DECENTRALIZATION, PRIVATIZATION AND
THE SOLVENCY OF LOCAL GOVERNMENTS IN REFORMING
ECONOMIES: THE CASE OF BUDAPEST

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WORKING PAPER

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I. INTRODUCTION

In many reforming socialist economies decentralization of governmental functions to local governments and privatization of government-owned assets are fundamentally linked (Bird and Wallich 1993). Often the ownership of previously state-owned assets has been devolved not to individuals, but to newly-established local governments for them to select the appropriate privatization strategy. As a result, many aspects of privatization are essentially local government decisions, decisions that are now being made by new local governments in most of the cities of reforming economies, including the twenty European cities with populations in excess of one million and the major cities of China and Vietnam.¹

This paper discusses the recent decentralization and privatization programs in Hungary, focusing especially on Budapest. It then examines the sustainability of these policies, by looking at their effects of their continuation on the long run solvency of local governments in Budapest. In particular, we apply the Buiter (1983) and Bean and Buiter (1987) approach to measuring the net worth of local governments that have been given ownership of previously state-owned assets. Our objective is to show the effects of the transfer of ownership, given a continuation of current pricing policies, on the solvency of local governments. We also wish to demonstrate the usefulness of undertaking such analyses of the long run budgetary effects of policies, the relative ease with which basic information can be arrayed to use the framework, and some important implications of this approach. To our knowledge, such information is not at present being used in any of the reforming economies.

Our discussion of the decentralization and privatization reforms indicates that they have increased the expenditure responsibilities of Budapest while cutting its revenues, have given the city little capacity or incentive to raise revenues, and have transferred ownership rights of large amounts of ambiguously priced assets and liabilities to the city. Importantly, our analysis suggests that the current pricing policies for these assets and liabilities -- if continued -- will pose serious solvency problems for the governmental units involved. Even so, despite these potential solvency problems, the privatization is unlikely to lead to a change in current pricing policies, and in fact it may well lead the local governments to undertake actions that exacerbate the solvency problems of local governments, thereby affecting the broader stabilization program.

The plan of the paper is as follows. In the next section we present background on the general economic reform program in Hungary and on the decentralization program as it applies to Budapest. In section III we review how the privatization program affects the city of Budapest. In section IV we consider how a continuation of these policies will affect the solvency of local governments in Budapest. In a final section we discuss the implications of these policies both for the pricing policies of local utilities and for the "soft budget" constraints that have traditionally plagued socialist economies (Kornai 1986).

¹ The public housing stock has been given to local governments in Bulgaria, Hungary, Poland, Russia, the Czech Republic, and Slovakia. Similarly, in China enterprises and housing boards are owners of most of the housing stock, but the linkages of these enterprises to local government decisions are very strong.
II. BACKGROUND ON THE ECONOMIC REFORMS

Hungary has made much progress on its economic restructuring program. These policies have focused on several broad areas (Dervis and Condon 1992). In the stabilization area, the central government has attempted to reduce the overall size of government, primarily by reducing its expenditures. These policies have contributed in part to five consecutive years of declining gross domestic product (GDP). In the pricing area, its price decontrol program has increased consumer prices on most products, and has contributed to a sharp jump in the inflation rate from about 8 to over 30 percent. However, publicly owned housing and transport are still two of the most underpriced services in Europe. The decentralization program has shifted the responsibility for many government duties to local governments, and has given the local governments very wide discretion in dealing with both greater fiscal responsibilities and reduced intergovernmental transfers. However, the tax sources allowed to local governments seem generally unproductive, and transfers give little incentive for revenue mobilization. Finally, the privatization program has transferred ownership of numerous central government assets to local governments, the values of which are largely unknown.

The various policy changes have affected local governments in Hungary and in Budapest in several ways. This section first discusses the general reform policies for local governments in Hungary, and then focuses specifically on the impact of these policies on Budapest.

A. Decentralization Policies in Hungary

A central part of Hungary's restructuring involves the role of local governments. Under the previous regime, local governments (or "councils") had no real identity, or mandate of their own. The councils largely operated under the control of higher levels of government: they did not make their own independent tax or expenditure decisions, budgets were subject to approval by others, revenues from the central government were determined primarily by their skills in negotiation, and the councils could be combined with other local councils without their own consent. In effect, local councils performed primarily a transmission role. This subordinate role was reflected in the revenues of local governments. For much of the last ten years, local own revenues were less than one-quarter of total local revenues, so that the vast bulk of local expenditures was financed by central government transfers. This rigid system was somewhat relaxed in the last five year plan in 1985, before being completely revamped in 1990 and 1991.

Overall, these recent reforms have made local governments independent, and autonomous units of government more responsive to the wishes of their citizens. The reforms have

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2 Much of this discussion is based upon Davey (1991), Gyulavari, Semjen, and Toth (1991), and Bird and Wallich (1992).

3 The major pieces of legislation in these reforms are the Law on Elections of Local Self-Governments (Act No. LXIV of 1990) and the Law on Local Self-Government (Act No. LXV of 1990). The first law specifies the details of the election of local officials, and the second creates a system of independent local governments to replace the old council system.
transferred numerous spending and revenue powers from the central to the local government, and have specified the election process for local officials. In response, the number of local governments has doubled, to nearly 3,100. Local governments are required to provide water, education, health care and social services, public lighting, roads, and minority protection; other duties can be performed at their discretion. They are allowed to impose six new taxes to finance these expenditures; these taxes include two types of property taxes (on buildings and on land), three types of per capita taxes (on individuals living in buildings, on employees, and on tourists), and a tax on business turnover.

These reforms are significant and far-reaching, and clearly lead toward greater local accountability. Nevertheless, there are serious potential difficulties in the process. Although local governments have been given numerous (mandated) expenditure responsibilities and several potential tax sources—these taxes are unlikely to generate significant amounts of revenues in the near future—few local governments are availing themselves of the opportunity to levy new taxes, and local governments in fact have few incentives to levy any new taxes. Although local governments now have substantial discretion over their spending decisions, they remain almost entirely dependent on the central government for their revenues, and much uncertainty surrounds the future levels of this support. Although there is widespread acceptance of the goal of reducing the scope of government in the economy, there are signs that many local governments intend to use their assets to begin various types of enterprises; there are also indications that many localities may attempt to sell their assets to finance current expenditures. Some of these tendencies are not sustainable in the long run, and are not consistent with the goals of decentralization and privatization. We turn now to a more detailed discussion of these issues in Budapest.

B. Decentralization Policies in Budapest

Budapest consists of 22 geographically distinct "districts," each of which has its own district government and mayor. There is also a single city government (the "capital") with its own mayor, which manages various city-wide administrative responsibilities (e.g., public transport, water, and gas supply). Overall, the governance of Budapest is organized largely along

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4 By the end of 1991 only 45 of the 3100 local governments had imposed any of the new taxes. See Davey (1991) for a discussion of the tax instruments given to local governments, and Bird and Wallich (1992) for a discussion of how the new intergovernmental grant system provides little incentive for local governments to mobilize revenues. As discussed in more detail there, these difficulties include: the potential for most of these taxes to become a productive revenue source is quite small; local governments have little expertise in the administration of the taxes; there is at present some uncertainty about which taxes can be imposed by local governments; the use of local taxes is limited by the requirement that local governments avoid "double taxation" and so are not allowed to use any tax currently used by the central government; local government officials fear the political consequences of tax increases and believe that their citizens already face a high tax burden; and transfers to local governments do not depend upon local government tax effort. It is therefore unlikely that local governments will soon if ever generate significant revenues of their own, unless changes are made in the tax instruments that are available to them and in the incentives that they face to use these instruments via the intergovernmental grant system.
the lines of "jurisdictional fragmentation," in which the responsibility for the same functions lies with the independent district governments.5

**Expenditures.** The 22 districts generally provide primary and secondary schools; cultural, youth activity, and sports centers; road and bridge maintenance; and various social service programs for the poor, handicapped, elderly, and unemployed. Districts also are responsible for maintenance of the state housing stock whose ownership has been transferred to them. On average, the largest proportion of the district budgets goes to education, often roughly two-thirds of the budget. The main responsibility of the capital is to provide several public services to all districts, such as public transport, water supply, gas supply, sewage treatment, street cleaning, garbage collection, and heating for housing estates. Police protection is still provided by the central government. Over three-fifths of total Budapest local government expenditures are made by the capital. The total budget of Budapest in 1991 was projected to be 80 billion forints, a figure equal to approximately US$1 billion or almost 3 percent of GDP. More recent data are not yet available.

**Revenues.** The capital and the districts are like other local governments in Hungary in their heavy reliance upon central government transfers. In 1990 and 1991, shared personal income tax revenues, state subsidies, and transfers from the Social Security Fund accounted for over 70 percent of capital and district revenues. The dependence of the capital itself on transfers is even greater than the districts, with nearly 80 percent of the total revenues of the capital in 1991 projected to come from the central government. The capital and the districts make relatively little use of their own tax sources, especially the new ones. In 1991 one-fourth of the own income of the governments came from taxes, and only one of the 22 districts even planned on imposing any of the new taxes. Of course, the taxes are still quite new, and it is possible that local governments will begin to introduce the taxes over time. However, there are few indications that this will soon change.

As a result of the stabilization program in 1991, local governments in Budapest experienced a significant decline in their real revenues, due largely to a fall in central government transfers; the capital bore the brunt of this decline, a policy that seems to have been deliberately chosen to redress perceived advantages given to Budapest in the past and to reflect the greater tax capacity and growth potential of Budapest (and other larger cities). Transfers fell by 2 percent of GDP over the 1989 to 1991 period, a real revenue cut of over 40 percent. The stabilization program also eliminated subsidies for publicly owned housing. In large part, the decline in transfers was due to a reduction in the share of personal income tax revenues returned to the local government and to an increase in the role of equalization in the state transfers.

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5 Remember, however, that some services (e.g., public transportation, water and gas supply) are provided for the entire urban area by a single government enterprise controlled by the capital. Whether the current structure will remain in its current form is a matter of some discussion. In fact, Dr. Peter Szegvari, General Secretary, Municipality of Budapest, has proposed changing the structure of governance in Budapest toward greater centralization. See also Davey (1991) for a discussion of consolidation and the reform of local government in Hungary.
Such a cutback in government transfers is certainly consistent with a stabilization program that seeks to reduce aggregate demand while simultaneously laying the groundwork for a less intrusive role of government in the economy. Still, the ability of the capital and the districts to deal with this reduction in revenues is rather limited. As noted above, the new tax sources are largely unproductive, and, in many respects, an underlying assumption of the new system of decentralized local governments appears to be that areas like Budapest will either finance their revenue shortfall out of asset sales or will reduce expenditures. Either strategy will lead to less government. Any asset sales will also redistribute the capital stock to private entrepreneurs, thereby turning assets over to more motivated and more productive managers.

Clearly, then, the privatization decisions made by local governments are a key element of the stabilization, pricing, and decentralization programs. We now turn to a discussion of the details of the major aspects of Budapest’s new balance sheet and the way the privatization program affects them.
III. PRIVATIZATION IN BUDAPEST

In a process parallel to the decentralization program, the government has distributed a significant portion of previously central-government-owned assets to the capital and the districts of Budapest. Ownership and responsibility for the state-owned housing stock in Budapest -- some 410,000 units, or roughly one-half of Hungary's public housing stock and one-half of the city of Budapest's total housing units -- has been distributed to the 22 separate districts of Budapest in which the housing is located. Ownership and responsibility for the Transportation Department and six other public utilities (Water, Sewer, Garbage, Gas, Central Heating, and Public Baths) have been transferred to the capital. Hence, for the city the two key privatization issues relate to housing and the public utilities. In both cases, we have been able to construct estimates of the value of these assets, under current pricing policies.

A. Housing

In the older districts of the city (e.g., districts V, VI, VII, VIII, IX), virtually all publicly owned housing is in the form of council flats, or large multi-family housing units. Although in several of the newer districts (e.g. districts XV, XVII) much of the housing was built during the 1970s, these flats are generally quite old. Over two-thirds were built before World War II, half were built before World War I, and about one-fifth were constructed before the turn of the century: in the older districts especially, most flats were constructed in the last century. While the heterogeneity of the stock makes it difficult to make generalizations regarding the age or quality of a particular district's housing without a detailed inventory, two things are clear. First, much of this housing stock has considerable potential market value, depending on the manner in which the stock is priced, and the transfer of these sellable, or "standard units," to the districts represents in principle an enormous share of national wealth. Second, roughly 150,000 units of this housing stock represent "substandard units" in need of considerable maintenance, and most of these substandard units are heavily concentrated in a relatively few closer-in and older districts. For example, more than half of the 150,000 substandard units are located in five inner city districts.

The value of the 410,000 units distributed to the districts is difficult to determine after so many years of administrative allocation and the operation of a "gray market" in housing. Nevertheless, it is clear that the value of these housing units is very high. However, it is also clear this value depends both on the pricing of those units that can be sold (the standard units) and on the large maintenance expenditures on the remaining units (the substandard units).

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6 The local governments have also been given ownership of a variety of other assets, such as construction companies, vacant land, and small shops (or enterprises occupying less than 1000 square meters. Cumulatively, these assets are no doubt important balance sheet items. However, in the absence of an inventory, we have for simplicity ignored them.

Estimates of the value for the roughly 260,000 standard units can be derived as follows. Previous studies have noted that the market value of Hungary’s 800,000 state-owned housing units exceeds the total assets of the financial system. The units in Budapest should be worth 30 to 50 percent more than units elsewhere, due to their superior location (The World Bank 1991). If so, then the stock of standard housing units transferred to local governments in Budapest has a potential market value of about 70 to 80 percent of the nation’s monetary assets, or approximately 350 billion forints (Table 1). If these units are sold at market prices, then their value in total is quite large. To put this amount in perspective, it represents roughly 40 percent of Hungary’s GDP in 1991 and over four times the entire city’s annual budget of 80 billion forints. It would therefore appear that there is considerable wealth available to fund budget shortfalls of the types confronting the capital and the districts.

Again, however, while the potential market value of the public housing stock is quite large, the realizable sale value of this stock via privatization is considerably less, given both the actual sale policies of the city and the existence of the 150,000 substandard units of housing. Both factors dramatically reduce the potential value of the housing stock.

Consider first the sale policies for the privatization of the housing stock. Privatization of public housing has been legal in Hungary since 1969, but it is only since 1990 that a sales program has been in full swing. About 37,000 units have now been sold, and applications are currently pending on another 150,000 units.

Under the sales process, the houses are sold at steep discounts, the size of which depends upon how recently the unit has been renovated; on average these discounts lead to a purchase price of only 15 percent of the market value of the unit. In addition, these sales are financed by local governments through installment sales discounted at a nominal interest rate of 3 percent, and the down payment requirement is only 10 percent of the purchase price; the effective down payment is therefore only 1.5 percent (or the 10 percent down payment times a sales price of 15 percent). These financing terms make the effective realizable sale value of most standard housing units equal to a complete give-away of the house. The 1.5 percent effective down payment is slightly greater than the 1.0 percent closing costs, and the 3 percent installment sales terms allow household payments to remain at their current extremely low level, a level that is insufficient to cover maintenance costs and one that yields a 90 percent subsidy relative to the costs of such installment purchase finance offered by the financial system. The realizable sale value of the standard units is therefore close to 0 billion forints (Table 1).

The existence of substandard housing units further lowers the value of housing to the district governments. Even at the heavily subsized prices, roughly 150,000 substandard units will never sell. These units are older, beyond repair, and located in central city districts. For instance, district VIII has 36,000 public units (or twice the average figure for a district); more than 10 percent of the units are beyond rehabilitation, and more than 44 percent are substandard. Districts V, VI, VII, and VIII also contain in total more than 50,000 units in need of renovation, as well as some of the more conveniently located land in the city. For all districts together, these units are on balance an enormous net drain on the district governments, with annual required
maintenance expenditures estimated at 3 billion forints, and some local governments have expressed an unwillingness to accept ownership of these substandard units. As discussed in more detail in section IV, these annual maintenance expenditures imply a value for the substandard housing units of negative 75 billion forints (Table 1).8

B. Transportation and Other Public Utilities

Transportation. The capital has been given the Transportation Department (or BKV). This department is by far the largest utility in the city of Budapest, and probably one of the largest in the world. Our comparison of balance sheet data for BKV with similar information on intercity transportation systems in the United States, for example, indicates that BKV is larger than any such American system. It employs approximately 24,000 people and operates extensive subway, trolley, and bus networks for the city. The subway is the oldest in continental Europe. Overall, the quality of transportation is superb.

Transportation Department income statements suggest a modestly profitable company. In fact, however, its fares are low by international standards, and fare revenues (5.4 billion forints annually) cover only about one-fourth of total costs. Most of the difference is made up by state subsidies, amounting to 10 billion forints per year or about 1/2 percent of gross domestic product.

Importantly, the balance sheet of BKV does not offer a potential financing solution to the huge imbalance in the operating account. The historic book value of the BKV capital stock is 35 billion forints. The bulk of this net worth is in transportation plant and equipment, and the company has only a few profitable subsidiaries that could be liquidated. Although the state currently controls pricing policy, this responsibility is changing to give more discretion to the city to set prices.

Other Public Utilities. The capital has also received ownership of the public works utilities and responsibility for the management and operation of the Water Department, the Sewer Department, the Gas Department, the Central Heating Department, and the Sanitation Department; the mayor of Budapest acts as a corporate "Chairman of the Board" of these corporations. There is little financial information of the type normally provided by the typical investor relations department to stockholders, corporate chief executive officers, or boards of directors, and these utilities are largely run as separate and distinct entities.

Nevertheless, we have constructed income statements and balance sheets at an aggregate level for these utilities. The historic book value of all the assets of the six utilities was roughly

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8 Note that, although some of the substandard units may in fact be able to be sold, it is likely that their value derives only from the land on which they are located and that the housing units themselves have a negative value. However, realization of the underlying value of such units requires a complicated change in land-use that involves coordinating the interests of a large number of often poor tenants who have few other housing options and strong but ambiguous legal protections. Thus, this source of district government income is much more limited than might appear at first glance.
65 billion forints in 1990; including the Transportation Department, the total book value of the assets was approximately 100 billion forints, a figure equal to 125 percent of the city's cash budget and 4 percent of GDP. As with the Transportation Department, however, little of this capital can be used to finance the revenue shortfalls of the companies, much less that of the city.

It is essential to note, however, that in 1990 the six utilities of the capital received 3 billion forints in subsidies from the central government; including the subsidies of 10 billion forints received by the Transportation Department, total subsidies to the capital were 13 billion forints. Although the balance sheets of all companies indicate an aggregate income equal to about 2 billion forints in 1990, this 2 billion figure includes the 13 billion forints in subsidies from the central government. Consequently, an accurate picture of these companies shows that on balance they lost on an annual basis 11 billion forints. This annual loss of 11 billion forints will be used in section IV to help estimate the net worth of all utilities to the city. As discussed in more detail there, the annual loss implies a net worth for all utilities of negative 275 billion forints (Table 1).
IV. THE NET WORTH OF LOCAL GOVERNMENTS IN BUDAPEST

Most conventional measures of fiscal deficits or surpluses summarize government transactions during a single budgetary period, typically one year (Blejer and Cheasty 1991a, 1991b). However, there is a growing recognition that measures that focus on fiscal transactions in only a single year may give a seriously misleading picture of the government’s fiscal stance. As noted by Buiter (1983) and Bean and Buiter (1987), annual measures do not include any capital gains or losses that may occur on governmental assets and liabilities. They also do not consider the effects of current changes in tax and entitlement programs (like social insurance programs or loan guarantees) that affect the future obligations of government. Finally, conventional measures typically include as current revenues any receipts from asset sales, such as those that may occur with privatization. These deficiencies are potentially quite important, and their recognition requires an explicitly intertemporal perspective.

As an alternative to annual measures of fiscal deficits and surpluses, intertemporal measures examine the long run effects of current policies. In particular, Buiter (1983) and Bean and Buiter (1987) suggest the calculation of "public sector net worth," or the present value of the assets and liabilities on the balance sheet of the public sector. The intent of such a measure is to focus on the long run sustainability of current government policies. Put differently, the intent is to examine the impact of a continuation of existing policies on the solvency of government, where solvency is determined by the consistency between a government’s spending and tax policies on the one hand and its assets and liabilities on the other hand.

The calculation of net worth is in principle straightforward. With a net worth perspective, the market rate of return immediately capitalizes losses into changes in net worth but preserves the rate of return at market rates. More precisely, flows are converted into stock values by the simple formula \( P = \frac{(R - O)}{(i + d)} \), where \( P \) is the present value of some property or of some tax policy, \( R \) is the revenue of the property or the policy, \( O \) is the annual expenses of managing and maintaining the revenue flow, \( i \) is the rate of interest, and \( d \) is the depreciation rate. Note that \( P \) might be termed the "real perpetuity equivalent" measure of current policies, while \((R - O)\) is the "permanent deficit" (Bean and Buiter 1987, p. 31). This "mark-to-the-market" measure is also commonly used in the evaluation of the financial integrity (or lack thereof) of financial institutions (Merton 1977).\(^9\)

There are clearly problems with the calculation of public sector net worth. Perhaps most importantly, the calculation assumes that current policies will remain unchanged. Nevertheless, there is growing recognition that the intertemporal, or long run, effects of current government policies need to be considered, and these long run effects are ignored by annual measures of the fiscal stance of government. As stated by Bean and Buiter (1987, pp. 31-32), "Although ex-ante permanent deficits will not actually materialize, let alone be permanent, they represent the permanent adjustment that must be made, relative to the ex-ante inconsistent plans, to the flows

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\(^9\) See Buiter (1987) and Bean and Buiter (1983) for a detailed discussion of these concepts. Also, see Blejer and Cheasty (1991a, 1991b) for a discussion and analysis of alternative budget concepts.
of spending, tax receipts or seigniorage revenue in order to achieve solvency." Net worth therefore indicates whether or not current policies are sustainable in the long run.

The measures of net worth with which we are mainly concerned are the transferal of housing (standard and substandard units) and of public utilities to the capital and district governments of Budapest, and for simplicity we ignore other changes. We take the present value of current spending and pricing policies of these assets as if they were permanent policies (i.e., perpetuities) or slowly changing policies in order to provide a measure of initial government net worth.

A. Housing

Consider first the housing situation in 1990 before the recent housing privatization occurred. As noted above, the standard units of housing have a considerable potential market value, estimated at roughly 350 billion forints, if these units are priced and sold at their true value. The substandard units are on balance a net liability. Net rents of the substandard housing stock in 1990 (or R-O in the present value formula) yield an annual deficit equal to a negative 3 billion forints. If this negative income flow is considered a perpetuity and is discounted at a 3 percent real interest rate i plus a 1 percent depreciation rate d, then the present value P to the districts of the substandard housing stock is negative 75 billion forints, a figure that may even understate the loss because it ignores the accelerated loss of value due to accumulated lack of maintenance expenditures.10 The net potential market value of the combined standard and substandard housing stock is 275 billion forints (or 350 less 75 billion forints). See Table 1.

Remember, however, that the actual government pricing and sales policies for the housing stock effectively translate the realizable sale value of the standard housing units to 0 billion forints for the districts. Consequently, given the policies now in place for the privatization of the sellable or standard housing units, the city’s aggregate net worth position is negative 75 billion forints (or 0 billion forints for the standard units less 75 billion forints for the substandard units); see Table 1. Under current policies, the city is actually better off by giving away the entire housing stock.

It should also be remembered that such an aggregate privatization program has not in fact taken place. Instead, the distribution of housing assets that has occurred has given ownership to district governments who can then privatize or not as they see fit. Given the ways in which standard and substandard units are located across the 22 districts, this distribution has had a capricious effect on the districts’ net worth positions.

10 Assuming that the income stream can be viewed as perpetuity is a simplification that amounts to assuming that we want to estimate the present value of current policy. The income stream can then simply be divided by the discount rate. Instead of viewing policy as continuing forever, we could alternatively view it as changing slowly over, say, 15 years. Then with a 4 percent discount rate (or i+d), the value of the income flow would be about half the value implied by the perpetuity perspective.
To illustrate, it is helpful to trace the impact of the current approach on two extremely different districts, districts VIII and XVII. Both have similar taxpayer income levels that are slightly below the average of the entire city. However, district VIII has over 36,000 public housing units and is located in the central city, while district XVII received only 4,100 units and is on the outskirts of the city.

At least 16,000 of district VIII’s housing units are substandard, whereas only 100 of district XVII’s are in similar disrepair. If these substandard units cannot be given away and if they are not allowed to depreciate any further from their already run-down condition, then the subsidy per unit needed to cover the costs of maintenance will be on the order of 5 percent of household income, or about 10,000 forints per unit annually. The present value of these subsidies for all substandard housing in VIII is negative 4 billion forints, while for XVII it is only negative 25 million forints.

If district VIII could sell its 20,000 standard housing units for 25 percent of an average estimated market value of 800,000 forints per unit, then the net worth of its housing stock would be zero. Of course, at any price less than 25 percent of value, district VIII’s net worth from the transfer of housing stock would be negative, and the transfer of the housing stock to district VIII would then create more financial demands on the district than value. For district XVII, on the other hand, if the housing stock is sold at any price in excess of 2 percent of value, no net resource demands on local government would be created.

However, if the districts follow the "almost" give away privatization program of the last two years, in which they sell the entire standard stock at a discounted price equal to 5 percent of the estimated values and keep the substandard stock, district VIII’s housing would have a value of negative 3.7 billion forints, and district XVII would have a housing net worth that is just barely positive (or 30 million forints). To offset the 3.7 billion forints loss in net worth, the 37,000 taxpaying residents of district VIII would each have to confront a 1 million forint obligation. Such a large obligation is obviously not sustainable. To give some sense of its magnitude, assume that district taxes must be increased to amortize this obligation. The amount of the per taxpayer tax increase, over and above the taxes required for ongoing expenditures, is nearly 40,000 forints per year, and equals an additional tax rate of about 28 percent of income.

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11 The estimate of 5 percent of income needed to cover maintenance expenses is derived in the following way. Public housing tenants in Budapest spend on the order of 5 percent of their income on rent, and this figure covers less than half the expenses of maintenance and upkeep. Hence, doubling this figure yields an increase equal to 5 percent of income.

12 This calculation assumes district VIII owns 20,000 units worth 800,000 forints each, and 16,000 substandard units worth negative 250,000 forints each; the latter assumption uses the unchanged policy assumption noted above. If the former units are sold for 25 percent of their value, the sale will generate 200,000 forints each, enough to pay for the loss on the smaller number of substandard units.

13 Gyulvari, Semjen, and Toth (1991) report that 40.6 percent of 92,000 residents were taxpayers in district VIII, implying 37,000 taxpaying units.
Clearly, this rate of increased taxation would be sufficient to induce residents to "vote with their feet" to avoid the tax, thereby continually decreasing the tax base.

B. Transportation and Other Public Utilities

If the present value of the current utility pricing policies is estimated by applying the net worth approach to the income statements of the utilities, then the 11 billion forints in annual net subsidies represents the annual negative flow of income earned by the utilities. At a discount rate of 4 percent, the net value of the utilities is negative 275 billion forints (Table 1). This figure is roughly equal to the potential market value of both the sellable standard housing stock of 260,000 units worth 350 billion forints plus our estimates of the value of the unsellable substandard housing units, worth negative 75 billion forints.

It is important to note that this calculation is based on a continuation of current pricing policies for the utilities. The assets of the utilities are in principle quite valuable, and a change in their pricing policies could lead to a realization of this value. It is also important to note that the effect of the transfer of utilities ownership on net worth is completely dependent on future pricing policy as determined by the capital, while the obligation for the pricing policy is borne by taxpayers throughout the country through central government transfers. Under current pricing policy, the country as a whole has a liability, with the deficits in funding the utilities’ operations equivalent to about one-fourth of the personal income taxes paid by residents of Budapest. Moreover, because the capital’s pricing policies have shifted the costs to the rest of the country, the capital has little incentive to change the pricing structure.

The problem with this approach to the distribution of costs is that with restructuring there is no reason for the continuing insolvency for these firms. Over time, they should be able to provide the services demanded by their users on a self-sustaining basis. However, because their deficits can be shifted to non-beneficiaries rather than imposed as a cost solely on the residents of Budapest, there is little incentive to restructure these firms in ways that are responsive to the effectively constrained demands of the city’s residents.

The immediate results of the present way of financing utilities are twofold: little action is taken on restructuring the firms to operate as more effective service providers, and the capital uses all of its intergovernmental grants to fund utility companies. As a result, the capital has no discretionary resources with which to deal with district governments. The ultimate results are also twofold: little is obtained in the way of potential efficiency gains from the devolution of authority for the utilities to the capital, and no pressure is created to reduce the role of

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14 This estimate is based on the following assumptions: (1) the transfer of 13 billion forints to Budapest comes from the income tax, which yielded 122 billion forints in 1991; (2) Budapest accounts for 20 percent of taxpayers, and they pay 100 percent more than nonresidents (as they did in 1988; see Annex 2, The World Bank (1992)); (3) the contribution of Budapest residents to personal income tax payments is therefore 40 percent of 122 billion forints, or 48 billion forints; and (4) if Budapest residents paid for the city’s total utility companies’ subsidies, they would have to pay 13/48, or about 25 percent, of their tax payments for utility underpricing costs.
government in funding activities that could eventually be funded by the private sector. The implications of these policies are discussed in section V.
V. SUMMARY AND CONCLUSIONS

Our analysis of privatization via the newly created local governments in Budapest makes it clear that the transfer of ownership rights over housing and utilities has in the aggregate left the entire city with at best a zero net worth and at worst a hugely negative net worth. At best, the potential gains in wealth due to housing (350 billion forints on the standard units of housing less 75 billion forints on the substandard units) are completely offset by the losses realized on the utilities (negative 275 billion forints). At worst, given the current pricing policies for the disposal of the standard housing units that generates a zero realizable sale value, the transfer of housing has imposed a net liability of 75 billion forints from the substandard units, in addition to the 275 billion forints losses on the utilities, leaving the entire city with a net worth of negative 350 billion forints.

Moreover, the disaggregated story is a quite different. The capital has been given only the utilities (a liability). Further, the districts have been given only the housing, an asset with a potential positive value but with a negative value in practice. Finally, the districts have been given widely different housing stocks, with inner city districts treated far more adversely than outer districts because of their large number of substandard units.

A continuation of some of the pricing policies now being pursued will therefore effectively decapitalize some of the nascent local governments. When local governments privatize housing by selectively giving it away but simultaneously take financial responsibility for large numbers of run-down housing units of which they cannot dispose, governments may well be incurring a liability that in practice exceeds their net worth. In this case, fulfillment of the privatization objective undermines the decentralization objective by bankrupting local governments that are unable to carry out their responsibilities. As Dhanji and Milanovic (1991) argue, when the objective of privatization is rapid market development, it may be appropriate to give away assets to those who in some sense already own them.
residents receive the full subsidy and bear only a portion of the costs, so their incentives for seeking improvements in operational efficiency are also minimal. This problem is typical of those analyzed under the name "principal-agent" problems.

There is, however, an alternative means of financing utilities that would create a constituency for higher user fees for Budapest’s public utilities. Because the utilities’ capital stocks are the net worth of the residents of Budapest, it follows that ownership shares in these companies should be distributed to taxpaying residents of the city. In principle, a share distribution program could be developed in which the average shareholder of a newly formed "public utility company" would receive the same amount of dividend from the companies as he or she must pay in higher user fees from market-based provision of services. Poorer shareholders, such as low income pensioners who are heavily concentrated in the central city areas and who use utilities relatively less, would receive a higher dividend from their ownership rights than they would pay in increases in user fees. In fact, the more that utility fares were increased (and so the higher the profits of the utilities), the better off would the shareholders be and the greater would be their incentive for achieving efficient pricing.

Of course, these owners should also be responsible for the taxes now paid to subsidize the utilities. Residents of the city should therefore be able to reduce their personal income tax payments as the profitability of the new "public utility company" increases. If the company was able to eliminate the need for transfers to fund the deficit, the tax on city residents would also be eliminated. This type of policy would place significant inducements on the utilities to improve performance and to implement real user fees on a permanent basis. In short, effective use of these assets requires the development of "ownership rights" to any net worth potentially embodied in these companies, as well as to the current losses on implied by the pricing of the services.

Recognition of these solvency problems may also lead local governments to take actions that will make the problems even more severe. Our estimates suggest that a number of the new local governments are essentially bankrupt. However, they still have access to significant amounts of intergovernment grants. They also have powers of regulation and taxation with which to address their budget shortfalls. Finally, as noted earlier, many governments seem intent on engaging in various entrepreneurial activities. If these newly entrepreneurial governments cannot exit from operation, they become examples of entities operating under what Kornai (1986) describes as the "soft budget constraint": they are immune from bankruptcy, and they are therefore unconcerned with covering costs. The economic distortions created by the actions of such governmental units are unlikely to be supportive of the adjustment program.

In conclusion, the current decentralization and privatization policies in Budapest pose serious long run problems for the local governments and, more broadly, for the reforms themselves. These problems are specific to the institutions and policies now in place in Hungary. However, given the broad tendencies in other reforming economies to pursue similar kinds of decentralization and privatization policies (Bird and Wallich 1993), the issues in Budapest seem likely to arise elsewhere.
REFERENCES


Table 1. Net Worth of Local Governments in Budapest  
(in billions of forints)

<table>
<thead>
<tr>
<th>Utilities (Capital)</th>
<th>-275</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing (Districts)</td>
<td></td>
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<tr>
<td></td>
<td>Realizable Sale Value</td>
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<tr>
<td>Standard Units</td>
<td>0</td>
</tr>
<tr>
<td>Substandard Units</td>
<td>-75</td>
</tr>
<tr>
<td>Total: Housing</td>
<td>-75</td>
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</tbody>
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SOURCE: Calculations by authors.