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Research Summaries

Public Investment

Alex Segura-Ubiergo



The study of public investment has a long tradition in the public finance literature. In recent years, it has attracted increased attention as observers have noted that fiscal consolidations may have been associated with disproportionately large reductions in public investment. New research has also focused on mechanisms to measure and improve public investment “efficiency” and fiscal risks associated with promoting investment in infrastructure by using public-private partnerships (PPPs). This article provides a brief overview of how recent research by IMF staff members has contributed to this debate.

There are at least four reasons why the public sector may need to invest directly or indirectly (Atkinson and Stiglitz, 1980). (Public investment is defined herein as the set of economic transactions that lead to changes in the stock of physical capital. This is the definition normally used in national account statistics.) First, in the presence of externalities and spillover effects, the private sector might underinvest in certain economic activities (e.g., building lighthouses), an argument that typically applies to public goods. Most public investment is not, however, on public goods. Second, asymmetric information *(continued on page 2)*

Bank Transaction Taxes

Andrei Kirilenko



Over the past twenty-five years, a number of countries, mostly in Latin America, have imposed taxes on banking transactions. Empirically, these taxes have been shown to be effective in generating revenue in the short term. Recent studies, however, question their ability to be a reliable source of revenue in the medium term and show that they result in significant financial disintermediation.

When, in 1898, the U.S. government introduced a two-cent tax on bank checks to finance the Spanish-American War, little did it know that a century later many Latin American countries would use similar taxes to fight their own fiscal battles. Since 1976, taxes on bank transactions have been introduced repeatedly in Argentina, Brazil, Colombia, Ecuador, Peru, and Venezuela. As of the end of 2006, such taxes were in effect in seven Latin American and Caribbean countries: Argentina, Brazil, Bolivia, Colombia, the Dominican Republic, Peru, and Venezuela.

There is considerable variation across countries in the design of these taxes. Usually, taxes on bank transactions are levied on withdrawals from bank accounts, including the clearance of checks and the use of *(continued on page 4)*

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problems or insufficiently developed institutions (e.g., the lack of clear laws and relatively independent and responsive courts) may prevent the development of capital or insurance markets and discourage private firms from investing in risky projects. In such cases, potentially viable and socially desirable projects would not be executed without public sector intervention. Third, public investment may have other social objectives, such as income redistribution, that profit-maximizing private agents would not be willing to pursue. One example would be investments in housing developments for poor families or in services, such as provision of electricity and safe water in rural areas, that are sold below market prices. Finally, certain economic activities, such as the provision of infrastructure (e.g., roads, ports, dams), are characterized by large sunk costs and increasing returns to scale, which may result in high barriers to market entry. Under these circumstances, the public sector may decide to either regulate the monopoly-dominant market structure or undertake the project directly. In practice, countries undertake public investment projects for a variety of reasons, and political considerations (e.g., upcoming elections) often trump purely socioeconomic objectives.

Recent research on public investment by IMF staff members has focused on three issues: (i) determinants of public investment levels, (ii) factors underlying differences in public investment efficiency, and (iii) fiscal risks associated with public-private partnerships. On the first topic, Tanzi and Davoodi (2002) find, on the one hand, that corruption (proxied by the International Country Risk Guide Corruption Index) increases public investment while, not surprisingly, reducing its productivity. Clements, Bhattacharya, and Nguyen (2003), on the other hand, show that high debt-service levels tend to decrease public investment. These studies by IMF researchers do not deal, however, with the perhaps more interesting question of what explains the well-documented downward trend in public investment in different regions in recent years.

One obvious reason could be the need for fiscal adjustment. Little is known about whether there is a causal relationship between these two variables, however, since decreases in public investment could have many other explanations (such as preference for a smaller public sector or the completion of large infrastructure projects). A different, but somewhat related question is how the composition of fiscal adjustment may affect its sustainability. In this regard, a seminal paper by Alesina and Perotti (1995), which focused on member countries of the Organization for Economic Cooperation and Development (OECD), showed that fiscal consolidation is more likely to be successful (i.e.,

sustained) when it is predominantly based on cuts in current spending, as opposed to cuts in public investment and/or revenue increases. This result has also been confirmed by Gupta and others (2003, 2005) for low-income and emerging market countries. More recently, the work of Akitoby and Stratmann (2006) has shown that financial markets are not indifferent to the composition of fiscal adjustment. In particular, spreads in emerging markets tend to narrow when fiscal adjustment relies on cuts in current spending but do not change when adjustment is based on cuts in public investment or revenue increases. This suggests that financial markets may also view cuts in current spending as a stronger sign of sustainable fiscal consolidation than cuts in public investment.

Some critics of the IMF have argued that the fiscal adjustment often called for under IMF-supported programs has put strong downward pressures on public investment and social spending in many countries. However, the IMF's Independent Evaluation Office (2003) and a related paper by Martin and Segura-Ubiergo (2004) did not find any evidence that this was actually the case. In practice, whether they are undertaken in the context of an IMF-supported program or not, little can be said about the desirability of cuts or increases in public investment in specific cases without paying attention to the efficiency/productivity of specific public investment programs. This is a relatively new area where further research seems particularly warranted. A paper by Clements and others (forthcoming) explores this issue in the context of Latin America. Using nonparametric techniques, they define a production function linking spending inputs and infrastructure outputs. Their results reveal a significant amount of inefficiency in about two-thirds of their sample.

Most of this research has relied heavily on the use of cross-country regressions. There is a limit, however, to what can be learned from these regressions, which are always vulnerable to problems of sample heterogeneity and omitted variables, and can, therefore, push researchers into the dangerous "ecological fallacy trap" (i.e., the belief that the average result obtained from the regression can be applied in practice to specific countries). Interestingly, the IMF is beginning to make greater use of qualitative methods based on in-depth case studies that try to avoid this problem. The loss of generality associated with the small sample sizes of the studies seems a reasonable price to pay, given the insightful results often obtained. For example, interviews with senior government officials conducted by various mission teams of the IMF's Fiscal Affairs Department (FAD) to eight low- and middle-income countries (IMF, 2005) suggested specific ways of making improvements in institutions for investment planning and project evaluation that

could ultimately lead to higher public investment productivity. FAD economists concluded that countries would benefit from introducing more systematic use of standard cost-benefit analysis techniques, avoiding a bias in favor of new projects and against the maintenance of existing infrastructure, introducing a central institution responsible for screening sectoral public investment projects (as Chile has successfully done), and establishing mechanisms for project monitoring and ex post evaluation.

Finally, one alternative to traditional public investment that is becoming increasingly popular is using public-private partnerships (PPPs), under which a private entity builds and operates a new infrastructure project or takes over the management of a large public infrastructure asset for a given period during which it also assumes significant investment risk. Hemming and Ter-Minassian (2004) note that PPPs hold the promise of boosting efficiency and increasing the supply of infrastructure and other services. They argue, however, that PPPs should be treated with great care. First, it is not obvious that they are more efficient than traditional public investment; and, second, they have experienced a number of failures in developed countries. Third, there is a danger that PPPs will be used to move public investment off budget while obtaining no significant efficiency gains. The authors also point out some principles needed for a successful PPP program: (i) contractible services with payments that are linked to performance; (ii) competitive and/or incentive-based regulation; (iii) an appropriate institutional framework with adequate supporting legislation; (iv) specialized staff with strong project-appraisal skills; and (v) in the absence of internationally accepted accounting standards, full disclosure of fiscal risks posed by PPP schemes. Recent international experience has shown, as noted in a forthcoming paper by Pritha Mitra, that substantial project risks posed by PPPs often result in the need for government guarantees. In this regard, in the presence of uncertainty, guarantees are a legitimate form of support for infrastructure investment when the government is best placed to anticipate and control project risk. However, guarantees used as a response to project risk are also a source of fiscal risk, and pose in practice a number of transparency, accounting, and monitoring issues that should suggest great caution in their use (IMF, 2006). Fortunately, the experience of some countries with a long tradition of fiscal discipline and a centralized system of fiscal risk management, like Chile, provides some guidance on how to make effective use of them.

Many questions still remain and others have not been properly answered. Ongoing projects on public investment and fiscal risk (including risks posed by public enterprises that often carry out substantial investments) and research

on public investment efficiency in Latin American and transition economies will, it is to be hoped, advance our understanding of these issues further. Other useful contributions to the debate may also develop in the context of technical assistance missions on PPPs that are currently being conducted to a number of countries for which limited academic research is available so far.

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