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The Macroeconomic Impact of Privatization

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Abstract

Privatization programs have generated large sums at times, and it is tempting to treat the proceeds they generate as revenue. This paper argues that privatization proceeds should not be treated as revenue, but instead as financing. Unlike taxation, privatization never reduces private sector wealth. In exceptional cases, it may reduce the propensity to invest, and depress domestic absorption like a tax increase. Given the difficulty of predicting when this will happen, and its exceptional nature, the receipt of proceeds from privatization should not be seen as warranting a loosening of the fiscal stance to maintain aggregate demand.

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I. INTRODUCTION[1]

Privatization is not supposed to be undertaken to fill a hole in the budget. Its purpose is to achieve a redeployment of assets in the economy from the public sector, where it is assumed that they are being used inefficiently, to the private sector, where it is expected they will be utilized more efficiently. Consequently, privatization should lead to a permanent increase in the *level* of aggregate output, if not in its rate of growth, and be welfare-enhancing. In fact, many governments have also seen privatization campaigns as a source of budgetary revenue.

Whatever the ultimate aims of privatization, the larger privatization programs have generated substantial proceeds for the governments that have launched them. The privatization programs of Chile and Mexico, for example, generated proceeds that averaged about 1 percent of GDP in their peak years. Thus, apart from their impact on the productivity of a nation's capital stock, and on the long-term growth rate or output level of the economy, privatization programs can have important macroeconomic and financial consequences in the short run.

The purpose of this short paper is to delve into these consequences. The main question it addresses is whether privatization proceeds are best viewed as a form of revenue—a

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[1]This short paper draws heavily on several papers prepared by staff of the IMF's Fiscal Affairs Department: Hemming and Mansoor (1987); Mansoor (1993); and Hemming and Miranda (1991). It has also benefited from Skarzynski (1994) and from comments from Patricia Alonso-Gamo, Anupam Basu, Patricia Brenner, Paul Cotterell, Alfredo Cuevas, Jeffrey Davis, Jorgé Guzman, Peter Heller, Alain Ize, Christoph Klingen, Kalpana Kochhar, Desmond Lachman, Sergio Leite, Paulo Neuhaus, David W.H. Orsmond, Neil Patterson, John Pitzer, Ruby Randall, Dawn Rehm, Christian Schiller, Lelde Schmitz, Krishna Srinivasan, Teresa Ter-Minassian, and Andrew Wolfe. I alone am responsible for any errors the paper may contain, however.

"deficit-determining" item that can alter the stance of fiscal policy, and thus contribute to a stabilization effort—or as a form of financing, like a bond issue. The answer to this question might seem obvious—since privatization entails simply an exchange of assets that does not affect the net worth of the government, or reduce that of the private sector, it should be seen as a financing transaction. For practical purposes, that conclusion is more or less the one that the paper reaches. However, its analysis will demonstrate that the short-run macroeconomic impact of privatization is strongly affected by the circumstances in which it takes place. It depends in particular on the relative rates of return of the privatized concern in the public and private sectors. In some instances, privatization can even reduce domestic absorption, other things remaining equal.[2]

II. PRELIMINARIES

The macroeconomic effects on a privatization program can be shown to depend on a number of factors. In particular, its effects will depend on the size of the difference between the present value of the income stream generated as public sector entities by the enterprises to be privatized, and the value their shares will command with private sector investors. The paper refers to this difference as the public-private sector valuation differential (or valuation differential for short). The analysis that follows distinguishes in this regard between two cases. In Case I, an enterprise is worth less (or is deemed to be worth less) in the public sector than as a going concern in the private sector (the case of a negative valuation differential).

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[2]The treatment of privatization proceeds is only one of a number of issues that arise in the interpretation of the public sector's financial operations (see Blejer and Cheasty (1993) for further discussion).

In Case II, the enterprise has a higher value in the public than the private sector (the case of a positive valuation differential).[3] The point of exact equality between public sector and private sector values is particularly interesting, since it generates an "indifference" result.

The impact of privatization also depends on what the government does with the proceeds, and on the modalities of the privatization. It will simplify the discussion if we assume initially that privatizations are financed via an offering of shares; financing by means of a voucher issue is analyzed subsequently. We also assume that shares are perfect substitutes for government debt. The proceeds of privatization are not used to finance additional public expenditure, but initially to reduce the government's indebtedness with the central bank. The analysis of the macroeconomic effects of privatization does not depend greatly on the assumption made regarding the openness of the economy, for the reasons set out in what follows.

Whatever the valuation differential, the initial impact of a privatization operation on the government's accounts is to reduce its net indebtedness to the central bank—since the proceeds are simply deposited in the Treasury's account there—and to decrease its stock of illiquid, real assets. The initial impact of the operation on the private sector is to reduce its holdings of money or near-money, and increase its holdings of financial assets at the long end of the maturity spectrum.

Elementary portfolio theory suggests that the private sector will not acquire the shares unless the rate of return on financial assets increases, even if only slightly, since the share of

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[3]Section 3A treats the question of why the government might wish to privatize in these circumstances.

financial assets in total private sector wealth has increased.[4] In a closed economy, interest rates could rise, especially since the private sector has become less liquid. An increase in rates, by reducing the market value of the financial assets held by the private sector, would reduce its wealth. This effect can, however, be offset if the government uses the proceeds to repurchase public debt held by the private sector, or if the central bank conducts an open-market operation (which is more or less the same thing). A repurchase operation reduces the stock of bonds in the private sector's hands and increases the money supply by the same amount, thus effectively restoring the status quo ante. The supply of money and the combined value of stocks and bonds will be the same as they were pre-privatization. Consequently, privatization should not reduce the wealth of the private sector.

In an open economy, interest rates cannot rise, even if no open-market operation is undertaken to restore the money supply to its original level, since in the absence of a change in the exchange rate regime, they are determined by the level of international interest rates.[5] The excess demand for money is satisfied by an inflow of foreign capital, and domestic interest rates remain at their original level. Foreign reserves increase in this case, an effect which takes place regardless of whether residents or nonresidents acquire the shares of the privatized

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[4]The size of the increase will depend on the size of the privatization program in relation to the private sector's portfolio holdings.

[5]With a fixed exchange rate that is not expected to change, domestic rates equal international rates. With a floating rate, the domestic-international interest rate differential should be determined by the expected rate of depreciation of the domestic currency. Unless the privatization operation affects expectations about domestic inflation or other influences on the exchange rate, it should not have an impact on domestic interest rates.

concern.[6] If a countervailing open-market operation is undertaken, there is no increase in net foreign assets.

Box 1. The Accounting Treatment of Privatization and Asset Sales in the GFS Manual

The statistical system presented in the IMF's Government Finance Statistics Manual (1986)—now in the course of revision—treats nonfinancial asset sales and privatization proceeds as operations that **determine** the deficit; that is, as above-the-line operations. Specifically, proceeds from the sales of capital equipment (i.e., physical assets) are classified among capital revenue, while those from the sale of shares in privatized enterprises are treated as negative net lending. Consequently, both nonfinancial asset sales and privatizations reduce the size of the budget deficit. They are "deficit-determining," just like tax increases or expenditure cuts.

There is a valid internal logic to this treatment. Under the GFS system, an act of net lending or a capital transfer, **if undertaken for purposes of public policy**, is put above the line; similarly, any repayments of this lending is treated symmetrically as negative net lending.[7] On the assumption that the acquisition or original investment in the enterprise was an act of public policy, that operation would be classified as net lending. Symmetric treatment of privatization proceeds requires that they be classified as negative net lending. In any case, since privatization is presumably undertaken for public policy purposes, it could arguably be assimilated to negative net lending.

The Annotated Outline for the revised GFS manual (IMF (1996)) advocates treating net lending for policy purposes as a financial transaction, since the government in carrying it out, exchanges one financial asset for another (a claim on the private sector). The Outline then asserts that consistent treatment of privatization operations requires that they be treated as a financial operation as well.

Most privatization operations will take the form of a sale of shares, a financial asset. Equivalently, a government could sell the physical assets directly. The *Outline* does not take a position on whether or not the sale of physical assets should be part of revenue, but a parallel treatment would require that such a sale not be part of revenue.

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[6]The money supply is unaffected; a fall in net credit to the government is offset by the increase in net foreign assets.

[7]Lending for the purposes of public policy is distinguished from lending to earn a return, or lending as an act of cash management.

III. ANALYSIS OF THE TWO CASES

A. Implications of the Valuation Differential

Turning to the effects of the valuation differential, consider Case I, when the value of the privatized concern is less in the hands of the public than the private sector. For simplicity, suppose that the assets are worthless in the public sector. In such a case, the government gives up assets of no value and receives liquid assets in return. Since it may use these assets to reduce its debt or make an investment that earns a rate of return, the operation loosens its intertemporal budget constraint, just as a tax increase does.

In Case II, on the contrary, the government receives less for its assets than they are worth. *In the limiting case of exact equality*, the rate of return on the asset in the public sector equals the rate of return in the private sector. Consequently, the government's intertemporal budget constraint is unaffected by the operation. It gets cash, but gives up a stream of earnings generated by the asset that is of equal value.[8]

It is, however, possible that the private sector, being more risk-averse than the government, discounts the assets at a higher rate than the government does, so that the price it is willing to pay for the assets is less than their worth as determined using a standard discount

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[8]The analysis abstracts from differences between the social and financial rates of return of investments. It is certainly possible that a public sector enterprise may enjoy a social rate of return that exceeds its financial rate of return; this might be the case with a transport company, for example, if its fares were set deliberately low in an effort to increase ridership and thereby reduce traffic congestion. In principle, the government could equalize public and private returns before the company was sold to private sector interests by arranging to pay it a subsidy.

rate.[9] Of course, if the government persists with the operation it reveals that its own subjective discount rate is higher than the market's. Such a course of action could reflect official short-sightedness; it could also reflect problems with the mechanisms used to determine share prices.[10] In this case, privatization would actually result in a **tightening** of the government's intertemporal budget constraint, since the stream of income the government gives up is worth more (to it) than the proceeds of privatization.[11]

B. The Short-Run Impact on the Economy

Case I. Under the assumptions noted above, private sector wealth does not fall in this case, and there is no particular reason to believe that private sector consumption should fall; it may even increase. If the fact that the private sector is willing to acquire the privatized assets implies that their use in the private sector entails a positive social rate of return, the economy's existing resources are used more efficiently, and productive capacity increases. Of course, it may take some time for the extra productive capacity to come on stream.

Although consumption should not decline, private sector investment **may** be affected when the privatization displaces private sector investment that would otherwise have been

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[9]This is discussed by Mansoor (1993). The sale of an enterprise is a classic case of asymmetric information, since the knowledge necessary to make an informed bid is almost by definition insider knowledge.

[10]Nontransparent arrangements could create a serious principal-agent problem, under which key officials in the privatization agency are suborned by bidders.

[11]When a country cannot borrow abroad, it is in effect income-constrained. The shadow price of the foreign exchange it gets from a sale of an enterprise to nonresidents may then substantially exceed its face value. The presence of bottlenecks created by shortages of imported goods is an analogous situation. A country in these straits might well be inclined to settle for a low price for its privatized enterprises.

undertaken. As an example, consider the sale of a (poorly run) national airline to a private sector consortium. The acquisition of the airline and its assets could substitute for new private sector investment (for example, the placement of an order with an airline manufacturer). In this case, privatization will depress aggregate demand unless the proceeds are spent by the government. The direction of its impact on aggregate demand is the same as that of a tax increase. Even if investment is not depressed, privatization will lead in this case to an increase in potential output (although the exact size and timing of this increase may be very hard to predict). This increase means that the gap between demand and potential supply is increased, a result that needs to be borne in mind in the setting of the stances of fiscal and monetary policy.

Case II. As in Case I, private sector wealth does not decline in Case II. There is, in consequence, no reason to suppose that private sector consumption would fall. In fact, it is possible that the private sector may benefit from a wealth effect, to the extent that it pays significantly less for the privatized firms than they are considered to be worth. In the limiting case, there should, however, be no wealth effect.

What about private sector investment? To return to the airline example, *but assuming this time that the airline is efficiently run* (and so no longer Case I), the mere transfer of ownership to the private sector does not have to affect the profitability of additional private sector investment. The airline industry after privatization has the same number of passengers and the same effective capital stock as before, so that the expected rate of return to additional investment does not change.

In consequence, privatization in Case II, at least in the limiting case, does not affect either domestic absorption or aggregate supply significantly. In its effect on the composition of the private sector's portfolio, it is identical to bond financing. It has a similar impact on the government's budget, except that bond financing increases interest payments instead of reducing nontax revenue (in the form of dividends and other transfers from public sector enterprises). With either bond financing or privatization, the government receives a lump sum up front.

When the government sells its assets for too low a price, however, it constrains its intertemporal budget constraint, and confers wealth on the private sector. In these circumstances, privatization, unless its effects are offset by a contractionary fiscal policy, can have an expansionary impact on the economy in the short run.[12]

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[12]The impact of sales of fixed assets—that is, capital equipment, instead of ownership rights—can be analyzed with the aid of the two cases just presented, and the conclusions are the same. Specifically, in Case I, selling unutilized or underutilized real assets would increase aggregate supply, and might reduce private sector investment. Similarly, in the limiting case of Case II, selling efficiently utilized assets would not have any significant effect on private sector investment, or on aggregate supply.

Box 2. Treatment of Privatization Costs

In addition to the operating costs of the government agency that may be responsible for the privatization campaign, rehabilitation expenditures and capital infusions may be necessary to put the enterprises to be privatized in a state that makes them attractive to potential shareholders. The question arises as to how to evaluate the short-run macroeconomic consequences of these expenditures.

It is useful to distinguish between financial expenditure—for example, capital infusions and debt assumptions—and expenditures on goods and services necessary for rehabilitation or the successful functioning of the privatization program. Financial expenditures effectively increase the value of the privatized enterprises to the private sector, and it is reasonable simply to net them off the gross proceeds from the privatization operation. Expenditures on goods and services, like other public expenditure on goods and services, presumably increase domestic absorption. At the same time, they are like an investment to the extent that they increase the value of the privatized enterprises. In this respect, these expenditures have both demand-side and supply-side effects, which need to be recognized in setting the fiscal policy stance.

IV. Relaxing the Assumptions

A. Financial Market Imperfections

To this point, the exposition has simplified the analysis by assuming that the transfer of ownership involved in privatization is accomplished by a share issue, and that shares are perfect substitutes for bonds. This assumption allows us to apply the standard IS-LM model, and yields the result that privatization has effects akin to an open-market operation. The IS-LM model effectively abstracts from the banking sector, by assuming that there are only two financial assets, bonds and money. However, with bank financing, and a constraint on the total volume of credit available to domestic borrowers, a privatization operation may conceivably reduce the credit available for new investment. The same effect can result from an aggressive effort at pre-funding or over-funding the budget deficit by the government, if bondholders finance their acquisitions in part by borrowing from the banking system. However, if the government restores the money supply to its pre-share issue level by buying

back its paper, the private sector ends up with the same quantity of stock and bonds taken together, and with the same quantity of money. It will then seek to retire the additional bank debt it contracted initially.

Different assumptions about the substitutability of bonds for stocks could yield different results. However, as long as the government undertakes an operation to offset the initial impact of the share offering on the money supply, the total quantity of stocks and bonds will be unaffected, and it seems reasonable to assume that the demand for bank loans would not be materially affected.

When financial markets are not very developed and, in particular, where there is no substantial outstanding stock of government paper that can be used to offset the impact on liquidity of the privatization operation, privatization may require that shares trade at values that are well below a reasonable estimate of the privatized enterprises' net worth. A share offering in these circumstances may create a substantial wealth effect for investors who are relatively unconcerned about the marketability of their holdings. However, the prices of other securities held by the private sector may be depressed by the privatization offering, especially if the outstanding stock of these securities is not large. The low value obtained for the privatized shares also reduces the impact on the government's budget constraint, conceivably resulting in a tightening of its constraint.

B. Voucher Privatizations

The comparative thinness of financial markets in some countries, and the great size of some privatization programs have led some countries to adopt privatization by voucher. Under a voucher program, participants receive free a voucher or vouchers that makes them

owners of given fraction of an enterprise or group of enterprises. Privatization by voucher is akin to a capital transfer by the government to the private sector financed by a sale of assets. The government's property holdings decline, but its liquid assets do not increase. Unless the privatized concerns had zero or negative net worth, the government's budget constraint is tightened. The private sector, however, enjoys an increase in its wealth. If it can trade or borrow against this wealth, consumption will increase. Hence, voucher privatization has, if anything, a positive impact on domestic absorption. That impact, and the possible impact on investment discussed above, need to be borne in mind in determining whether a voucher privatization has effects that need to be offset by making fiscal policy more restrictive.

Box 3. Implications of the Analysis for Other Budgetary Operations

If privatization should be seen as financing, should the acquisition by the government of the shares of private enterprises also be seen as financing—negative financing—and treated as such, even if it continues to be classified as a deficit-determining item? The answer to this question depends critically on the nature of the operation. Some share acquisitions are akin to a capital transfer, because there is no expectation that the investment has to earn a market-related rate of return. To the extent that the operation may be assimilated to a capital transfer, its short-run macroeconomic effects are akin to those of expenditure. In other cases, however, there is no subsidy element in the operation, and it is not obvious why it should be treated for purposes of analysis as a deficit-determining item.

There is, as a practical matter, probably some justification for the asymmetric treatment of sales and purchases of shares by the government. The strong likelihood of a subsidy element in an operation of share acquisition means that private sector wealth increases; unless the government is simply giving away its assets, the same is not the case with a privatization operation.

V. Conclusions

The thrust of the foregoing analysis is that the short-run macroeconomic consequences of privatization are akin to those of a bond issue. Privatization should not reduce consumption, because, unlike taxation, it does not reduce private sector wealth. Indeed, it may even increase it. As for its impact on investment, the analysis suggests that in certain cases, like the poorly-run airline example, privatization can actually reduce investment. In this particular case, it depresses domestic absorption. Provided the stance of fiscal policy was appropriate to begin with—that is, not too relaxed—it could conceivably be relaxed in these circumstances without fueling domestic and external imbalances.

Apart from this case, which is somewhat extreme, privatization, in and of itself, does not alter the stance of fiscal policy. It follows straightforwardly that if the proceeds of privatization are used to finance additional investments, be they productive investments or prestige projects, the short-run macroeconomic impact will be expansionary.

Determining whether a given situation approximates Case I or Case II, and predicting the timing and amount of the proceeds of privatization are both extremely difficult. In these circumstances, prudence would dictate that the proceeds of privatization be treated as financing, and not as revenue that may be spent without affecting the government's intertemporal budget constraint. **At the very least, it seems reasonable that there should be very convincing reasons to treat privatization proceeds as revenue**.

The paper's analysis implies that it is inconsistent to believe increases in investment financed by bonds are expansionary and problematic, and not to believe the same thing of investment financed by the proceeds of privatization. It is equally inconsistent to ignore the

potential crowding out of private sector investment that the expenditure of privatization proceeds could entail, while being concerned about the crowding out that investment financed by borrowing from the nonbank private sector could entail. Finally, it is inconsistent to be concerned with the debt servicing implications of external borrowing, and not to be concerned about the similar implications entailed by privatization. From the short-run macroeconomic point of view, privatization is not a free lunch.

These arguments apply with even greater force if privatization proceeds are used to finance recurrent expenditure. Even under Case I, where additional public expenditure may be necessary to maintain domestic absorption, the once-off nature of privatization proceeds make them an unsuitable financing source for recurrent expenditure. Similar arguments often apply to grants—which in some Fund member countries are classified as financing (i.e., the budget balance is measured excluding grants)—although a grant does loosen the government's budget constraint. A related operation is the receipt of fees for the right to operate certain services (cellular phones, etc.). It is dangerous to use these to finance recurrent expenditure if they are themselves nonrecurrent.

These considerations do not imply that additional proceeds from privatization should always be used to retire debt, either to the central bank or to the nonbank public. Just as there can be very good reasons for an increase in a government's reliance on nonbank or external borrowing during a period, say, of exceptional needs for infrastructure investment, there can be a good reason for using the proceeds of privatization to the same end. The arguments for tax smoothing can be applied to justify reliance on privatization proceeds, although the desire to avoid tax hikes is not an argument in favor of fire sales of public enterprises.

Privatization also affects potential supply. If the privatized assets are much more productive in the private sector than they were in the public sector, privatization increases potential output, although this increase will probably not materialize at the moment of transfer of ownership. This increase may imply that the public sector deficit consistent with a given current account deficit will increase. Similarly, it may have implications for the future path of prices if inflation is a function of the difference between actual and potential output. Again, prudence would dictate that their beneficial supply-side effects be at least somewhat discounted. When and by how much privatization will increase potential output cannot be known with much accuracy.

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