universal access to free primary education) and the financing available, when the center does not fully control the numbers of persons employed, and the sub-national governments do not face a hard budget constraint (Levy and Kpundeh, 2004).

Assigning full responsibility has been attempted in Federal countries, such as Nigeria and Ethiopia, e.g., for primary education assigned to the lowest tier of government (see Table A1 in the Appendix). However, capacity constraints, together with the absence of own-source revenues and other weaknesses in the design of intergovernmental fiscal relations, have resulted in an effective reinstatement of overlapping responsibilities.

In the Nigerian case, after the implementation of the new constitution, several local governments played their main political card—not paying the health workers or teachers (Khemani, 2006). This forced the center to pay these wages through the conversion of municipal transfers into “earmarked grants” for wages. But this again faced the intractable issue of implementation of centrally determined policies at the local level with incomplete or weak information, including on the number of teachers. The “middle tier” states have been co-opted to assist with the determination of the rolls and ensuring the transfers actually reach the relevant teachers or health workers, involving a return to overlapping responsibilities. The Ethiopian experience, with effective sequencing of decentralization/deconcentration and strong leadership, has been more successful, but the federal government has effectively maintained a firm grip over all levels of governments.

The Kenyan constitution, still under discussion, attempts a clearer delineation of responsibilities for education and health care, making a distinction e.g., between primary and secondary education, assigned to districts, and tertiary education assigned to the center.

However, on other crucial issues, such as the role of local governments the constitutional text is silent..

In South Africa, the critical functions of education or health care were not devolved to local governments, but to the provinces—given the substantial externalities associated with these functions, and the possibility of “game-play” that has become apparent in cases such as Nigeria (and in several Latin American countries). These issues become clearer with the evaluation of public service delivery outcomes in several African countries—where the requisite information is available.

Governance and monitoring

A coherent framework for consistent decision-making across all levels of government would be desirable. However, standard public financial management principles are weak in the African context, as noted in the World Bank-Fund HIPC tracking exercise and are even weaker at the sub-national level these African countries.

Attempts to involve the local communities to assist with monitoring the use of special purpose transfers and donor funds, as in Uganda, have had some success. However, these do not *per se* overcome the weaknesses of the design of the intergovernmental fiscal system, and the absences of effective incentives, together with the generation of information and application of sanctions needed for good governance.

Monitoring by citizens at the local level is a positive factor, but has to be based on solid public financial management systems and processes, and is not a substitute for these foundations. Attempts to by-pass standardized reporting requirements, through the use of contracts and local monitoring are subject to all the uncertainties associated with a weak base line, audit institutions and limited information or sanctions. This may result in some patchy successes, but cannot be a basis for rapid decentralization. Given significantly enhanced capabilities in certain regions in most countries, such as in capitals and major urban centers, there may be a case for more rapid devolution of responsibilities in these regions—leading to asymmetric solutions.

Several donors and international agencies have emphasized the importance of performance outcomes, especially for sub-national public service delivery, in order to achieve more effective poverty-reduction. As a consequence, several countries are being encouraged to move towards performance budgeting. Desirable as this may be a shift to performance budgeting, without adequate preparation of the public financial management system, risks a loss of control and information and could paradoxically generate greater corruption and rent-seeking. Again, careful preparation and sequencing is essential.

D. Expected Outcomes of decentralization: a survey of the literature

In this section, we examine some cross-country and single country studies.

A number of papers discuss decentralization outcomes in individual countries,² others provide international comparisons. The cross-country studies are generally constrained by limited availability of comparable data to use a reduced-form relationship between decentralization and efficiency.³ Assessments for single countries can, potentially, overcome the control variables issue and provide firmer results. Many studies use data from different sources—mainly budgets, administrative sources, and increasingly household survey data.

The empirical literature on decentralization and efficiency can be arranged in four distinct groups. The first group of studies link **decentralization with production efficiency**, and forms the largest group. The OECD evidence is summarized in Ahmad, Brosio and Tanzi (2008).

A second group of papers refer to **preference matching and decentralization**. This is important considering, the more so when cultural/ethnic motivations are important in the impetus for decentralization. However, there are relatively few papers addressing this issue, and most consider it jointly with growth issues.

A third group of few papers relates **decentralization to convergence of service delivery levels**. According to the theory, decentralization should decrease convergence, when heterogeneity of preferences and disparities of economic conditions prevail. However, it does not imply that centralized provision ensures uniformity of levels. For example, in Italy, major differences are commonly observed among regions at different levels of development in the actual levels of centrally provided services, such as tax administration, education, health or the postal service. This may reflect neglect by national politicians, slack and bureaucratic capture in deconcentrated agencies. It is expected that decentralization could bring convergence, particularly if accompanied by introduction of uniform standards and effective transfers.

Fourth, a large number of papers examine **decentralization and growth**. It is hard to argue that overall economic growth could depend on decentralization. However, one of the crucial goals pursued by local politicians is the promotion of growth in their areas, and this may have an impact on overall growth. The origins of the literature linking decentralization to growth can be traced out to Oates (1993), who argued that the gains from decentralization should also apply to a dynamic framework of economic growth. This is because centrally determined policies do not consider adequately local conditions in the provision of public goods and services, such as those regarding infrastructure and education. It is argued that economic growth might be more rapid with decentralization if more resources go to public

² There are several papers on Spain. Spain provides excellent opportunities for testing theories about the impact of decentralization. Firstly, Spain has experienced an important process of fiscal decentralization since the re-establishment of democracy and the Constitution of 1978. Secondly, the timing of decentralization has not been equal for all Autonomous Communities (AC). Some AC's have assumed devolved responsibilities earlier than the other, thus allowing researchers to examine the impact of decentralization with reference to two distinct samples: one with decentralized and the other will still centralized responsibilities.

³ The dependent variable is usually a comparable but simple indicator of policy outcomes, while decentralization is represented by fiscal indicators based mostly on the relative shares of central and subnational governments in total national public expenditure and/or revenue.

investment; health and education policies are better targeted to growth, and in sum this produces more growth. In other words, local preferences are growth-oriented. A simpler approach focuses mostly on productive efficiency. The main hypothesis is that if decentralization promotes more efficient use of resources, it should also result in higher rates of growth for the whole economy.

There are also a number of arguments against a positive link between decentralization and growth. For example, decentralization could work against growth if it discourages big investment projects with growth-conducive spillovers across regions. It may discourage the production of genuine public goods. Moreover, political objectives may emphasize equity and not growth—elected politicians want results within their terms in office.

Production efficiency

Barankay and Lockwood (2006) examine the relationship between educational outcomes and decentralization in Switzerland. They show: a) that it is possible to overcome most of problems associated with information constraints and, b) that decentralization does in fact contribute to improve outcomes. In Switzerland responsibility for education has always been cantonal, although the federal government equalizes across cantons. Cantons can devolve some of expenditure responsibilities to their local governments and they effectively do so. It is thus possible to observe different degrees of decentralization in education between cantons.

Educational outcomes are measured in the study by the share of 19-year population that passes the final exams (*Maturité*) to enter University.⁴ The index of decentralization is measured by share of education expenditure by the local governments in each canton over the sum of local and cantonal expenditure for education. In other words, the index shows the degree of education expenditure within each canton:

$$D_{ct} = \frac{LE_{ct}}{LE_{ct} + CE_{ct}};$$

where D_{ct} is the index of canton c in year t,

LE_{ct} is the sum of education expenditure in all counties of canton c in year t and

CE_{ct} is education expenditure at the cantonal level in year t.

The use of a purely fiscal variable, such as the expenditure share, entails the risk that it does not adequately represent the degree of effective autonomy of local government. To solve the problem, Barankay and Lockwood examine cantonal regulations in four crucial areas for education: a) appointing teachers; b) determining the pay level of teachers; c) granting

⁴ Some problems have to be noted referring to the use of this measure of outcome. Upper secondary education is mostly a responsibility of cantons while local governments are fully responsible for primary education. Their expenditure and policies are thus impacting minimally on *Maturité*. To partially account for this fact Barankay and Lockwood refer results at *Maturité* to the degree of decentralization in the years where the concerned students were enrolled in primary schools, but clearly the main impact on *Maturité* derives from years spent in secondary education. Finally, there is no federal intervention in exams that could ensure uniformity of criteria.

teachers' incentives and d) organizing the structure of school. Apparently, decentralization of expenditure is closely associated with higher local decision-making power, especially for teachers' incentive pay. Local government expenditure for education is mainly for teacher's salaries. Thus, when the number of teachers or the pay levels increase, the degree of decentralization also varies within cantons. Secondly, variation in expenditures for teachers' salaries is induced by changes in the size of the student population. If it increases, local government have to provide more teachers, since cantons impose minimum class sizes. Also, changes in student numbers induce changes in the indicator of decentralization. Variations in outcomes can thus be meaningfully associated with changes in decentralization if the number of students does not impact on outcomes.

Finally, Barankay and Lockwood regress for 20 years (1982-2002) the *Maturité* results on their chosen index of decentralization after adding a number of variables that control use of inputs and canton and year fixed effects. Results show that educational attainment is positively and significantly related to the degree of decentralization. The absolute impact of the latter is also substantial. According to the estimate, if the decentralization index increases by 10 percentage points, the share of students obtaining the *Maturité* increases by 3,5 percent. Thus, cantons seem to play an important role in ensuring effective outcomes.

Table 2. Selected papers on productive efficiency and convergence

Author(s)	Countries of reference	Period of reference	Dependent variable	Decentralization Index	Main results
Ahlin Asa and Eva Mörk	Sweden	1989-2000	Convergence in per student spending and teacher-pupil ratio	Regulatory variables	Little evidence on convergence
Balaguer-Coll et al.	Spain (1.315 municipalities)	1995-2000	Output of local services	Range of responsibilities (regulatory and fiscal)	Decentralization increases efficiency
Barankay and Lockwood	Switzerland (26 cantons)	1982-2000	Education attainment:	Fiscal and regulatory: local on cantonal expenditure controlled for regulatory powers	Decentralization increases Efficiency
Cantarero Prieto David and Marta Pascual Sanchez	15 EU member countries	1993-2003	Infant mortality ratio and life expectancy at national level	Fiscal decentralization: local on total expenditure	Decentralization improves outcomes
Crivelli, Luca, Massimo Filippini and Ilaria Mosca	Switzerland (26 cantons)	1996-2001	Expenditure and input measures for health	No specific decentralization index	Huge disparities associated with decentralization and federalism
Inchauste	Bolivia Municipalities	2001 - 2005	Education and public works	No specific index	Provision of additional funds does not bring

					substantial results
Jakubowski and Topińska	Poland: Local governments	1999-2003	Various variables referring to education	Fiscal regulatory decentralization	Mixed results
Jimenez and Smith	Canada (10 provinces)	1979-1995	Infant mortality rate	Fiscal decentralization	Decentralization reduces infant mortality
Montero-Granados and de Dios Jiménez	Spain (17 autonomous communities)	1980-2001	Life expectancy at birth and infant mortality	Regulatory (before and after devolution of responsibilities)	No clear convergence: regions with low levels improve, but greater dispersion of outcomes emerges
Robalino , Picazo and Voetberg	High-income countries Spain	1970-1995	Infant mortality ratio	Fiscal decentralization: subnational on total national expenditure	Positive impact declining with increases of GDP
Salinas Peña	Spain (50 provinces)	1980-2003	Survival rate: proportion of students in last course of compulsory education who access to non-compulsory education	Regulatory (before and after devolution of responsibilities)	Decentralization is associated with positive outcomes

Source: Ahmad, Brosio and Tanzi (2008).

It should be noted, however, that the system of transfers in Switzerland has been reformed (since the paper was written) as the authorities felt that the previous system, in which transfers are linked to variables under the control of cantons, provided an incentive to increase costs—generating macroeconomic inefficiencies.

A similar analysis is conducted by Salinas Peña (2007) on Spanish schools. Spain provides, through its asymmetric regionalization, unique opportunity for checking the outcomes of decentralization. The central government has retained the responsibility for defining the structure and setting national guidelines and standards for education policies, leaving other competences to the regions. Salinas Peña uses as an indicator of outcomes—the share of students who complete post/secondary education (*Bachillerato*) to those enrolled in last year of compulsory education, assuming that a good level of education quality will induce students to stay at school. Typical variables explaining educational outcomes, such as family income, or the size of classes, are used for control purposes, while a few dummies are used to distinguish between regions that acceded to education responsibilities in different years. The fiscal discipline of regions is controlled via the introduction of the surplus/deficit in the regional budget. Different specifications of the chosen model are tested. The results show

some problems referring to the control variables, most of which do not show the expected sign. Decentralization is positively and significantly correlated with the survival rate in two out of three specifications. However, earlier decentralized regions are at the same time those with a higher per capita income. As income is also a determinant of the survival rate, the link of the latter with decentralization may be blurred. The dependent variable is also correlated positively with fiscal discipline, supporting a basic tenet of decentralization theory that maintains that the benefits of decentralization are also dependent on the quality of decentralization.

Jimenez and Smith (2005) try to trace the impact of decentralization on health care outcomes proxied by infant mortality, with reference to Canada during 1975–1995. This shows higher variation among Canadian provinces than life expectancy. First, the authors attempt to check the production efficiency of decentralization with a single step model, where infant mortality is regressed on a decentralization index and a number of control variables. Secondly, they proceed to estimate a two-step model. In the first step, provincial expenditure for health is regressed on the index of decentralization and on a number of control variables, such as transfers from the central government, private sector expenditure, birth rates and the like. In the second step, the authors proceed again to check the impact of decentralization on infant mortality by substituting actual provincial expenditure for education with an estimated one. The purpose of the two-step exercise is to control the impact of decentralization on preference-matching and then to proceed to control the efficiency effect.

The results show a negative and significant relationship between infant mortality and the decentralization. More specifically, reduction of mortality is closely dependent on provincial expenditure on health: roughly a 1 percent increase in provincial expenditure on health stimulated a 3.8 percent reduction in infant mortality.

Unfortunately, the reliability of the results is reduced by the indicator of decentralization used, which is based on the provincial share of total health care in that province.⁵ By not controlling for the effective subnational decision-making power, the index shows mostly the propensity to spend for health by a provincial government and its municipal governments. Moreover, as federal expenditure in each province is not a substitute for subnational expenditure; its relative size is not an indicator of degree of decentralization of expenditure.⁶

⁵ The indicator is represented by the formula that follows:

$$D_{pt} = \frac{MEH_{pt} + PEH_{pt} + SSF_{pt}}{MEH_{pt} + PEH_{pt} + SSF_{pt} + FEH_{pt}}$$

where MEH_{pt} is health expenditure by all municipalities in year t ; PEH_{pt} is provincial expenditure for health in the same year, SSF_{pt} Security Funds provincial expenditure and FEH_{pt} is the federal government expenditure in the same province in the same year t .

⁶ Consider a numerical example: in province A subnational expenditure for health is 80 and federal 20. In province B the same numbers are 10 and 90. The indicator will have a value of 0,8 in A and of 1,0 in B. It means simply that subnational government in province A spend more for health than the corresponding governments in province B. This could be compensated by lower expenditure for education, but is not referred per se to any difference in decentralization. On the other hand federal expenditure is for native Canadians, military personnel, inmates of federal penitentiaries and the Royal Mounted Police, which has no relationship with decentralization.

Balaguer-Coll, Prior and Tortosa-Ausina (2006) examine a sample of Spanish municipalities during 1995 and 2000. They attempt to estimate the impact of decentralization on typical municipal services, *i.e.*, those that constitute the back-bone of any decentralized system. The study tries to evaluate the gains in productive efficiency brought by decentralization by using a non-parametric (FDH) estimate of the efficiency frontier. The study links inputs used—more specifically municipal expenditure—to a number of indicators of municipal output, such as the waste collected and surface of public parks, and then select the most efficient units. The authors distinguish between (small) municipalities with fewer responsibilities and medium and large municipalities with extended responsibilities. After controlling for the operation of scale economies, municipalities with wider responsibilities should be ahead in the decentralization process. The results show that average efficiency is higher for large and medium-sized municipalities and that the differences tend to grow larger over time (a proxy for increased decentralization).

Robalino, Picazo and Voetberg (2001) provide one of the few cross-country studies for industrial economies. In their empirical model they regress infant mortality on the ratio of expenditure managed by local governments relative to that managed by the central government. They also introduce a few control variables, which refer to institutional capacity, such as political and civil rights, and corruption. These variables allow the authors to control the quality of political institutions. But without reference to the actual use of inputs one cannot perform a thorough assessment of production efficiency (with the partial exemption of GDP). The sample of low and high income countries is not specified. The results show that outcomes are positively correlated with decentralization. They also show that the marginal effects of decentralization diminish as GDP increases. This, if validated with other empirical evidence, would be an interesting result. It would mean that when countries grow their institutional capacity increases and thus the advantages of decentralization are likely to vanish, since the presumed differences between central and local management of public affairs disappear.

Cantarero Prieto and Pascual Sanchez (2006) provide a similar analysis for 15 EU countries. However, their results—positive association between outcomes in health and decentralization—are weakened by, among other factors, their use of nation-wide indicators. There is now an increasing use of household surveys for the assessment of the access of poor and disadvantaged individuals and on the personal characteristics of users. When combined with fiscal and administrative data, household surveys can potentially allow for an examination of both efficiency and equity.

Jakubowski and Topińska (2006, and forthcoming) use this methodology to evaluate the results of decentralization in education and health care in Poland. Their paper is an illustration of methods that could be used to evaluate the effects of decentralization—and also emphasizes the combination of fiscal and household information that is needed to carry out a proper evaluation. It provides for a before, during and after comparison, and illustrates the complex inter-relationships that arise. The authors show that decentralization in Poland has not been up to the expectations in terms of cost-effectiveness and a brought up a reduction in service delivery in the rural areas- This applies particularly to kindergartens.

All the studies are valuable since they move the debate to practical policy questions, rather than purely political considerations that represent a black versus white perspective on decentralization.

Convergence of service provision across areas

There is a small but increasing number of studies analyzing convergence across areas of levels of service provision. Empirical observation seems to confirm the theory—e.g., for health care in Switzerland. Switzerland is one of the most decentralized countries of the world. With respect to health care, the role of the federal government is limited to funding of health care to poor people (federal expenditure is 20% of total national health care) and to the definition of basic packages of health insurance (Crivelli, Filippini and Mosca, 2007). Provision of health care shows huge disparities between cantons, whether measured in terms of expenditure, use of inputs, or outcomes, such as differences in mortality rates amenable to absence of timely and effective care (Crivelli, Filippini and Mosca, 2007).

One of the arguments used against decentralization is that it will increase disparities in levels of service delivery, if decentralization is not accompanied by the imposition of strict national standards on service levels and if substantial equalization grants are not provided.

Montero-Granados and Juan de Dios Jimenez (2007) do not provide an analytical framework, but test the convergence hypothesis with reference to the Spanish regions in the health sector. Health care is provided by a National Health System funded (with the exception of Navarre and the Basque Country) by general taxation and small user co-payments. Standards are determined by the central government, while regional authorities are responsible for planning, organization, and management of health care, and are provided with a centrally determined block-grant allocated according to an unadjusted capitation formula. The authors use two measures of convergence derived from the literature on growth. They are the sigma (σ) and the beta (β) convergence. The first measure is based on changes of standard deviation over time. When variation declines, there is more homogeneity of outcomes, or of behaviors. According to the second measure, convergence increases when laggard regions improve quicker than more advanced.

Outcomes of health care include life expectancy at birth and infant mortality, while decentralization is measured by access by regions to health responsibilities. The authors also use a host of variables, other than decentralization, that are expected to impact on outcomes. The results show convergence taking place at the extremes. That is, less developed regions improve faster than more advanced regions, while in the middle, there is a big increase in variation. These results are open to interpretation. One could say decentralization fills the most optimistic expectations, as the difference between the rich and the poor regions are leveled and at the same time individual (middle) regions adjust to their preferences. One can also argue that the results confirm the expectations that there is little to expect in terms of homogeneity from decentralization.

Ahlin and Mörk (2007) analyze the impact on convergence due to different stages in decentralization in the Swedish education sector. Sweden took three major steps to decentralize its education system. In 1991 formal responsibility for compulsory, upper secondary and adult education was moved to the local government level. Teachers were transferred to municipalities, but salaries were still determined centrally, as well as curricula and national evaluations. Distinct specific grants for education, such as for books and school premises were unified into a single specific grant. In 1993, all sector specific grants—such as those for education, health and social protection—were unified into a single block-grant,

giving municipalities the freedom, for example, to move resources from education to social protection (or vice versa). In 1996, teachers' wages setting was moved to municipalities and new block grant system was introduced, based on revenue and cost equalization. Note that since 1992, the central government introduced public funding for independent schools, thus inserting more competition between public and private education. Convergence is analyzed with reference to two typical input indicators: per pupil spending and teacher-pupil ratio. The paper shows that no appreciable change has taken place in the pattern of per pupil spending, while variation in teacher-pupil ratio has decreased over time. The authors explain the surprising result (challenging traditional theory) in terms of the strategic interactions between local politicians—local choices are constrained by neighboring municipalities' choices. However, they do not control for the varying equalizing impact of different systems of grants. Subsequent regression analysis shows that with decentralization, higher reliance on own-source of revenues had an impact on per pupil expenditure, but this effect may have been neutralized by the equalization grants. Thus the power given to local governments by decentralization of responsibilities may have been offset, by the ability of the central government to influence local choices through the allocation of grants.

Preference matching

The empirical literature exclusively devoted to preference matching is still relatively small. In fact, most studies link preference matching with growth, as illustrated below.

A well-structured and accurate analysis is provided by Strumpf and Oberholzer (2002) with reference to regulation of the liquor sales in the US States between 1934 and 1970. In 1933 the Prohibition Act was repealed and the States were made responsible for liquor control. States then had the choice between centralized/statewide regulation, or devolution of regulation to their local governments (counties, municipalities and towns). Initially, seven states prohibited sale of package liquor, while among non-prohibitionist states 20, and later 34, devolved regulation to their local communities where the issue was decided in local elections.

Strumpf and Oberholzer-Gee construct, and test with regression analysis, a model predicting that decentralization of regulation would be observed in states with huge heterogeneity of preferences on liquor sales, while centralization should prevail with less extreme disparities. The test is conducted in two sequential stages. The first stage refers to (3100) counties where the tastes of the decisive voters are estimate using variables that according to the literature should influence the taste for liquor, such as religious affiliation and socioeconomic variables. Tastes will predict the policy—wet or dry- adopted by the community. The second stage refers to states and is based on regression of decentralization of policy with two measures of within-state taste heterogeneity. The results show that the states with more heterogeneous preferences have been more prone to decentralize.

Arze del Granado, Martinez Vasquez and Mc Nab (2005) provide specific empirical testing of preference matching, also with reference to developing countries. More precisely, the paper analyzes the impact on fiscal decentralization on the provision of publicly provided private goods, such as health and education. The analysis is based on 45 developed and developing countries between 1973 and 2000. The dependent variables are the share of local health and education expenditure on total local expenditure, while the independent variable is the share of local total general government expenditure. The results show that

decentralization brings about an increase of the share of these two categories of expenditure, but the generality of the findings may be questioned. Since there is no evidence – but only a general presumption - in the paper that more expenditure for health and education means effectively in every country better adaptation to local preferences, more spending for these two sectors could simply derive from the fact that these are the sectors where decentralization has taken place.

There are also a few studies of preference matching referring specifically to developing countries. Faguet (2004) and Faguet and Sanchez (2006) analyse Bolivia and Colombia : These countries have undergone a far-reaching decentralization process. While Bolivia has relied mostly on strengthening of municipalities, Colombia's decentralization was initially based on strengthening municipalities and has relied subsequently on the regional governments (departments). Bolivia also initiated elections of departmental governors, but the process has run into difficulties over the sharing of natural revenues. In both countries, subnational revenue has substantially been increased through the increased sharing of national tax collections—much of this was earmarked to investments in education and health.

Both studies assess, first, how decentralization affects the composition of local expenditure by sector in line with citizens' preferences and secondly how decentralized spending improves the outcomes of education, although from a partial point of view, namely enrollments. The studies exert a considerable effort in singling out local preferences for expenditure. They argue that, with decentralization, investment priorities shift from typical services such as water, sewerage and roads to education and health. This shift is assumed to be more in line with people's preferences. There is, however, no demonstration of this. In both countries decentralization brought about an increase in school enrollment, as would have been expected considering the increased amount of investment. There is, however, no precise checking of the correspondence between increased expenditure and increased enrollments. In other words, the studies do not provide conclusive evidence about gains in production efficiency reached through decentralization per se.

Inchauste (this volume) uses of both fiscal and household survey data to check whether resources channeled to municipalities have been distributed as intended under the enhanced Highly Indebted Poor Countries (HIPC) initiative, and whether there is any evidence of absorptive capacity constraints, particularly by poor municipalities. The paper also investigates whether the resources that actually have been spent have had any impact on short-term social indicators, such as illiteracy rate, rate of unattended respiratory diseases, and home access to electricity and water. Results again do not provide convincing evidence of efficient working of local governments. For example municipalities, particularly the poorer ones, show substantial problems in transforming increased revenue in effective spending .For education, for example, increases in education transfers do not significantly affect the share of children not attending school. When looking at infrastructure indicators, there is still no significant effect of changes in spending or transfers on the share of homes with access to water and electricity services. More in general, there is no evidence of a clear improvement of conditions in the poorest municipalities, or for the poorest segments of the population.

Solé-Ollé and Esteller-Moré (2005) analyze the impact of decentralization on the pattern of investment in roads and education premises during 1977-1998 in Spain. The paper is well constructed, although it is not *strictly* a test of preference matching, but rather an efficiency

test of spending decisions. The main focus of the analysis is, in fact, testing if after decentralization investment decisions have been more closely targeted to effective needs, such as, more road construction in congested areas and more school construction in areas with higher student population growth and if investment activities have become more cost conscious. The results show that with decentralization the regional allocation of investment in these two sectors has become better adapted to local conditions and needs, thus showing a higher level of efficiency than under the previous centralized regime.

Table 3. Decentralization: preference matching and growth--summary of selected papers

Author(s)	Countries of reference	Period of reference	Fiscal variables of reference	Growth variables of reference	Decentralization Index	Main results
Akai and Sakata	US counties	1993-2000		GDP growth rate	Fiscal with emphasis on tax autonomy	Growth is positively related to tax autonomy and specifically to non-bailouts
Arze del Granado Martinez Vasquez and Mc Nab	45 countries developed and developing countries	1973-2000	Ratio of education and health expenditures to total public expenditures		Fiscal decentralization	Likely increase of expenditure for health and education
Ebel and Yilmaz	19 OECD countries	1997-99	Public sector's expenditure share of GDP	GDP growth rate		
Faguet	Bolivia Sample of municipalities	1991-1996	Investment for Education; Water and Sanitation; Watershed Management		Fiscal decentralization	Increased spending in poorer areas
Faguet and Sanchez	Bolivia and Colombia. Samples of municipalities	Mid 1990's early 2000's.	Investment in education		Fiscal decentralization	Increased spending for education and expanded enrolments
Jin and Zou	17 industrial and 15 developing countries	1980-1994	Subnational, national, and aggregate government size: the ratio of total expenditure at corresponding level to GDP		Fiscal and regulatory decentralization	Increase of subnational expenditure and reduction of national expenditure

Solé-Ollé and Esteller-Moré	Spain	1977-1998 (44 provinces)	Investment road and education		Fiscal and regulatory decentralization	Better adaptation of investment to local needs
Thiessen (2000)	26 mainly developed countries	1975-1995	Annual growth rate of real gross fixed capital formation (as indicator of physical investment)	Growth rate of per capita GDP Total factor productivity growth	Fiscal decentralization	Growth initially increases but then declines with decentralization
Thiessen (2003)	14 and 21 high-income OECD countries	1973-1998	Average annual investment share in GDP	Log difference GDP per working-age person Average annual total factor productivity growth	Fiscal decentralization	Growth initially increases but then declines with decentralization

Decentralization and growth

Although there is a large empirical literature on the link between decentralization and growth, the consensus appears to be that any relationship is relatively weak. A good survey of its main results has already been provided by Breuss and Eller (2004, see *e.g.*, page 11).

The empirical literature refers to samples of countries, as in Thiessen (2000 and 2003), Ebel and Yilmaz (2002) and to distinct countries, such as in the papers by Behnisch *et al.* (2003) on Germany and by Feld, Kirchgässner and Schaltegger (2004) on Switzerland. The empirical findings are mixed. Negative findings are more frequent for European countries and with a longer term perspective.

We limit our consideration to the studies of Thiessen (2000 and 2003), which are mostly devoted to OECD countries. The relationship between decentralization and growth is represented by a bell-shaped curve, meaning that when countries move from low to medium levels of decentralization, growth accelerates, but higher decentralization will reduce growth. Part of this explanation derives from the positive impact on capital formation deriving from decentralization. However, the key variables used – average rate of growth from 1973 to 1998 and average indexes of fiscal decentralization- raise a few doubts on the results even after other variables that impact growth are controlled for. Take the case of Italy. Most decentralization reforms were introduced in the 1990's, but growth declined in that period, while lower decentralization and higher growth characterize the previous years. Ireland has the highest rate of growth, but has always been a highly centralized country. Norway has promoted some recentralization, but its high rate of growth is due to oil. Japan is close to Ireland in the sense that no change towards decentralization is observable. However, economic growth had declined in the second half of the period.

Convergence/divergence in regional rates of growth

When countries decentralize, less developed regions fearing losing in terms of growth because of lesser support from the central government. This looks *prima facie* reasonable, although increasing divergence may be associated to the peculiarities of the decentralization process. Akai and Sakata (2005) provide good analytical and empirical analysis for the US. They distinguish between two different concepts/impacts of decentralization. The first refers to decentralization of resources. The presumable impact of decentralization is to increase disparities among regions. Here the impact of decentralization will arise mostly through the expenditure multiplier. The second concept refers to decentralization as a commitment device. Decentralization occurs when subnational governments rely on their own sources of revenue with a hard budget constraint. In this case, regional efficiency in spending and self-reliance will be increased, with likely positive effects on growth. Akai and Sakata test their model with reference to an unspecified number of US counties during 1993-2000. They also use a number of appropriate control variables in order to take into account many of the factors that impact on growth. Their results show that decentralization, as a commitment device, has a significant impact on the reduction of regional disparities in growth. The results by Akai and Sakata are confirmed by Rodriguez-Pose and Bwire (2003) with a detailed analysis of a group of five OECD countries (Germany, Italy, Mexico, Spain and the US) plus India.

The exploration of link between purely regulatory decentralization and growth is also an important one. When subnational, particularly regional, governments are empowered with growth-related responsibilities, there are clearly new potentialities to foster growth, but regional growth inducing policies can be construed at the expenses of other regions. There also worries - for example in Italy - of excessive regional regulation in growth related sectors, such as the environment, health and labor. These issues have been initially explored by Weingast (1995), who maintains that a federal system is market-preserving if it has three characteristics: i) subnational governments have primary regulatory responsibility over the economy; ii) a common market is ensured, preventing the lower governments from using their regulatory authority to erect trade barriers against the goods and services from other political units; and iii) the lower governments face a hard budget constraint, that is, they have neither the ability to print money nor access to unlimited credit. Weingast and his coauthors (for example Lin, Yifu and Liu, 2003, Cao, Qian and Weingast, 1997) have made extensive empirical analysis of market preserving federalism theory with reference to China. Unfortunately, similar studies for other, and specifically OECD countries, are still missing. Again this may have been the case during the early years of the economic reforms, but increasing inequalities and other potential constraints are likely to have changed the composition of the “growth-engine” in recent years.

E. Conclusions

Confronted with the often asserted benefits of decentralization for enhanced service delivery, efficiency and preference matching the evidence is not quite conclusive. Despite the number of empirical studies available, general conclusions are still tentative because of the context-specific nature of decentralization processes and of their outcomes. Of course, it is possible to draw firmer conclusions when, as in the case of Spain, there are quite a large number of

studies. The studies for Spain show a convergence of positive, although cautious, conclusions, especially concerning preference-matching. Also for Switzerland, some positive results emerge, particularly regarding allocative efficiency. In general, the evidence referring to industrialized countries is more positive than that for developing countries, where decentralization has additional goals to meet and where institutions are generally weaker than those in mature economies.

There is also not enough specific evidence to conclude whether ethnically or culturally driven processes of decentralization produce better or worse results than those driven only by efficiency considerations. Surely, the cases of Spain and Switzerland show that cultural and linguistic divides do not necessarily have a negative impact. But the quality of institutions is a critical precondition for the successes seen in Spain and Switzerland.

In theoretical terms, the claims that decentralization enhances service delivery have to be reconciled with the recognition of the joint nature of the spending and revenue constraints, and of the fact that lower levels of administration are likely not to have adequate own-source revenues for effective hard budget constraints, nor the governance, budgeting and reporting infrastructure to make decentralization effective.

There is relatively poor evidence to characterize effective links between decentralization and growth. Claims of improvements in developing countries may be due to the general development process and growth, perhaps improved central decision making with local implementation, while linkages with decentralization are tenuous.

Convergence of levels of service delivery does not seem to be a prevailing pattern, but this should be an expected outcome of decentralization, which rewards capacity and availability of resources. Clearly, the poor jurisdictions should also benefit from the growing exposure to efficiency that derives from increased autonomy. There is, however, still little evidence to prove this.

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Table A1: **Expenditure assignments in African countries**

Countries	Level of government	Policy responsibilities	Functional responsibilities Education	Functional Responsibilities Health
Ethiopia	Central	Typical functions of federal states	Framework legislation Financing	Framework legislation Financing
	State/Regional	Regulation of education, health, roads and financing of local government	Regulation, financing and monitoring	Regulation, financing and monitoring
	Local	Education, health, roads, growth promotion and basic urban services (when transition is completed)	Hiring of teachers Administration O&M Infrastructure	Hiring of medical personnel Administration O&M Infrastructure
Uganda	Central	Typical of decentralized systems	Policy Financing (including wages)	Policy Financing (including wages)
	Regional (Districts)	Education, health, roads and basic urban services	Hiring of teachers; Administration O&M Infrastructure	Hiring of medical personnel, Administration O&M Infrastructure
	Local (Counties, parishes, villages)	Mostly urban services	Administration O&M Infrastructure	Administration O&M Infrastructure
Rwanda	Central	Most	All	All
	Local	Basic urban services and some economic services (water, agriculture). Devolution of education & health is planned		
Nigeria	Central	Typical functions of federal states	Policy, financing of teachers	Policy, financing of health care

	State/regional	Concurrent legislative powers with the federal government in education, health, public works.	Hiring of teachers Administration O&M	Hiring of medical personnel; Administration O&M
	Local	Typical urban infrastructure and services	Some maintenance; responsibility for primary education	Some maintenance; Responsibility for basic health care
Ghana	Central	Typical functions of unitary states	Policy, financing, teachers	Policy, financing, medical personnel
	Provincial	Feeder roads, abattoirs	Building and O&M primary, middle and secondary schools	Public health and public hygiene
	Local	Typical urban services		
Tanzania	Central	Typical functions of unitary states	Financing and tight control through standards on inputs an outputs	Financing and tight control through standards on inputs an outputs
	Local	Primary education, health services, water supply, local roads and agricultural extension.	Most functions, very tightly controlled.	Most functions, but....as for education.
Senegal	Central	Most functions	Most	Most
	Local	Typical urban services	Building and O&M for primary	Building and O&M for health centers
DR Congo	Central	Typical functions of federal states	Policy, financing and teachers	Policy financing and medical personnel
	Regional	Education, health, social protection, sports, culture, roads	Building and O&M, supply of material	Building and O&M, medical supplies and equipment
	Local	Typical local services		Local clinics
South Africa	Central	Typical functions of federal states		
	Regional	Concurrent legislative powers with the federal government concerning roads and transport, economic affairs, social services, health and education, public works.	Recruitment of teachers, administration O&M Investment, supply of equipment	Recruitment of doctors, administration, O&M Investment, supply of medical equipment

	Local	Provision of urban infrastructure and basic services, such as water, sanitation, transport and roads	None for localities, but possibly some role for local communities and families	None for localities, but possibly some role for local communities and families
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