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The Safety Net During Transformation: Hungary

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Most Eastern European countries face the double difficulty of attempting systematic transformations while facing severe external constraints and the need to reduce domestic absorption. Safety nets to protect vulnerable groups are important to sustain political concensus and to offset adverse distributional impacts created as social income determination is replaced by the market and public finances are put under strain. This research examines the political transformation and safety net programs, in Hungary and how they have effected income distribution. A comparison of income distributions of Hungary and the United Kingdom reveals that benefits in-kind along with taxes are more progressive in the UK than in Hungary, while the before tax distribution of incomes is more equal in Hungary. These comparisons suggest that Hungary relies too heavily on subsidized wages, rather than on taxes, to achieve egalitarian goals. The further privatization of firms with its removal of wage subsidization will, without additional safety net programs, further skew Hungary's income distribution, perhaps contributing to political instability.

The Safety Net

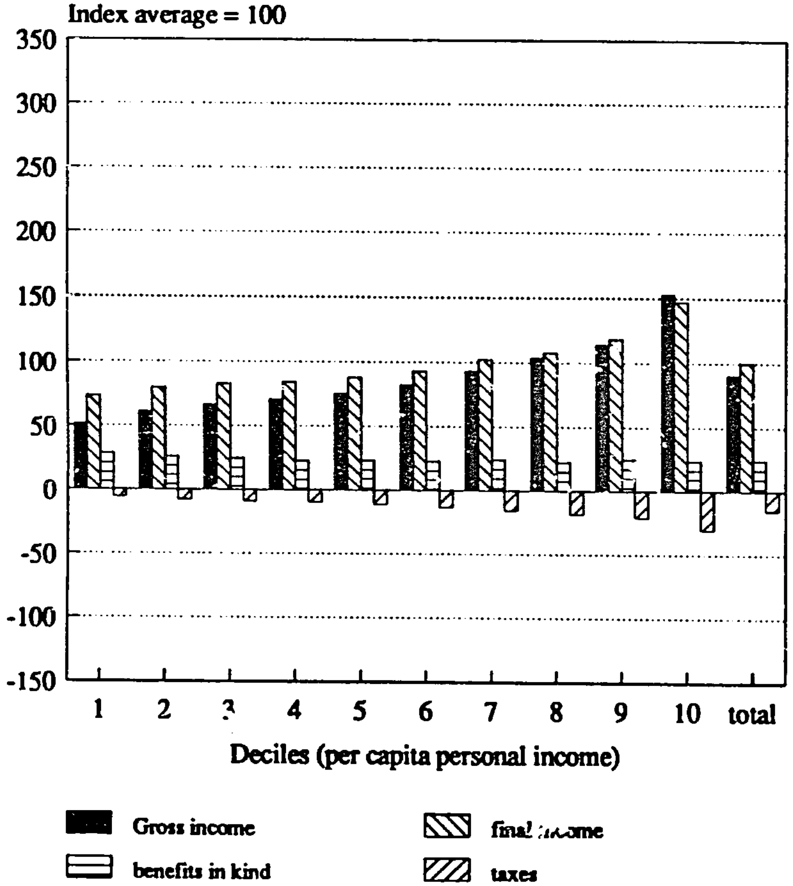
During Transformation: Hungary

Background

The countries of Eastern Europe face multiple discontinuities in their economic management. Not only are they attempting systemic transformation, but they face a severe terms of trade shock caused by collapse of CMEA trade and a shift to hard currency payments for oil, while the world oil market itself is in turmoil. Some, notably Hungary and Poland, have the additional problem of servicing their high external debt with high real interest rates and pessimistic prospects for international trade. Any one of these might give cause for disquiet over the prospects for economically disadvantaged members of society, and in a period in which consensus-building is critical for the success of political transformation, adverse impacts on vulnerable sectors of society could undermine support for the process of transformation.

We can address these problems by first asking how systemic transformation might affect income distribution. In some fortunate countries (Czechoslovakia?) this might be the only major source of dislocation, but in

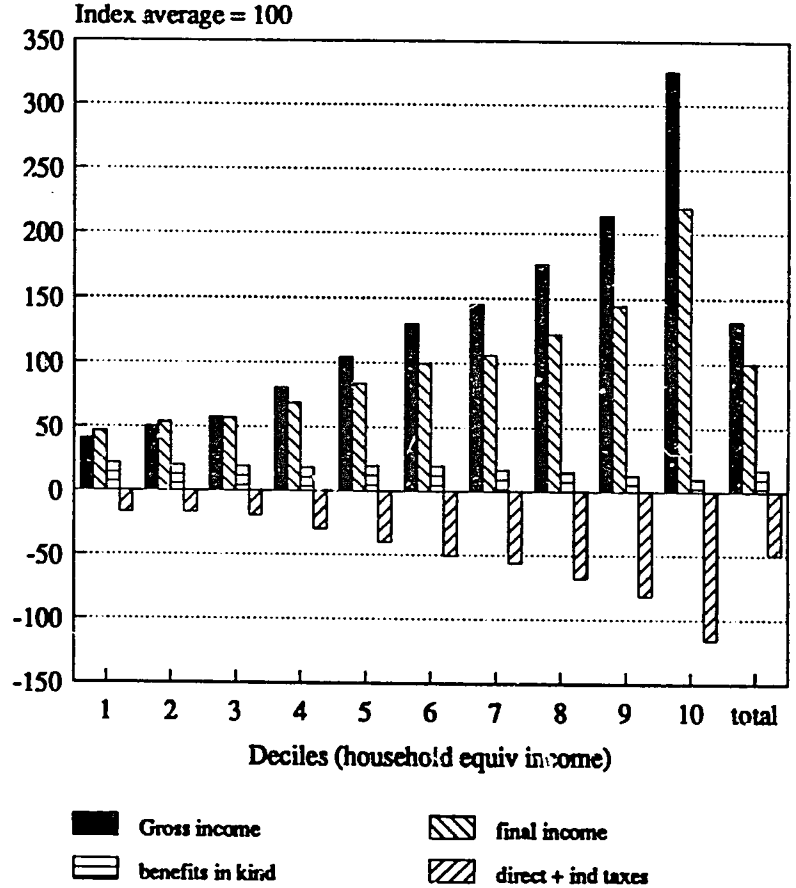
Per household income, taxes and benefits
Hungary 1989



Kupa and Fajth (1990)

Fig. 1

Per household income, taxes and benefits
UK, 1987



Economic Trends 1990

Fig. 2

2.

most Eastern European countries one must also ask what additional impacts the structural adjustment required to meet the terms of trade shock and/or the debt burden might have on income distribution and the ability of the government to protect vulnerable groups. We can then ask what methods are available to provide safety nets and protect vulnerable groups, whether existing policies are likely to be adequate, or whether they will need to be supplemented or reformed, and if so, in what directions. In the interests of concreteness, the discussion will concentrate on Hungary, though it is hoped that the analysis has wider application.

Systemic transformation and income distribution

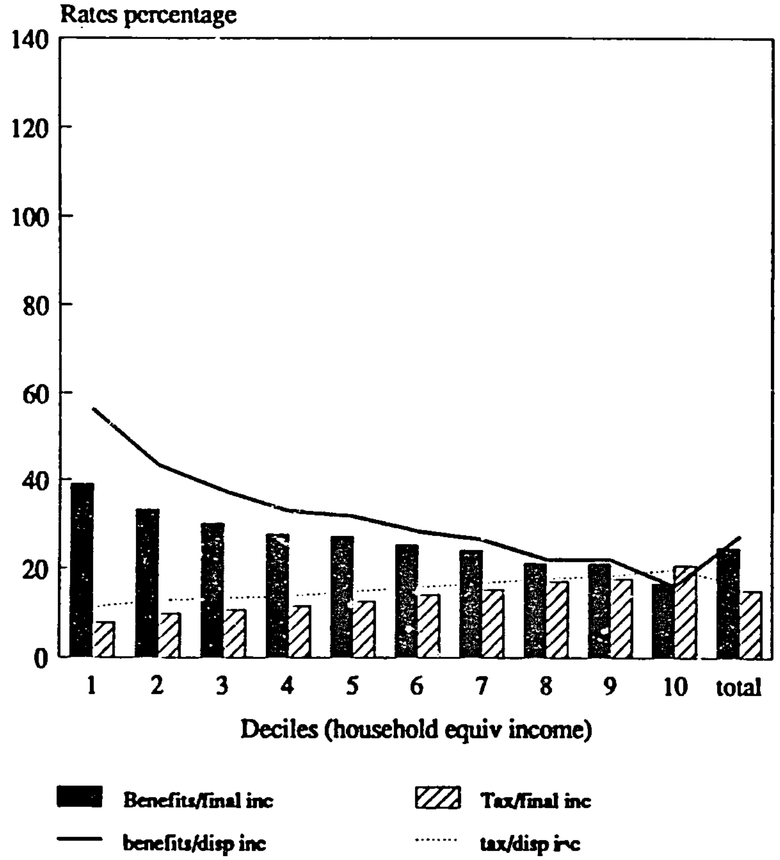
Figs 1 and 2 compare the income distribution by deciles in Hungary and the UK before and after taxes and transfers. The heavy bars represent gross income before taxes but including pensions, unemployment benefits, and other cash transfers. To this are added benefits in kind (free medical services, education, etc) and from which are subtracted direct and indirect taxes and national insurance payments (for state pensions), to give final income. Note that in each case the population average is taken as 100, and that the scales are identical to facilitate direct comparisons about the income *distribution* while abstracting from differences in income *levels*.

Figs 3 and 4 give the same information in a different form, showing the taxes and benefits as percentages of the final income (ie the income after all taxes and transfers including income inkind) and as percentages of gross income including cash transfers but before taxes and other incomes in kind and subsidies. Again, the scales are the same.

Several differences stand out from the comparison between Hungary - an economy which has passed through the first stage of transformation by introducing a system of direct and indirect taxes similar to those used in market economies - and the UK, which has had such a system in force (with frequent though structurally more minor reforms) for many years. The first difference is that the UK system of benefits in kind is considerably more progressive than in Hungary. UK benefits decrease in absolute terms as one moves up the income distribution, while in Hungary they are far more uniform (and also proportionately larger). UK taxes are somewhat more progressive than Hungarian taxes, and also absolutely a larger fraction of income.

The second difference is that while the before-tax income distribution in the UK is substantially less equal than in Hungary, so also is the post-tax and

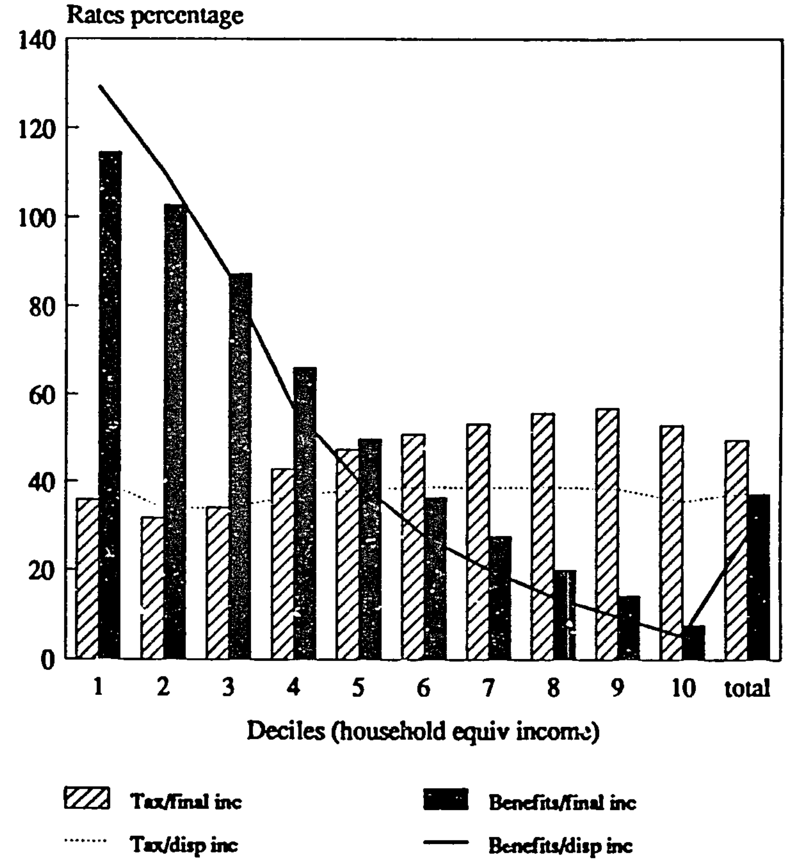
Tax and benefit rates per household
Hungary 1989



Kupa and Fajth (1990)

Fig. 3

Tax and benefit rates per household
UK, 1987



Economic Trends 1990

Fig. 4

transfer income, despite the more progressive system of transfers. The bottom decile in Hungary receives a final income which is nearly 75% the average, while in the UK it is below 50%. The top decile in Hungary has less than 150% the average, while in the UK the top decile has more than 200%.

The obvious explanation is that the UK reflects the attempt to mitigate the naturally inegalitarian outcomes generated by a market economy by means of a quite progressive system of taxes and transfers. These are intended to take account of distributional considerations while not prejudicing efficiency, or income levels, too severely. Hungary has not fully adjusted prices and wages to market equilibrium levels, and thus has not yet had to face up to the full problem of correcting the potentially large inequities which might ensue. Under the former system of bureaucratic socialism, employees of state enterprises were paid incomes which were not subject to income tax, while the enterprise was subject to a range of essentially confiscatory levies design to appropriate the surplus, which was then redistributed to firms in proportion to their investment requirements. Indirect taxes and subsidies were intended to further adjust the revenues of enterprises while maintaining consumer prices at levels deemed appropriate.

In a centrally planned soviet-type economy, taxes are not used to redistribute income. Individuals receive wages at rates deemed appropriate for their needs, and a large fraction of their needs are met by direct provision (free education, health, etc) or at subsidised, below market-clearing rates (housing) by direct allocation. In such a system income taxes on individuals are not needed, since their take-home pay is controlled. In a bureaucratic socialist economy such as Hungary the plan as such no longer plays such a clear-cut role, but the Plan Office certainly exercises considerable influence over the allocation of resources and distribution of income by direct enterprise-level intervention, often retrospectively adjusted. Contrast this with Western thinking which argues that the competitive market will achieve an efficient allocation of resources, but is unlikely to achieve a just distribution of income, nor is it likely to provide an adequate supply of public (or collective) goods such as defence, environmental services, and the like. The benchmark is thus taken as the competitive market allocation (more accurately, as the efficient allocation which such an ideal market would achieve), and taxes are judged by the efficiency with which they achieve their objectives. Taxes create distortions, and the fall in the value of the output compared with the undistorted equilibrium is a measure of the cost of raising revenue - and is usually termed the deadweight cost of the tax, or the excess burden. Taxes are justified if the value of the revenue raised is greater than the cost of raising the revenue, including this extra deadweight cost. The revenue may be required to pay for infrastructure or other public or non-marketed goods, or to transfer income to poorer or more deserving recipients. In a planned economy a tax is judged by the success with which it steers decisions towards those planned. In a market economy a tax is usually judged by the extent to which it is the least costly way of raising revenue (to be used for a whole variety of purposes), though some taxes are specifically designed to correct a market failure - such as the damage caused by lead in petrol, for example.

Current economic analysis emphasises the desirability of aiming at efficiency in production, confining the inevitable distortions to the consumption side of the economy as far as possible. Provided that firms in the economy are competitive and are exposed to foreign competition, this will be achieved by taxes which are neutral to firms, such as value added taxes and (properly designed) profits taxes. The main emphasis is then placed on income taxes and commodity taxes designed to raise the required amount of revenue for public expenditure and redistributive transfers, whilst best meeting distributional objectives. Taxes and expenditures are then adjusted in the budget primarily to achieve macro-economic stability and to adjust the tax structure where improvements are identified.

The Hungarian tax reforms of 1988-89 were intended as a crucial first step in the transition to a market economy. Enterprises were required to gross up wages and to with-hold income taxes so that the after-tax income of employees was essentially unchanged (though inflation reduced real wages during this period). In the fullness of time, if enterprises are successfully persuaded to compete in product, labour and capital markets, they will presumably adjust wage payments to reflect differences in marginal productivities, and wage dispersion will increase. Successful entrepreneurs will similarly increase their incomes, as will those with scarce skills such as accountants, bankers, financial analysts, and others in the productive services sector, while those who are unskilled, or in relatively unprofitable sectors (mining? heavy industry, and those sectors heavily dependent on CMEA trade) will suffer a decline in relative and perhaps also absolute income. On this score, then, there are grounds for concern about income distribution, especially in the lower deciles (at least to the extent that low household income arises from low pay for their economically active members).

Another aspect of Hungarian income distribution which is distinctive but not revealed in the aggregate figures is the high relative standard of living of rural to urban workers. In 1985, households of manual workers spent 49,768 HUF per head while those of the cooperative peasantry spent 50,414 HUF per head.[1] Inactive urban households spent 46,476 HUF while those in villages spent 40,374 HUF, virtually identical. In most other countries of Western Europe, rural and agricultural incomes are considerably below urban levels. It is interesting to speculate how the removal of food subsidies might impact on the urban-rural income differentials. Higher food prices will lead to a decline in demand, which might have a depressing effect on farm-gate prices, lowering rural incomes, and somewhat offsetting the increase in urban food prices. The figures for January-August, 1990, bear this out, and show that compared to the same period one year before, agricultural sales are down by 11%, and agricultural prices are up by 28%, (compared to those of industry which are up only 19%), while the CPI is up 27%.[2] Devaluation and the attempt to stimulate agricultural exports to replace some of the industrial exports no longer demanded by CMEA partners might eventually offset this to some extent. But it is hard to see how the rather high relative standard or rural living will survive the tendency to increased commercialisation of agriculture and the decline of rural labour demand.

Other changes that might be anticipated in the move to a freer labour market have to do with participation rates and unemployment. Fig. 5 compares participation rates for the same age groups in the two countries for men and women since 1971. Fig. 6 corrects for possible differences in educational participation by including students of working age as participating in the labour force. That reduces the difference between male participation rates in the two countries but widens the difference for women, reflecting the greater participation of Hungarian women than UK women in education. Fig. 6 shows that male participation rates have fallen somewhat over time, though more rapidly in Hungary (perhaps because of the poorer health of older men). Participation rates for women have risen in both countries, but are systematically higher in Hungary than in the UK, which itself is high by

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[1] *Statistical Yearbook 1985*, p306. Note that there are subsidies to electricity, transport, etc, which are only available to urban dwellers, so that the differences in real incomes may have been masked by the reported money incomes. Note also that rural incomes often include the income of workers who also work in the industrial sector.

[2] National Bank of Hungary, *Market Letter*, 8-9/1990.

Participation rates
Hungary and UK

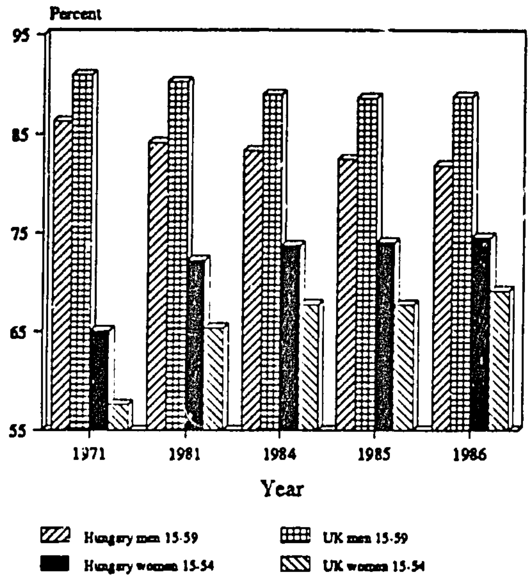


Fig. 5

Participation rates
Hungary and UK

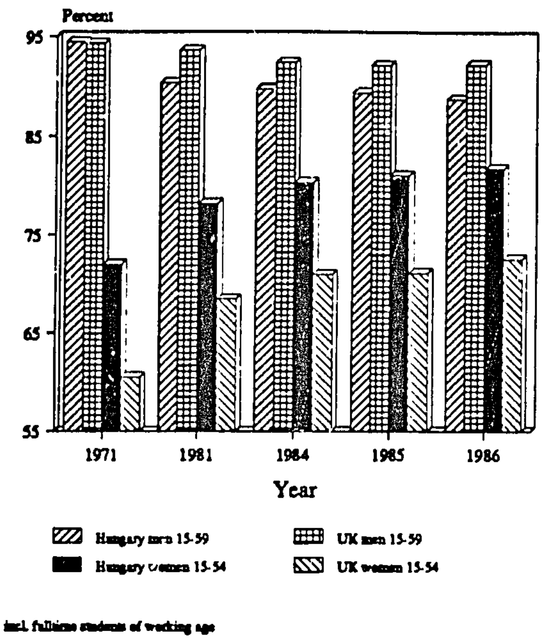


Fig. 6

Social income in kind
Hungary 1989

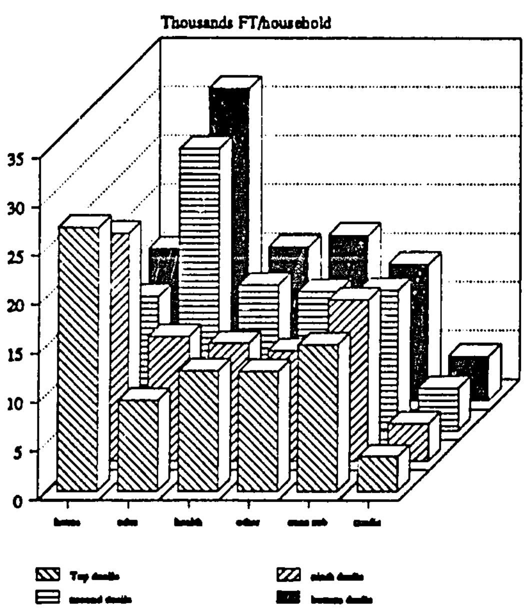


Fig. 7

Income in kind - Education
Hungary - per household

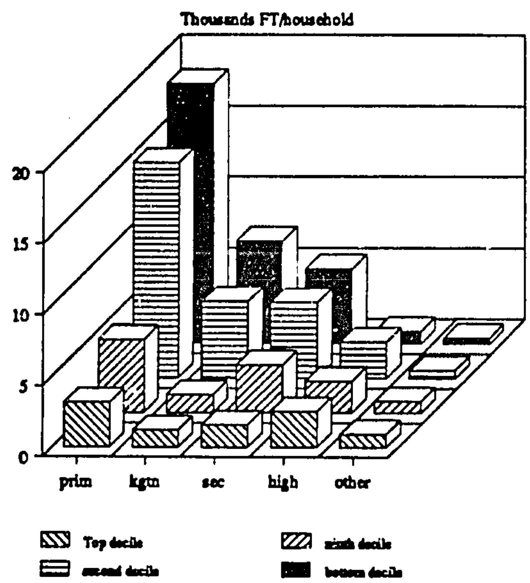


Fig. 8

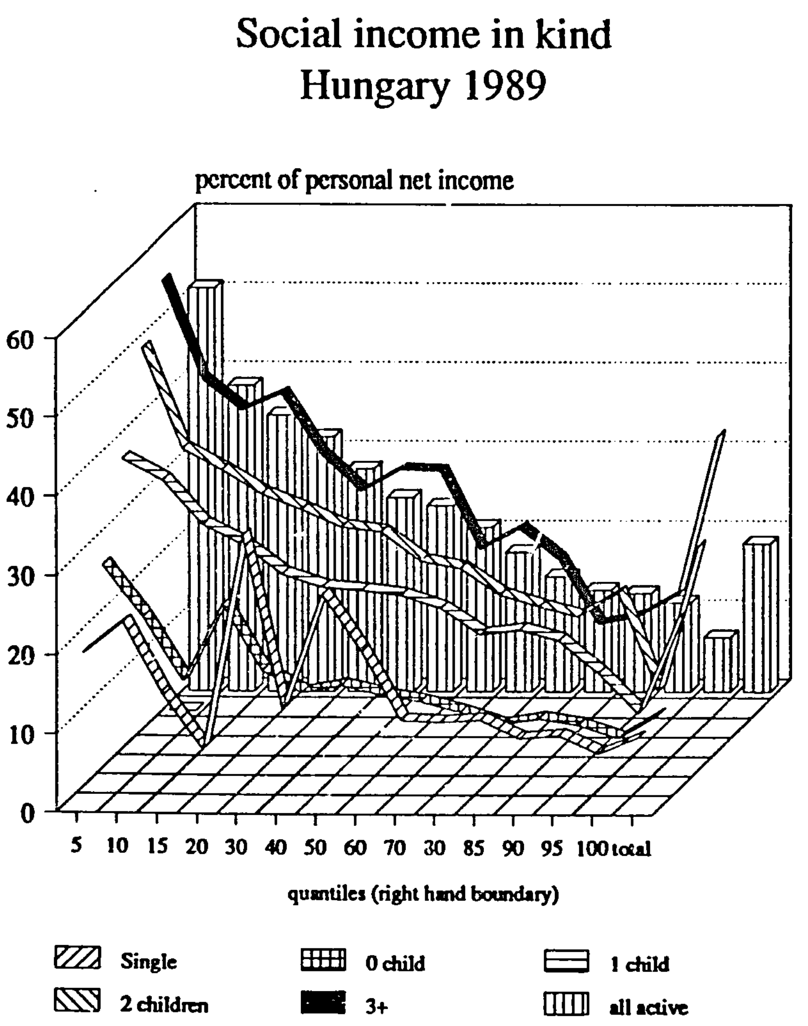
Western European standards, and certainly by comparison with countries of a comparable living standard to Hungary. To a considerable extent this difference reflects the very different social attitudes to women working in socialist countries, and the extent to which the state is willing to support these participation rates by providing nursery and other child care facilities.

It is an interesting and important question whether these attitudes will change and support facilities deteriorate with the shift to a market economy, or whether Hungary represents the equilibrium towards which Western market economies are evolving, and which will continue to be supported largely by social attitudes and expectations. If there is a decline in female participation, then this is likely to adversely affect families with young children, and much will then depend on the effectiveness of system of child support. The next section examines the effectiveness of the system of transfers and benefits in addressing distributional objectives.

Transfers and benfits

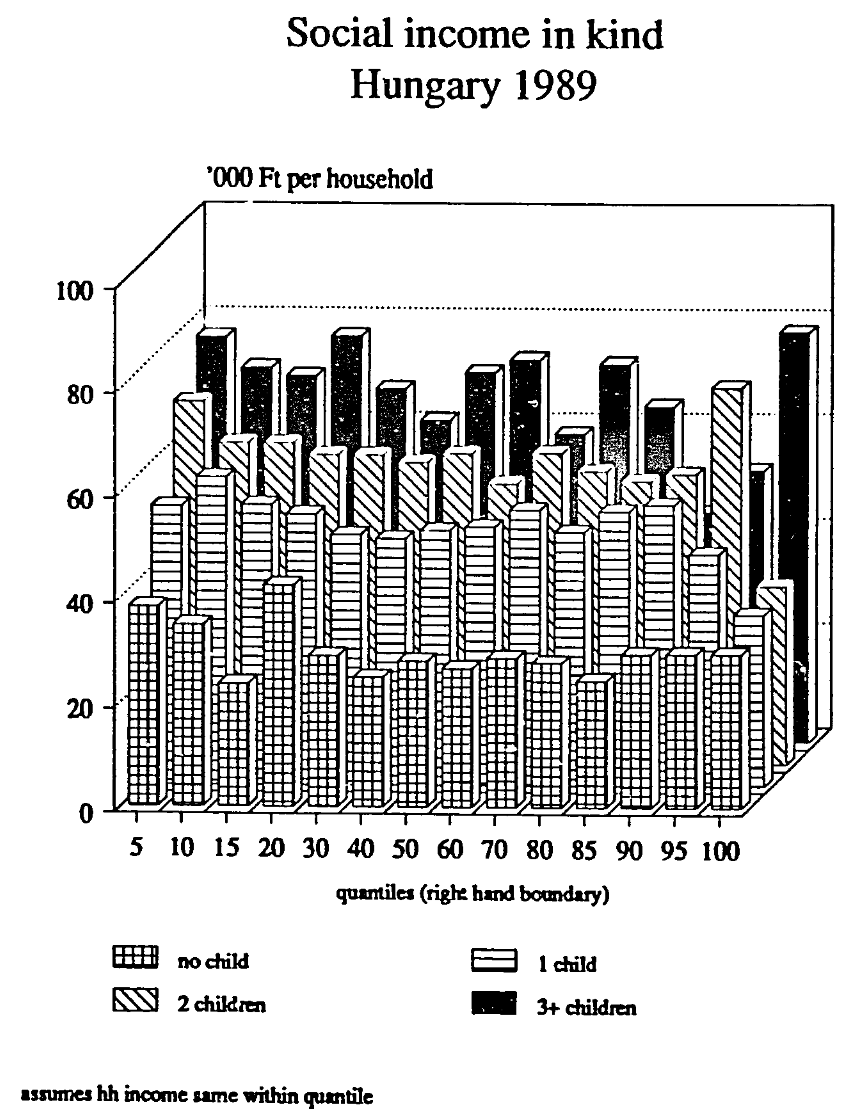
Fig. 7 shows the levels of various categories of social income in kind in Hungary after the recent tax reform, for the bottom two and top two deciles. For poorer families it will be seen that education subsidies dominate, whilst for the richer families housing subsidies dominate. To a considerable extent this reflects the reality that when households are ranked by per capita income, larger families with more and/or younger children and fewer working adults are poorer and they naturally benefit more from education. Fig. 8 breaks down the education subsidies by type of education and decile, and shows that primary education is most important to poor families.

Fig. 9 tries to correct for differences in demographic structure and looks at total social income as a percentage of personal net income by quantiles (whose left and right ends are indicated on the *x*-axis, so that the first cell is from 0-5%, while middle ones span a whole decile). It shows that social income in kind is increasingly important for larger families, especially at the lower end of the income distribution. Of course, incomes at the lower end are also smaller, so one would expect social income to be a larger fraction of total income. Fig. 10 attempts to study the absolute levels of social income by demographic type of household, and the figures suggest that the sizes of total transfers are fairly



Social income in kind
Hungary 1989
percent of personal net income
0
10
20
30
40
50
60
5 10 15 20 30 40 50 60 70 80 85 90 95 100 total
quantiles (right hand boundary)
Single
0 child
1 child
2 children
3+
all active

Fig. 9



Social income in kind
Hungary 1989
'000 Ft per household
0
20
40
60
80
100
5 10 15 20 30 40 50 60 70 80 85 90 95 100
quantiles (right hand boundary)
no child
1 child
2 children
3+ children
assumes hh income same within quantile

Fig. 10

independent of income, as one would expect of transfers based on characteristic rather than income.[3]

Table 1. Decile shares in total* subsidy; Hungary 1989

percent

	shares in tot	bottom decile	second decile	ninth decile	top decile
social items	1.4	40.8	37.0	0.0	0.0
nurseries	1.2	25.6	9.1	1.5	2.9
kindergartens	3.4	19.5	16.3	5.2	5.4
other housing invest subs	3.9	16.3	10.7	10.4	15.6
primary schools	10.8	15.9	14.7	6.8	4.6
school books	0.1	12.7	12.5	7.5	5.2
water/sewge private dwels**	1.9	10.0	10.6	9.3	9.8
outpatient (other health)	6.2	8.8	9.4	10.4	11.7
hospitals	10.6	8.7	9.2	10.2	11.4
milk	0.5	8.7	9.0	10.4	10.6
medicine subsidies	4.9	8.7	9.3	11.1	11.4
secondary schools	5.7	8.6	9.7	8.5	4.3
transportation**	4.5	7.9	8.0	12.3	10.2
dairy products	0.9	6.8	8.1	11.8	13.5
culture, sport**	7.7	6.5	7.3	12.8	16.0
heating**	6.6	6.3	7.6	12.5	12.9
depr of state dwels**	1.2	5.7	7.6	14.4	14.5
rent**	2.8	5.7	7.6	14.4	14.5
water/sewge state dwels**	0.7	5.7	7.6	14.4	14.5
cafeterias	1.7	5.0	6.7	14.0	14.6
mortgage payment	16.9	4.8	6.0	17.3	21.5
other training	0.9	4.3	6.4	12.6	15.7
theatre, etc**	0.9	3.8	5.3	15.7	20.4
vacation	1.6	2.9	5.6	13.9	16.1
higher education	3.0	2.7	8.8	10.6	13.2
all subsidies	100.0	7.1	7.6	14.0	16.1
personal net income		4.7	6.2	13.9	20.5
noncash social inc and subs		9.2	9.5	11.4	12.5

Source: Kupa and Fajth (1990, Chapter II, Table 1.2.2.i)
Notes: * social income in kind and subsidies
** primarily benefitting urban households

[3] Published data on income levels by demographic status are not available, and it has been assumed that all households within the same quantile have the same income regardless of demographic status. The fact that social income appears to be moderately independent of income *across* quantiles suggests that this is not an unreasonable assumption, but in due course we plan to check this using the original household data source.

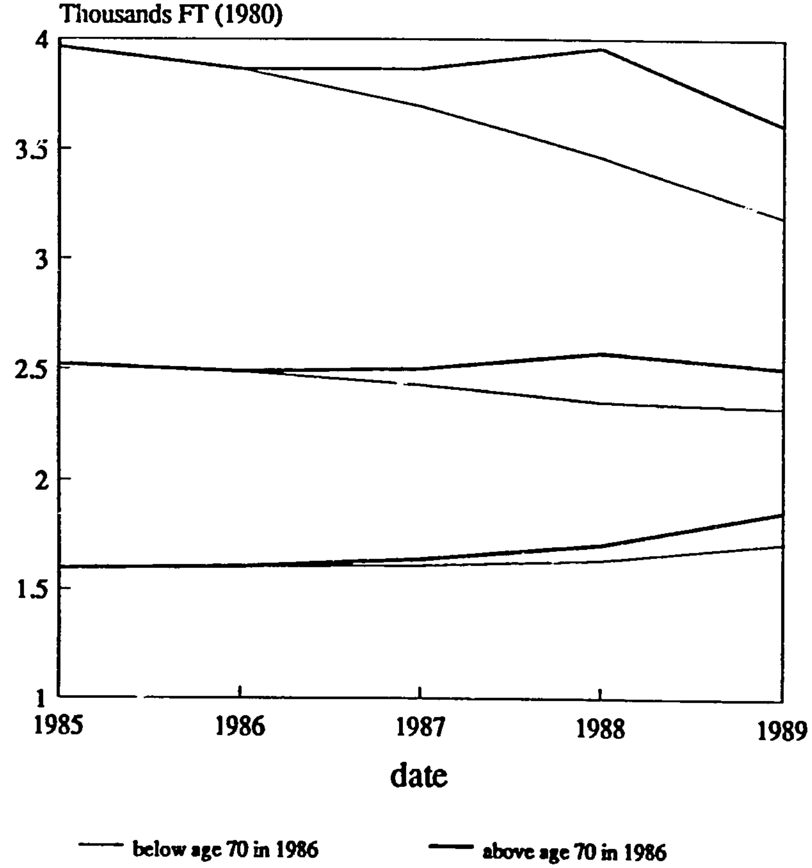
Another way to judge the extent to which various transfers protect the poor is to measure the extent to which they are targeted on the lower income deciles. Table 1 gives in the first column (headed 'shares in tot(al)') the percentage of all subsidies allocated to each category, and in the remaining four columns the percentages of the total subsidy paid out under each heading which are received by the bottom two and top two deciles. Thus of the 100% spent on kindergartens (2,776 HUF per average household, or 3.4% of total subsidies), 19.5% went to the poorest decile and only 5.4% to the richest decile. If the lowest decile receives more than 10%, or the lowest two deciles receive more than 20%, then one can say that expenditure is preferentially favouring the poor, otherwise one could not argue that the subsidies were targeted on the poor. 'Social items' (1.4% of the total or 1,154 HUF per household on average) and 'other housing investment subsidies' (3.9% or 3,168 HUF per average household) stand out as obviously targeted on the poor, while four out of the top seven (which qualify as having more than 10% targeted on the lowest decile) are all subsidies associated with children, who are more likely to be found in poorer households. If they are counted as part of the safety net, they amount to 23% of total subsidies and social income in kind, while if they are not, the remaining items amount to 7.2% of the transfers.

One explanation, consistent with the evidence of Figs 1 and 2, is that the system of wage determination was sufficiently egalitarian that few transfers needed to be specifically targeted on the poor, or designed to supplement low incomes, as in most Western countries. It was presumably thought sufficient to make transfers conditional on status (number of children, whether engaged at home in child care, etc) in order to supplement incomes adequately. It is difficult to believe that this will continue to be true as wages, employment and prices equilibrate towards market determined levels. Looking on the bright side, if only 23% of total transfers can be claimed to be 'pro-poor' or well-targeted to supplement low incomes, then the remaining subsidies and transfers do not serve that purpose, and might reasonably be reallocated towards income supplementation.

Pension payments

In 1986, 21.5% of the Hungarian population was over the retirement age (partly because the retirement age is 60 for men, and 55 for women). In Britain in

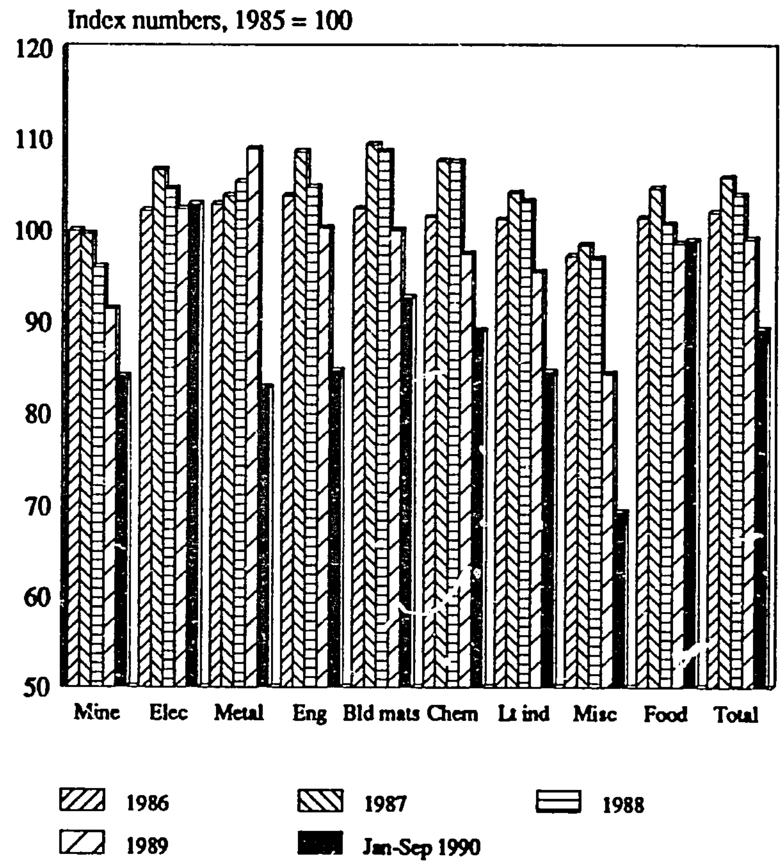
Real value of pensions started in 1980
Hungary



Kupa and Fajth Table 3.2b

Fig. 11

Gross Production by Industry
Hungary 1986-90



National Bank of Hungary

Fig. 12

1988 the proportion of the population above UK retirement age was 18.2%,[4] and above the Hungarian retirement age was 23.4%. The Hungarian population is declining slowly, so the proportion of elderly might be expected to be somewhat higher than in the UK, but it is lower because of the considerably lower life expectancy in Hungary.

Pension payments accounted for 62% of total social incomes in cash in 1978 and 61% in 1989, despite the 25% increase in the number of pension recipients. Fig. 11 shows that the rapid inflation in the latter part of the 1980s eroded the higher pensions, except for the older pensioners. The government appears to have done a good job in indexing lower pensions, and one can interpret this as a conscious attempt to protect poorer pensioners from the adverse effects of recent reforms. Given the pressures on the budget and the large share already accounted for by pensions, though, the natural solution is to make a commitment to raise the pension age in line with life expectancy, (which has been declining, but which will surely at some stage begin to improve), otherwise any improvements in living standards which show up in improved health are likely to precipitate a pension funding crisis, given the projected declining population size. To the extent that prime age workers are tempted to emigrate, the fiscal situation would become even worse.

Unemployment insurance

Unemployment rates have remained below 2% until the end of 1990, even after the recent reforms, reflecting an understandable lack of political will to restructure large firms, harden budget constraints, and accept the bankruptcy of non-viable concerns, though the rates are now beginning to increase rapidly. Fig. 12 shows the output levels by industry over the past five years and shows the sharp falls in output in 1989 and 1990. Employment will have fallen almost as much as productivity has been unchanged over the past two years. As the reform continues, more bankruptcies can be expected, and will inevitably cause more unemployment, as the Polish experience indicates. With luck, a reasonable fraction of those laid off will move into the private sector. The Government accepted the case for setting up an unemployment *insurance* scheme to facilitate the required restructuring in 1988, and some 56,000 unemployed workers were receiving payments at the start of 1991. The willingness of workers to join new

[4] The proportion of the population actually receiving retirement pensions was 17.6% of the population (*Annual Abstract, 1990* Table 3.21)

enterprises in relatively untried activities in the private sector is clearly enhanced if they believe they will be assured of an income related to contributions and hence wage (and also duration of contributions) if their enterprise lays them off (or goes bankrupt). The absence of such a system would likely make workers more risk averse about changing employment, and this would reduce the flexibility of the labour force. It would also be likely to set up political pressures to protect jobs and resist reform. It has been remarked that the Great Depression in Britain would have been a politically revolutionary period but for the existence of the recently introduced unemployment insurance.

Insurance-based unemployment schemes such as that set up in Hungary typically pay an amount related to previous income, regardless of current financial position, and are usually of limited duration, as their function is to facilitate the transition between jobs. Again, if the experience of Western countries is a guide to the future prospects in the East, it is unlikely that unemployment insurance will be adequate to deal with problems of low pay, and lengthy unemployment spells, which typically hit some sections of the population with greater frequency than others (unskilled, older workers).

Income supplementation rather than consumption subsidies

The natural solution to the problem of low pay and high unemployment in certain sectors of the population (and to other problems) is to provide income supplementation based on need (measured by family structure, income, and possibly assets[5]). There is in any case a standard public economics argument for moving away from subsidies on particular goods (food, transport, etc) towards income transfers related to income level, provided the country has a comprehensive system of income tax, so that it does not have to rely on a differentiated system of indirect tax to redistribute income. Subsidies to goods are likely to be poorly targeted, and will benefit the rich who consume them as much (and probably more, as they are likely to consume more) than the poor. Means-tested supplementary benefits are by definition targeted on those with low

[5] In Hungary, anonymity of asset holdings and bank deposits may rule out means-testing of assets of the kind used in Britain.

income.[6] This comes out quite clearly in Table 1 which shows only 7.1% of all subsidies go to the lowest decile, while 16.1% go to the highest. Fig. 3 illustrates the same point, showing in particular that housing subsidies benefit the rich far more than the poor, while consumer subsidies are fairly uniform across the income distribution.[7]

Another powerful objection to consumer subsidies is that they distort choice and may undermine competition. If energy for domestic use is income inelastic, (as is electricity consumption in Britain) it might appear to be an attractive candidate for subsidy. Energy has traditionally been heavily subsidised in Eastern Europe, though notably less so in Hungary. Low energy prices lead to profligate energy use, which is particularly inappropriate given the recent shift to trading energy at world market prices, and the current environmental concerns. Energy prices have risen slightly more than the general price level, though less than food, so further increases may be necessary, though it is important to remember than Hungary had removed the larger part of fuel subsidies in the early 1980s, and was much better placed than countries like Poland and Czechoslovakia. Indeed the main impact of the move to hard currency trading at world prices of oil imported from Russia was a sudden sharp fall in the equalisation tax received by the Government which before 1991 brought domestic prices up to world prices. In Hungary, the main problems are the publicly supplied district heating which is not metered at the consumption level and so provides few incentives for efficiency.

Public transport is also heavily subsidised, and this may be defended on grounds of market failure - private car users do not pay adequately for the congestion they cause in towns. But subsidised inter-urban bus transport in Hungary has undermined the market for private bus companies, just at a time when the British experience suggests that transport is an ideal sector for deregulation and privatisation. The natural solution, which is fiscally attractive as well, is to increase the taxation of private cars (on gasoline, and by annual licence fees) while removing the subsidy from public transport (except for

6 That is not to say that they are unproblematic, for the means-testing can give rise to high marginal rates of taxation, poverty traps, and low take-up rates, as well as being expensive. See Atkinson and Hills (1991) for a recent and useful survey of social security in developed countries.

7 This somewhat weakens the earlier criticism, for it is difficult to ensure that the money value of consumer subsidies is independent of income to this degree. The consumer subsidy system must be quite well targeted on goods of very low income elasticity.

carefully identified cases). It seems that the Hungarian Government aims to do this, though early attempts to raise gasoline prices lead to disturbances and were retracted.

Many of these subsidies are being abolished, and in any case the degree of consumption price distortion was probably lower than in other Eastern European countries: thus the ratio of food prices to non-food consumer prices in Poland had to double in 1990. Provided the real incomes of those receiving various income supplements, child allowances, pensions, etc, are appropriately indexed, the fiscal saving will be somewhat less than the previous levels of subsidy, but will still be positive, while retaining the safety net. Indeed, an explicit commitment to index well-defined targeted transfers might strengthen the safety net and reduce the fears caused by inflation.

Housing, mortgages and rents

Most developed market economies find the tax treatment of housing one of the more problematic and politically sensitive areas. Most market economies wish to encourage a 'property owning democracy' in which the majority of the population own their house, and have thereby a greater commitment to political stability and fiscal responsibility. These same governments typically tax interest income ('unearned income' in the revealing terminology of the UK Inland Revenue) in part because at the time income taxes were first introduced, wealth was highly concentrated, and interest income was highly correlated with wealth and living standards. Given this interest income tax, the natural way to encourage widespread home ownership is to allow mortgage interest payments to be deducted from income to determine assessable or taxable income - thereby giving a tax subsidy for borrowing to purchase a home. This has a compelling logic if interest income is taxed, as it makes the after-tax interest rate (roughly) equal whether lending or borrowing, and thus does not distort portfolio decisions. If interest income were taxed but borrowing were not deductible, then prospective home-buyers would be advised to liquidate their financial assets in order to finance house purchases, to reduce their tax liability.

The second common feature of many tax systems is that the imputed income (ie the rent that would have to be paid if the house were rented) is typically not subject to tax, whereas the income from other financial assets is taxed. Combined with the effect of mortgage tax relief, this makes house buying the most financially attractive investment for the majority of the population, and it makes borrowing more attractive than saving. It further makes the private rented property market relatively unattractive, as these rents are taxed. In the

UK, the share of private rented housing has fallen from almost half at the turn of the century to about 10%, whilst owner occupation has risen to two-thirds of the total stock of dwellings. Renting from local authorities accounts for just over 20%. The effect has been to reduce labour mobility among the poor, as there are long waiting lists for local authority housing, and few alternatives, if buying is ruled out as too expensive for temporary relocation.

Finally, the system of interest taxation and mortgage relief is particularly perverse during inflationary periods. If the real rate of interest is 5% before tax, and the rate of inflation is 10%, money rates of interest will be 15%. At a 33% tax rate, the after-tax rate of interest will be 10% nominal, or zero real. Taxation will then take 100% of the real return of the asset, and tax relief will make borrowing costless. It is hard to believe that either of these is desirable, but both have characterised the tax systems of most countries, and have also been written into the Hungarian income tax system (though the tax on interest income is now only 20% of the nominal amount, so that 100% taxation of real interest requires a 20% rate of inflation at a 5% real interest rate).

The problem of inflation is particularly acute and biassed in its effect in Hungary as existing mortgage holders were offered a choice between two attractive alteranatives. The first was to write down 50% of their loan and pay the market rate on the rest (currently 32% floating rate), while the second was to pay 15% (possibly floating) on the whole loan.[8] New house buyers are required to pay market interest rates, subject to various subsidies for young families and first time buyers. It might have been better to have specified a real cost of borrowing. For example, if the 3% mortgage interest rate had been interpreted as appropriate to an economic system intended to have zero inflation, then borrowers might continue to be charged 3% interest on their outstanding debt, but the debt would be revalued periodically (perhaps semi-annually) in line with the retail price index. The initial payments would not be a crippling fraction of total income for new house buyers, and would rise as prices (and their incomes rose). If, for example, a family buys a house whose cost is 5 times annual family income, then annual payments of about 33% of current

[8] There are two qualifications - the first is that everyone had to pay a minimum of 1500 FT per month for the first year, and the second is that the legality of changing the existing contracts of 3% nominal is being examined by the Constitutional Court, which might uphold the original contact (until Parliament obtains the required majority to make Constitutional changes to this law). Some 500,000 mortgage holders have opted for the first option as at March, 1990.

income (assumed to rise in line with inflation) would repay the original 100% mortgage over 20 years at 3% real interest rate. But if the family had to repay at an initial nominal interest rate of 30% the first year's payment would amount to 150% of income - resulting in considerable forced saving.

In Hungary, with a strong tradition of private construction (supplemented by state provision),[9] the main problem will be the design of the tax and mortgage interest system, as well as of the taxation of housing services. In other countries with a larger share of state-owned housing, privatisation (ie selling these houses to their tenants) is an obvious strategy (and in the UK was the largest and most successful privatisation). In these countries, privatisation will only become financially attractive if rents are raised to commercial levels, and this is likely to be politically difficult. A compromise, popularised in Britain and now also introduced into Hungary, is to offer state-owned housing to sitting tenants at a substantial discount, reflecting the present discounted value of subsidized rents received until the house is voluntarily vacated and becomes available for sale at a commercial price. But even this approach requires new lettings to be at unsubsidized rents. The determination of such rents is made more difficult by rapid inflation, but should be related to the real rate of interest, rather than the nominal rate (as the property value will rise in line with inflation).

If the experience of Britain is a guide to the effects of wide scale privatisation of state-owned housing, homelessness is likely to rise rapidly. Between 1981 and 1989, almost 1.5 million local authority and new towns dwellings were sold to occupiers (out of a total housing stock of about 22.5 million). The number of homeless households found accommodation by local authorities under the *Housing Act, 1985* doubled over the same period to nearly 150,000. (*Social Trends, 1991* p141). Housing benefits now account for nearly 4% of total government expenditure, and nearly 8% of social security benefits. Again, this suggests the need to move from general subsidies to housing (currently biassed towards the higher income deciles, as shown by Fig. 3) towards a more carefully targeted system of support, integrated with other forms of social security.

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[9] The average annual number of private houses built between 1976 and 1985 was 58,000 while the average number of state dwellings was 24,000. (*Statistical Yearbook, 1985*, p338). Recent figures suggest that public house construction has fallen further since then.

Terms of trade shocks and structural adjustment

Hungary and Poland face the additional problems of servicing their high foreign debt while adjusting to a collapse of CMEA trade (especially to Russia and East Germany) and a dramatic increase in the cost of energy imports (especially oil and gas) now payable in hard currency at current world market prices rather than at the old Bucharest formula price, which lagged behind current prices. As such they face problems familiar to Latin American and other deeply indebted LDC countries, who are typically required to undertake a structural adjustment programme in order to finance their external obligations. The World Bank's 1990 *World Development Report* is specifically concerned with poverty, and the effects of trade shocks and structural adjustment on the poor. The first point that comes out of that report is that historically there has been very little extreme poverty in Eastern Europe (World Bank, 1990, Table 2.1, p29), but that transformation raises similar issues to those faced by other developing countries, so the lessons learned there might be of some relevance.

What does economic theory have to say about the likely effect of structural adjustment on poverty? Much depends on the original objectives of the government and on the political constraints under which it labours. At one (ideal) extreme we can imagine a government imbued with a strong egalitarian sense which raises revenue not only to finance normal government activities (law and order, defence, infrastructure, etc) but also to optimally redistribute income, as in the utilitarian theories of optimal tax theory (Atkinson and Stiglitz, 1980; Newbery and Stern, 1987). Structural adjustment invariably requires a reduction in consumption relative to production, as the country endeavours to bring its fiscal and trade deficit under control and to meet its external debt payment obligations. In such cases revenue for redistributive purposes (as opposed to debt repayment) becomes scarcer and more costly. The government has to worry more about the efficiency costs of revenue raising and less about the redistributive benefits, and so redistributive activities must be scaled back, at least temporarily. In the worst case, the maximum revenue the government can raise is just enough to meet its expenditure obligations, and the design of taxation is motivated solely by efficiency considerations, and not at all by equity. The poor will necessarily suffer during such an adjustment.

At the other (more realistic?) extreme, the government was not raising and spending revenue primarily to benefit social welfare, but to advance sectional interests (such as civil service employment, producer interests, the welfare of the urban proletariate, the army, etc). Much will then depend on the political bargains that can be struck in the course of agreeing the structural adjustment programme with the IMF and/or World Bank. It is entirely possible that the external constraints can be used to alter the balance of domestic power and reduce allocations to some pressure groups, releasing resources for deficit reduction and poverty alleviation. The *World Development Report* appears to be quite optimistic about such possibilities, while being quite sensitive to the realities of political economy. It thus makes the point that finely targeted poverty programmes may be the most cost effective way of protecting the poor, but that this 'can reduce public interest in the vigorous implementation of government programs to help the poor. For example, in the late 1970s Sri Lanka replaced a universal food subsidy with a less costly targeted food stamp program. In time, the benefits of the new program declined. The middle classes no longer benefited from the scheme, and although the new program was more cost effective, it lost crucial political support.' (World Bank, 1990, p92).

The case studies examined by the Report suggest three conclusions (p118): where there are already existing well-targeted programmes these should be maintained; where there are not, they should if possible be introduced; and if opposition to their introduction prevents this, all programmes should be scaled back to release funds for other, possibly better targeted programmes.

What does this imply for Eastern Europe and for Hungary in particular? First, it is probably fair to say that previous governments were at least as egalitarian as any elsewhere, and had devised a redistributive system that ensured that poverty was remarkably low for countries of this level of income. To that extent, many well targeted programs already exist, and should be preserved, or strengthened to deal with the market realities of inflation, unemployment, and the removal of various consumer subsidies. The irony is that where the country was already pursuing very egalitarian policies, adjustment will almost inevitably mean that they will have to be scaled back. Putting it at its bluntest, if the object of the reform is to unleash some of the repressed forces for greater efficiency and higher incomes, the tax and reward system will have to become less progressive, and this will probably harm those at the lower end of the income distribution. Second, the existing system of supports was often administered through the enterprises, and as these are commercialised and/or privatised, they will have less incentive (and, in the stringent market conditions likely, less ability) to administer these supports. New infrastructure for handling social security programmes will be required, and it may be difficult to set up adequate machinery in the short run. As many of these programmes are probably best handled by local government, and as the revenue base of local government is still in a transitional state, there are likely to be additional difficulties in re-establishing these programmes in the more market-oriented environment of the 1990s.

The same point can be made in a different way. The reform process will eventually lead to positive gains, but it is unduly optimistic to suppose that these will arrive early on in the transition. If output available for domestic consumption does not increase much over the first few years, then gainers will gain initially at the expense of losers. Clearly there are going to be some who gain, possibly very substantially (and this might be seen as an essential step in recreating the middle class whose capital and enterprise are required to sustain the growth of the private economy). It follows that some will lose, and that they are likely to be the more vulnerable. The key political issue is whether the most vulnerable can be protected during the transition, with the brunt of the burden borne by the middle income deciles - in practice the workers in the state-owned enterprises - or whether the middle income deciles will be protected at the expense of the extremes. Inaction is likely to mean that the poor will bear a disproportionate share of the costs of transition, as positive steps will be required to set up the necessary infrastructure and revenue sources for their protection.

Policy issues during transformation

Some of the policy choices, to do with setting up unemployment insurance, and reforming the tax and social security system, have already been addressed. Others, such as the removal of food and other consumer subsidies, have been dealt with at the theoretical level - that subsidies to goods should be replaced by indexed means-tested supplementary benefits paid in cash, possibly contingent (in the case of housing) on existing expenditures (on rents). This leaves the key questions of speed of reform, and issues of sequencing. Is the Polish 'crossing the chasm in one jump, not two' the right way to reform prices and subsidies, or is the gradual approach favoured by the Hungarians preferable?

Two potent arguments support the swift elimination of distortions. The first is that one wants decisions to be guided by the right set of prices as quickly as possible so that investment decisions in particular are not distorted or based on incorrect transitional prices. The second is that the credibility of the reform process may be undermined by a slow adjustment. van Wijnbergen (1990) develops this case as follows. The government can choose between 'cold turkey' (prices immediately decontrolled) or 'gradualism' (prices may be fully decontrolled next period, but are only partially adjusted towards market clearing levels this period). Voters will decide whether to continue with the reform process after observing the performance of the economy (measured, in this model, by the size of the supply response) in the first period. In the gradualist approach if initial prices are kept low then it will be profitable to hoard in the expectation of making capital gains when prices are liberalised in the future, and this will reduce the supply elasticity (goods will not come to the market). If the first period prices are closer to market clearing levels then the incentive to hoard will be lower and the supply response of goods brought to market will be higher. In the cold turkey approach there is no incentive to hoard at all and the supply response is at its highest. This would suggest that the lower the initial prices the less likely the programme is to succeed in obtaining support for continuance. This is indeed the case, but it requires some delicacy to show that when the risk of failure is made endogenous, the result continues to apply.[10]

If efficiency and credibility argue for immediate liberalisation, what of the safety net arguments? The argument for cold turkey is that safety nets will be needed eventually if prices are to be liberalised, and should ideally be set in place as early as possible, and tailored to market realities in which prices and wages vary more violently than under the former socialist system (and inflation may be a problem). This means basing safety-net allocations (minimum pensions, family allowance, supplementary benefits, etc) on incomes and current price levels (ie indexing), in which case the time path of adjustment should not be an issue. Any alternative might mean that gradualism was less painful that immediate liberalisation, but only by concealing and deferring the problem, which would be better addressed explicitly and immediately.

There is another, macroeconomic argument in favour of rapidly replacing subsidies by less costly targeted means-tested cash transfers. Tax reform reduces the effective rate of profits tax from nearly 100% to something nearer to 40-50%, and this will tend to reduce revenue. If wages are grossed up sufficiently, and income taxes are now paid by workers, then some of the former profits tax will come back in the form of income tax. The problem is likely to come from

[10] The issue is that with low initial prices the risk of failure is large so the risk is that hoarding will be unprofitable as next period the old prices will be restored, and this will discourage hoarding, while with higher initial prices the risk of success is higher making hoarding more attractive. Allowing for the effect of hoarding on the success of the reform alters, but does not reverse the thrust of the simple argument.

loss-making firms. Although in aggregate after-tax profits plus losses may not change so much, since the losses are likely to be borne directly or indirectly by the state, and the profits are likely to be available to firms to invest or distribute, the net effect is likely to be an increase in demand and a fall in net government revenue, requiring higher taxes or lower subsidies elsewhere. Higher taxes would defeat the purpose of trying to reduce the role of the state in economic activity, hence the need for reductions in untargeted subsidies.

It has already been argued that inflation coupled with fixed and low nominal interest rates for past mortgages involves a substantial new subsidy to households, and that this is likely to require restructuring of mortgage interest payments and rents. If these are based on real interest rates, and if the former rents had not been kept at artificially low levels for lengthy periods (as in the Soviet Union) then the impact on households need not be too severe. Even where rents were formally very low, moving to a real interest based rate need not involve unreasonable fractions of family income (though proportionately the increase might be large). In 1985 active Hungarian households spent typically less than 9% of total expenditure on housing (compared to between 15-23% in Britain). Rent amounted to 512 HUF per person for manual workers, compared to total expenditures of 49,768 HUF, or 1% of total expenditure, which is remarkably low, even allowing for the reasonable fraction of owner occupation).[11] The fact that the correct level of rents or mortgage payments would not be unreasonably high does not of course mean that a movement to such a level would be politically popular.

Pensions

As almost all pensions are paid by the state, the only issue is that of indexing the level at an appropriate level to reflect the new level of prices. Fig. 9 suggests that informally at least the Hungarians have effectively indexed minimum pensions. The main problem here is that the average price level may conceal considerable differences in the levels of items like rent. Where some rents remain frozen but others adjust, the average will conceal important differences. One option is to explicitly recognise a rental or housing element in the pension which is based on individual circumstances. Until now the solution has been that rental payments by pensioners were frozen, but this will need modification if rents are to be moved to market levels.

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[11] *Statistical Yearbook 1985*, p306

Food subsidies and rations
In Hungary most consumer prices are probably not far from equilibrium levels as a result of gradual reforms over a lengthy period. In the Soviet Union this is far from true. Is there a case for combining the elimination of food subsidies with ration entitlements? If these were combined with a free market in food, with the rations sufficient for some bare minimum, then consumers would typically buy additional quantities of food at free market prices and the rations would act like lump-sum transfers of purchasing power. They would be administratively costly, would act as untargeted and therefore expensive general subsidies, and might be prone to corruption. It is hard therefore to think of good reasons why this should be preferred to moving to market wages (which will be related to the new price level) and indexed safety net payments. The main reasons might be political (to make the change to free market prices acceptable) or because the authorities have no confidence in their ability to set up the necessary system of income-based safety nets. Rations would not seem to be necessary or desirable in Hungary or Poland, for example, however good a case might be made for their use in the Soviet Union.

Low income producers
Liberalisation is likely to lower the returns to many activities, and if they are to continue, wages will have to fall. Self-employed workers in such activities will suffer a fall in income directly. The experience of Britain is relevant here. Initially, many producer services such as cleaning, provision of meals, laundry services, rubbish collection, etc were provided in-house in the state sector (hospitals, schools, etc). Privatisation and contracting out of such services resulted in considerable cost savings, but these were in large part obtained by a drop in the wage rates of the workers, who moved from the state sector (at wages determined by the activity of the institution) to the private sector (which, for unskilled labour, paid lower wages). The same may happen in the agricultural sector, though without knowing how farm-gate prices of agricultural goods are likely to change it is difficult to be sure of this.

What, if anything, should be done to protect the incomes of such workers? The standard answer is that the system of social security should be designed to provide safety nets for families of low income workers, rather than attempting to maintain wage levels. If the cost of employing these workers is kept above the market equilibrium level, then employment will be depressed, and the cost of meeting the distributive goals will be higher. A good tax system aims at production efficiency (and thus paying market-determined wages) while redistributing income through the income tax (and possibly indirect tax) system.

Sequencing, privatisation and the role of property rights

The sequencing of reforms affects not only their credibility and sustainability, but also the distribution of adjustment costs. Key issues to address are the order in which foreign trade and domestic prices are liberalised, and whether either or both should be delayed until large enterprises have been broken up into smaller units ('demonopolisation'). The case for moving as quickly as possible on demonopolisation and foreign trade liberalisation has already been made on efficiency grounds (eg in Newbery, 1990). What would be the impact of this sequencing on income distribution? The adverse effects of keeping large combines in being are readily identified. They stifle competition, and make it difficult for small enterprises to gain access to the banking system, which, if it is to be persuaded to impose hard budget constraints on the large firms, will be subject to tight monetary policy. This in turn will tend to favour large as opposed to small customers of banks, and make the repayment of trade credit advanced by small firms to large buyers delayed or problematic.

One of the most promising sectors for small enterprises and privatised firms to enter is that of retailing, wholesaling, distribution and transport. Where the large firms retain powers over imports (as often happens) then again competition is stifled and entry prevented. The Polish policy of subjecting wages in large enterprises to tight controls while liberalising prices and wages in the private sector has the advantage in this context of encouraging exit from the state to the private sector in pursuit of higher wages, but it may be thwarted if the private sector is discriminated against by the residual power of the large firms.

Privatisation of small enterprises (by management buy-outs) is arguably the best way of stimulating labour demand to offset the large falls in employment likely in the state-owned enterprises, while privatisating large enterprises intact is likely not only to be difficult but to have the opposite effect. Where enterprises can be dismantled into smaller units, the solution is obvious. Thus, for example, the average number of trucks per firm in Hungary is 566, in Poland is 137, while in Germany is 4, and in Holland and France is 7 (Bennathan, Gutman and Thompson, 1991).

Private enterprise requires a clear legal definition of property rights which are defended by the courts and police. While this is recognised in Eastern Europe, it is less evident in the Soviet Union, and even in Eastern Europe, the issue is clouded by arguments over restitution and compensation. A pessimistic scenario is that ambiguities over property rights in periods in which private property is potentially available leads to alternative extra-legal systems of imposing and defending property rights, of which various kinds of mafia organisations are the most worrying. The historical record suggests that while it takes unusual and turbulent circumstances to establish such rival extra-legal organisations, once established they are hard to dislodge, and they result in territorial cartellization and the exercise of market power (quite apart from other less savory activities). The recent maps of gang territories in Moscow controlling access to black market goods and food is a good though worrying illustration. Whereas state monopoly in a socialist society may be able to protect the weak, the same is unlikely to be true of mafia monopolies. It may be that the rapid, unambiguous creation and defence of private property is one of the most urgent tasks for preserving existing safety nets while unleashing repressed productive forces.

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