IN FOCUS

SOCIAL WELFARE AND LABOUR SUPPLY

Edited by
ÁGOTA SCHARLE
ZSOMBOR CSERES-GERGELY

1. SOCIAL WELFARE PROVISION, LABOUR SUPPLY EFFECTS AND POLICY MAKING

ZSOMBOR CSERES-GERGELY & ÁGOTA SCHARLE

The primary function of social welfare programmes is to redistribute incomes in the service of some social objective – such as the protection of certain basic human rights –, or to correct market failures. Pension or unemployment insurance, for instance, could not function, or would not function well under pure market conditions, which justifies state intervention.

The effectiveness of welfare provisions in reducing income inequalities has been investigated by several studies in Hungary, using a wide array of data sources and research methodology. Their conclusions are not equivocal but all of these studies reveal some inefficiencies in the system (see for instance *Darvas & Tausz, 2002; Ferge & Tausz, 2002; Havasi, 2005; Lelkes, 2006b; Szalai, 2007; Tóth, 1997, 2005)*, which suggests that the welfare system in general – and some elements in particular – does not fulfil its primary function adequately.

Welfare programmes function well provided that they reach the groups they are intended to support, increase their welfare and do this in an efficient manner, i.e., if they do not reduce total welfare more than absolutely necessary. Thus a social transfer, for instance, functions well if those in need have access to it, and only those have access to it; they are given as much as they really need; the costs of identifying those in need are kept at a minimum; and the labour supply of recipients does not decrease to any great extent. That is, if the social transfer accomplishes its primary goal while keeping its direct costs as well as its indirect costs at a minimum.

Let us call attention at this point to the difference between *efficiency* and classic *utilitarianism,* the latter of which implies no redistribution. The reason why one should be concerned with efficiency is that it can increase the resources to be redistributed. This does not imply that one should take a utilitarian approach to the *distribution* of resources and consequently object to providing support to the poor on grounds of solidarity. On the contrary: the efficient allocation of public money makes it possible to give more to those in need.

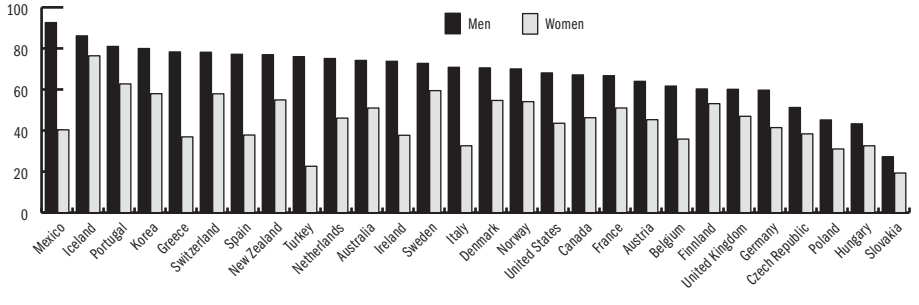
Unintended side effects of social assistance reduce overall welfare and may in the long run constitute a burden which endangers the sustainability of the system and may also reduce the subjective (non-material) well-being of welfare recipients. The indirect costs of social transfers include consequences such as the recipient of the transfer feeling humiliated or deciding to delay

job search or not seeking to enter employment at all so as not to lose eligibility. It also constitutes a cost if a prolonged period of staying at home results in a heavier reduction in work capacity than would otherwise be expected or if the children in the household never see their parents go to work with the problem consequently being passed on to the next generation.

This volume looks into the indirect costs of major types of social support. Specifically, the focus is on the indirect costs arising from the labour supply effects of transfers: their magnitude and possible ways of mitigating them.

There are compelling reasons for paying distinguished attention to labour supply effects. In Hungary, 57 per cent of the population aged 15 to 64 years are in employment, while the average employment rate is 64 per cent in the EU 27 member states and over 70 per cent in Scandinavian countries. Only Poland fares worse than Hungary among the former socialist EU members (with 54.5 per cent of 15 to 64 year-olds at work). Employment in Hungary started decreasing slowly in 1980 and plummeted between 1990 and 1993, reaching its lowest level at 52.4 per cent in 1996. The situation subsequently started improving but the 58 per cent employment rate measured in 1992 has still not been achieved 15 years on. *Figure 1.1* also shows that the employment gap is especially large for the low educated.

Figure 1.1: Employment rate for those with less than upper secondary education, 2004



Source: OECD Education at a Glance, 2004.

GDP has increased by 1 to 5 per cent a year since 1994 but the employment rate did not start rising until after 1996, and its subsequent average annual growth has remained below 1 per cent. Close to a quarter of the working-age population live on some kind of social benefit; the majority of recipients are inactive and most of them remain absent from the labour market for extended periods or permanently. These simple facts indicate that the welfare system has offered a superficial solution to the labour market shock of the regime change and has only alleviated social tensions.

The consequences are grave and far-reaching. Welfare payments, in combination with the wider system of redistribution, contribute greatly to the persistence of a low equilibrium characterized by a low employment rate and high

burden of taxes and contributions. High tax rates curb economic performance and thus impede economic growth. Long-term unemployment or inactivity among the working-age population in turn leads to long-term poverty, the propagation of poverty from generation to generation, social exclusion and a high risk of old-age poverty. And thus the vicious circle closes, in as much as these social disadvantages generate the need for further welfare spending.

Chapters 2 to 5 of this volume investigate the labour supply effects of four types of benefit: parental leave benefits, means tested unemployment assistance, disability pension and old-age pension. The labour market tensions accompanying the regime change did not only create new forms of support – which is natural to some extent, since unemployment benefit, for instance, is specifically targeted at relieving them – but also altered existing welfare programmes to assume similar functions. When a welfare programme does not, or does not exclusively fulfill the role it was originally created for, costly side-effects can be expected: this issue is discussed in the chapters on disability pension and parental leave benefits. Unemployment benefit also constitutes a major form of support but will not be discussed here for the simple reason that a number of very thorough studies have recently been published on the subject (see, for instance, the "In Focus" section of 2001 volume of The Hungarian Labour Market or *Bódis et al* [2005]). The chapters of this volume are supplemented by short sections: these scrutinize social effects other than those associated with labour supply and questions regarding the success of welfare programmes in fulfilling their primary functions.

The rest of this chapter gives an overview of the relationship between the labour market and welfare programmes and discusses issues concerning the welfare system as a whole. We shall review the consequences that the various welfare programmes are in theory expected to have for labour supply and outline the causes which may interfere with efforts to eliminate the disincentives buried in the current system. Finally, we shall summarise the results of the remaining chapters and the conclusions derived from them.

1.1. Who is inactive and who receives welfare payments?

Although welfare payments tend to reduce labour supply, employment probabilities are jointly determined by supply and demand. Aggregate figures cannot reveal causal relationships as they reflect not only the impact of provisions but also the composition of welfare recipients. The overview that follows, therefore, has the simple goal of describing the groups of workers which may in principle be the target of policies to boost employment.

Table 1.1 shows the distribution of the population aged 25 to 64 years – around five and a half million people – according to labour market status and welfare transfer based on the 2006 labour force survey of the Hungarian Statistical Office (CSO). The two largest groups are that of people in employ-

ment not receiving transfers and that of inactive pensioners. The third largest group, far below the previous groups in size, is that of inactive people not receiving transfers, who are immediately followed by the group of inactive people receiving some kind of parental leave benefit. The table also reveals that the transfers investigated in this volume are the most significant ones and that inactivity is higher among transfer recipients, except among those receiving unemployment benefit.

Table 1.1: The distribution of the population aged 25 to 64 years according to transfer and labour market status, 2006 (%)

	Employed	Unemployed	Inactive	Total
No transfer	62.4	2.5	5.2	70.1
Unemployment benefit	0.0	1.0	0.5	1.6
Social assistance	0.0	0.7	0.6	1.3
Parental leave benefits (gyed, gyes, gyet)	0.3	0.1	4.0	4.5
Pension	2.5	0.2	19.3	22.0
Other transfer	0.1	0.0	0.4	0.5
Total	65.3	4.5	30.1	100.0

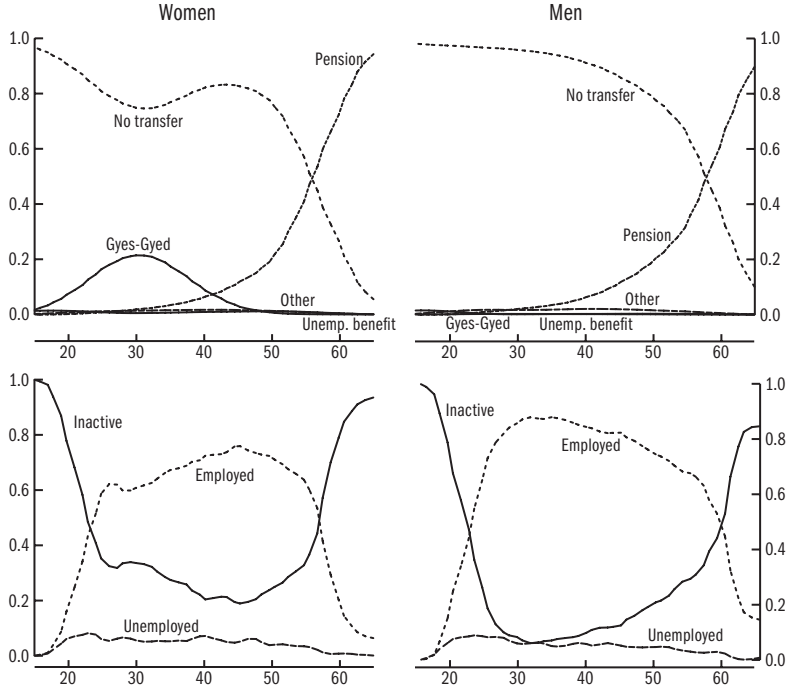
Notes: A worker is classified here, and in what follows, as unemployed with reference to the ILO definition: if he or she actively seeks employment and is available to start work within the next two weeks. The three main parental leave benefits include an insurance based benefit (gyed), a flat rate benefit (gyes) and an extended paid leave (gyet). See *Table 1.5* for more detail.

Source: Authors' calculations based on data provided by the CSO labour force survey, weighted by the CSO weights.

Participation in individual welfare programmes is of course related to stages in the life cycle: the years of education, followed by the period of activity (work and child raising), and finally the period of retirement. Economic activity status and transfer status therefore differ according to age and sex: these relationships are clearly displayed in *Figure 1.2*.

The relationship of activity, transfer status and age cannot all be shown in a two-dimensional figure; the strong effects of age can be clearly seen, however, by comparing the four parts of the figure. The first notable feature is the development of men's and women's employment rates. Both curves peak at around the age of forty, with a higher top value for men than for women. This is despite the fact that the great majority of women have at least one child at an earlier stage in their lives, which delays their careers – and thus the peak of their careers – in time and that the retirement age is still three years higher for men compared to women in 2006. What this suggests is that men are less active than women – not in absolute terms but relative to their circumstances. The data on women clearly show that their relatively lower level of economic activity at earlier stages of their lives coincides with the period of parental leave. We can also see that the increasing incidence of inactivity from about the age of 45 is accompanied by a sharp fall in unemployment for both sexes.

Figure 1.2: Economic activity by sex, transfer status and age



Note: Age in the week of observation, measured in years.
Source: Authors' calculations based on individual level data provided by the CSO labour force survey, weighted by the CSO weights.

We have seen in *Table 1.1* that over half of the unemployed population does not receive unemployment benefit. The figures further reveal that primarily younger age groups are affected: the likelihood of unemployment is highest among 30 to 40 year olds, while benefits (most people in the "other" transfer category are on unemployment benefit) have a high incidence among people over 40. The proportion of job seekers quickly decreases with age over the age of 40 – the majority of those who receive unemployment benefit but are in fact inactive are found in this group.

Looking at economic activity and transfer status as a function of educational attainment, we find that those with less than upper secondary education are especially disadvantaged with respect to labour market prospects *(Table 1.2)*. Barely half of the people in this group are in employment, a fifth of them receive some form of pension-like support and a tenth of them are unemployed.

Finally, let us examine mobility between labour market states. Are the same people stuck in each status over time or is it that different people are entering unemployment or inactivity at different time periods? The data in *Table 1.3* indicate a low likelihood of exit from employment or from inactivity with pension-type support not subject to strict re-assessment procedures. We find significant and approximately equal degrees of mobility among the unemployed

and among people claiming means tested social assistance but their destinations differ greatly. While the clear majority of those leaving unemployed status enter employment, almost half of those leaving the social assistance programme become inactive with no social transfers (none recorded by the LFS).

Table 1.2: Activity and transfer status by level of education for people aged 25 to 64 in Hungary, 2006 (%)

	Activity and transfer status							
Education	Working	Unemployed	Inactive + SA	Inactive + PLB	Inactive + Pension	Inactive, other transfer	Inactive, no transfer	Total
Primary or less	47.7	8.9	2.3	6.5	21.0	1.0	12.5	100.0
Lower secondary	73.9	5.9	0.5	4.0	10.0	0.5	5.2	100.0
Upper secondary	77.9	4.0	0.2	5.1	6.4	0.3	6.1	100.0
Higher education	87.5	2.0	0.0	5.0	2.4	0.0	3.0	100.0
Total	72.7	5.2	0.7	5.0	9.6	0.4	6.4	100.0

SA = Social assistance, PLB = Parental leave benefits (gyes, gyed, gyet).
Source: Authors' calculations based on data provided by the CSO labour force survey, weighted by the original CSO weights.

Table 1.3: Distribution of status changes according to combined activity and transfer status over two consecutive quarters of 2006 (%, relative to a given initial status)

	Activity in second period							
Activity in first period	Working	Unemployed	Inactive + SA	Inactive + PLB	Inactive + Pension	Inactive, other transfer	Inactive, no transfer	Total
Working	98.4	0.8	0.1	0.3	0.1	0.0	0.4	100.0
Unemployed	14.1	79.8	0.7	0.4	0.3	0.2	4.5	100.0
Inactive + SA	10.1	8.2	64.3	0.0	0.1	0.9	16.3	100.0
Inactive + Family	3.6	0.8	0.0	94.0	0.0	0.2	1.5	100.0
Inactive + Pension	1.7	0.6	0.0	0.0	97.3	0.1	0.2	100.0
Inactive + other transfer	0.8	0.1	0.0	0.4	0.1	97.8	0.8	100.0
Inactive + no transfer	6.8	4.8	2.1	1.5	0.3	0.5	84.0	100.0

SA = Social assistance, Family = Parental leave benefits (gyes, gyed, gyet).
Source: Authors' calculations based on data provided by the CSO labour force survey. Stock-flow consistent weights as in *Cseres-Gergely* (2007) and *Frazis et al* (2005). Respondents entering or leaving the sample were disregarded. Total percentages may differ from 100 for this reason.

1.2. Main welfare programmes

The welfare system of Hungary affects a substantial proportion of the working-age population and distributes a significant proportion of the GDP. As shown in *Table 1.4*, the coverage of main welfare programmes (including pension but excluding health care, education and benefits in kind) is extensive both in terms of GDP and the share of the population affected, with pension transfers being the largest category over the whole period. This in part simply reflects the chosen age frame, i.e., population aged up to 64 years, which is five or three years over the statutory retirement age, but the ranking of the transfers would remain the same were the upper age limit a few years lower.

Table 1.4: Major welfare programmes in Hungary in proportion to population size and expenditure, 1990–2005

	Percentage of population over 15			Total expenditure relative to GDP		
Year	Unemployment benefit and social assistance	Pension and pension-type transfers	Parental leave benefits	Unemployment benefit and social assistance	Pension and pension-type transfers	Parental leave benefits
1990	1.08	30.57	3.03	0.02	9.67	0.64
1995	4.77	36.14	3.63	0.78	10.37	0.66
2000	3.83	37.27	3.60	0.48	9.08	0.51
2005	2.97	35.64	3.47	0.50	10.40	0.57

Note: Social assistance does not include regular child protection benefit (rgyt).
Source: CSO Yearbook of Welfare Statistics 2005; The Hungarian Labour Market 2006, Institute of Economics, Hungarian Academy of Sciences.

These main welfare programmes – with the exception of the means tested social assistance (replacing the previous unemployment assistance scheme in 2000) – are universal or insurance-based – as in the case of unemployment benefit, maternity benefit (Gyed) and pension. The current regulations relevant to labour supply are summarised in *Table 1.5*.[1] All major benefits are cash benefits and, with the exception of the social assistance, grant a monthly income that is stable in time. The value of social assistance depends on household income and may change depending on other incomes (e.g., labour incomes) of household members.

1 The table includes secondary effects as well. The health contribution allowance for pensioners, for instance, belongs to this category, as it does not follow directly from pensioner status (i.e., from the regulations on pensions) but it follows from the tax treatment of pensioners' incomes. The Regular Child Protection Benefit (which was abolished in 2005) and the lump sum Child Benefits are not shown in the table. The former had an effect similar to that of unemployment assistance, while the latter is similar to Gyes in its effect except that more families are involved, as Child Benefit is paid until the child reaches the age of 20.

Table 1.5: Regulations on major social welfare programmes

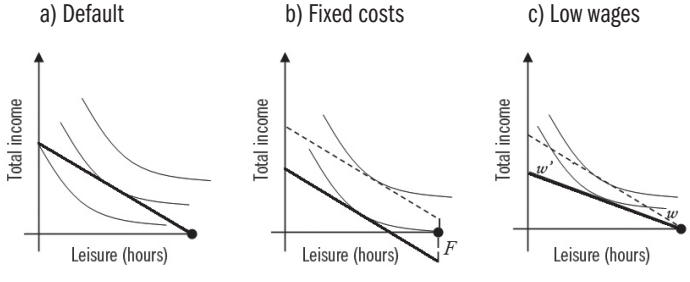
Programme	Can be claimed while in employment?	Tax allowances
Gyed: paid to families with children up to the age of two, in proportion with previous wages.	no	
Gyes: flat rate, may be claimed by families with children up to the age of three.	yes (after child reaches the age of 1)	yes (lower health insurance contribution)
Gyet: support for parents raising three or more children, where the youngest child is eight or younger.	yes (4 hours a day)	
Unemployment/job seekers' allowance: Entitlement is tied to registration and regular contact with the job centre. Maximum period of claim is 91 + 179 days.	no (availability for work must be proved)*	
Social assistance: means tested income support for the long-term unemployed.	no (availability for work must be proved)*	
Disability pension	yes	
Old-age pension	yes	yes (lower health contribution and personal income tax)

* Claimants are required to accept suitable job offers or community work as proof of availability for work. Support may be denied if the claimant does not co-operate.

1.3. The effects of welfare programmes on labour supply

According to the standard model of economics, a worker will consider two questions in deciding whether, and how much, he or she should work: one is the income to be expected as the return for a given number of hours of work and the other is the subjective value of leisure as compared to the value of consumption.[2] If the worker takes on employment, the income thus earned can be used for consumption but the worker will have less free time. The limits of consumption are determined by the amount of wages earned and the amount of income from other sources. In most cases the resulting constraints leave several viable options, so that a person can choose the one best suited to their individual preferences, i.e., their personal assessment of the relative utility of free time and consumption. The individual in the model strives to maximize utility, i.e., to find the point on the margin of his or her possibilities where utility cannot be further increased by increasing either consumption or leisure time. *Figure 1.3a* displays the default situation: the curves show individual preferences, while the straight line represents the budget constraint determined by the given market wage.

Figure 1.3: Consumption and labour supply trade-off
a) in the default case, b) with fixed costs and c) with a wage disadvantage



Labour supply decisions and the negative effects of welfare programmes on labour supply are plotted in *Figure 1.3*. A precise formal mathematical description is also given below but we shall attempt to discuss each figure in simple language accessible to readers unfamiliar with economic theory. The worker is characterised in the formal model as an individual seeking the optimal combination of labour and consumption. Let us define this preference as a well-behaved utility function $U(C, l)$ which is to be maximised by the individual given a budget constraint $N + w(T - l) = C$, where N is non-labour income, w is the wage, T is the total available time, l is leisure time and C is consumption. A basic welfare programme provides income $B = G - t(wH + N)$, where B is the net benefit, G is the minimum income guarantee, t is the tax rate and H is the number of hours spent working. If we add G to the left side of the budget constraint and simplify the equation we get disposable income

2 The description of the labour supply decision is based on *Moffitt's* (2002) chapter in the Handbook of Public Economics, a classic piece of the vast literature on the subject. Empirical estimates on labour supply in Hungary are summarised in *Galasi* (2003).

$w(1 - t)H + G - tN = Y$. The tax rate reduces both labour income and non-labour income. The tax rate on labour income also modifies the relative values of consumption and leisure time: since the net wages gained from the same amount of work are reduced, the income lost by spending time not working (i.e., the value of leisure time) will also be lower.

Figures 1.3 to 1.5 display labour supply choices in three scenarios where no welfare benefit is received and under six scenarios of different welfare programmes. It is useful to consider these simplified situations and the labour supply effects they are expected to induce because each of the welfare programmes under scrutiny in this volume either directly corresponds to one of these simple cases or can be constructed by combining some of them. *Figure 1.3* shows three variations on labour supply with no welfare support: the default case, the effect of fixed costs discouraging labour supply and the effect of low productivity. Part *a)* displays the budget constraint line and three indifference curves. Unearned income is assumed to be zero here for the sake of simplicity. The budget constraint shows the substitution rate between leisure time and consumption given the wages: the slope of the line is defined as $w(1 - t)$, i.e., higher wages result in a steeper constraint, while lower wages give a flatter line. The indifference curves represent individual preferences, that is, the individual's relative assessment of the utility of leisure time and that of consumption. Curves further away from the origin indicate increasingly higher levels of utility. The point of optimization is where the indifference curve meets the budget constraint: it is this point that provides the greatest level of utility for the individual under the given circumstances.

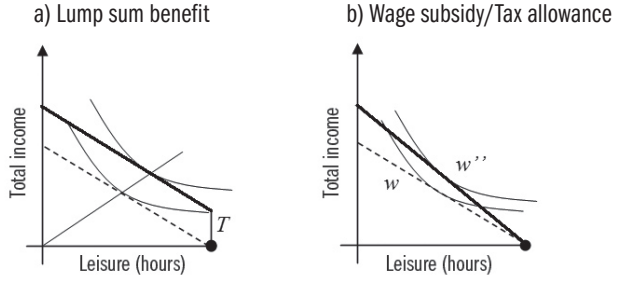
Part *b)* in *Figure 1.3* shows a scenario where the worker earns a wage corresponding to the market value of his/her abilities (training, age, etc.) but has to bear a fixed cost, independent of hours worked. Such fixed costs may include travel expenses, clothing, or child care costs. This cost is represented by F: the budget line shifts downwards by this amount. The cost has the consequence that labour supply will not be worth the worker's while below a certain number of hours of work because his/her income gain might be reduced to a point where it becomes negative, which is clearly worse than zero. Under these circumstances part time employment with average market wages, for instance, will not be profitable. We can see that a significant amount of work is needed simply to cover the fixed expenses and it is not worth working unless these costs can be paid.

The scenario in Part *c)* of *Figure 1.3* assumes no significant costs of labour supply but the individual's wage w' is below the market wage (w). This situation characterises those whose productivity is below average (due to their education, skills or state of health). Labour supply does not necessarily decrease in this case (unless some cost or other income acts as a disincentive) but the level of income gained from work may be very low. A situation where

the above problems add up is not only conceivable but is in fact frequently observed: uneducated people living in isolated rural communities in disadvantaged geographical regions is an example.

Both of the above problems may be counterbalanced by providing welfare support on grounds of solidarity and efficiency. The first solution is to grant a benefit of a fixed amount in the form of, say, a travel allowance. A solution of this kind is shown in Part *a)* in *Figure 1.4*, where *T* stands for a lump sum, unconditional transfer. The transfer shifts the budget constraint upwards, thus the individual in the model will work less (have more leisure time) and spend more.

Figure 1.4: The decision to work with a fixed amount benefit and with wage subsidy



The second way of providing support is wage subsidy or equivalent tax allowance, intended to compensate for low productivity. This is shown as *w''* in Part *b)* of *Figure 1.4*. The labour income of the recipient may increase as a result. A significant difference between the two scenarios is that a wage subsidy decreases labour supply to a lesser extent than an unconditional transfer, if at all.

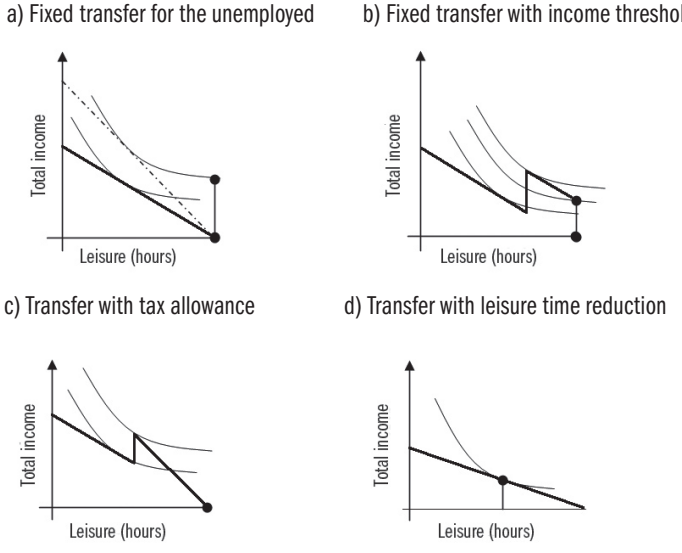
Part *a)* in *Figure 1.5* displays a welfare programme which provides support conditional on unemployment. Even short-term employment results in loss of eligibility and leaves labour wage as the sole income. Holding preferences and wages constant, the individual in our model will choose not to work and will only reconsider his/her decision if wages increase substantially. Should this be the case, labour supply will be nevertheless reduced compared to the default, unsupported situation.

The programme presented in part *b)* of *Figure 1.5* allows employment but eligibility is *dependent on income level*. This results in a high marginal tax rate on the extra income at point l^* – a few hours of increase in labour supply effects an almost fifty per cent reduction in income in our example. Since this threshold typically sets in at a low income level, the individual in the model will fall into a poverty trap. Although in employment, s/he works short hours and therefore earns little.

The third solution is a *tax allowance* with *an upper limit of income* for eligibility (Part *c)* in *Figure 1.4*). This method also generates a trap, which is

different in its details, but essentially the same as before. At the point where the worker ceases to be eligible, his/her disposable income suddenly drops, which has the effect of discouraging small increases in labour supply.

Figure 1.5: Consumption – labour supply trade-off with conditional welfare programmes



A fourth solution consists in tightening the conditions on *eligibility*.[3] These regulations ensure that support is given only to those in genuine need: unemployment benefit, for instance, is granted only to those who are genuinely unemployed (that is, who are seeking employment and are available for work) and are willing to co-operate with the employment services in an effort to find employment. Unemployment benefit may thus be conditional on active job search or regular visits to the job centre, and failure to comply may draw sanctions (such as the suspension of the benefit). This is illustrated in Part *d)* of *Figure 1.5*. The eligibility condition essentially has the effect of increasing the cost of claiming benefit by reducing leisure time: the programme effectively constrains the availability of free time while providing support. Given the recipient's competences and wage structures, the level of time burden can be set such that it reduces utility by exactly the same amount as the cash support increases it. Since the availability of leisure time and income will in this case be similar to a situation where the individual works, there will be no disincentive to labour supply.

The same indifference curve is used throughout our examples; that is, the levels of utility assigned to free time and consumption by the individual are the same in each of the models. In real life, there may be significant variation across individual preferences and thus the effects of the same welfare pro-

3 This is not the same as the *rules of entitlement*, which specify the set of hardships which are intended to be alleviated by a given welfare programme: e.g. that the claimant has exhausted insured unemployment benefit but has not found work.

gramme on individual worker's labour supply may vary greatly. These effects cannot be assessed on the basis of theoretical arguments: empirical research is needed to investigate labour supply effects based on data on workers affected by the programme.

In real life, the labour supply effects of welfare programmes are influenced by several factors which cannot be modelled in our simple theoretical framework. Most of these deviations come from the facts that the effects of this decision extend beyond the current period and that people other than the transfer recipient are also affected.

1. Rather than make separate decisions, couples often plan their labour supply together with consideration, for instance, to their preferences in sharing housework or because they wish to spend their leisure time together.

2. As a general rule, means testing considers per capita income within the household. Unemployment assistance affects the budget constraint of the entire household and it may reduce not only the recipient's but also other household members' labour supply.

3. The basic model cannot account for the long-term security of a given job or the costs of reapplying for the benefit – which is an important issue with regard to unemployment benefit and social assistance.

4. The model also disregards the rehabilitation services accompanying disability pension and unemployment assistance programmes, which are important in that they may increase the level of subsequently expected earnings.

5. With respect to programmes targeting families with children, the model needs to be enhanced by taking an additional preference parameter into consideration: the fact that parents regard the well-being of their children as a priority as well.

6. With regard to old-age pension, the neglected time factor and the irreversibility of welfare participation introduce significant deviation from the basic model. Because of its irreversibility, pension constitutes a welfare programme which covers a significantly longer period and gives more security than other types of support. As long as the long-term income received in retirement is not accompanied by any disadvantages, early exit may be a sensible choice even if the decision seems irrational in view of the immediate costs. The regulations on pensions, however, forbid or sanction labour supply in retirement in several countries, which make it costly to supply labour while receiving a pension *(OECD, 2005)*. The significance of irreversibility follows from the importance of the time factor. While simple models of entering the pension programme can be constructed as a series of static decisions, these decisions are not independent of time, the accumulation of entitlement or the effects of earnings on the amount of pension received. As a result, strategies concerning the timing of retirement affect labour supply *preceding* the period of retirement as well as human capital investment.

Finally, we need to point out that the considerations listed above concern labour supply in general and are not restricted to formal (reported) employment. The chapter on disability pensions briefly returns to this issue but, on the whole, we assume that the choice between black labour and formal employment is not governed by welfare programmes but by a willingness to avoid risk taking, the social acceptability of black labour and the risks and costs of being caught. Thus, while black labour is undoubtedly a problem that calls for a lot of attention, it is not of pivotal significance in the context of welfare programmes.

1.4. The causes of low efficiency in the welfare system and possible directions for reform

In response to the initiative of policy experts, crisis situations and the persistent calls of international organisations, some attempts have been made to reduce disincentives and financing pressures in the welfare system, such as the repeated tightening of entitlement conditions on unemployment benefit, the introduction of compulsory community work, or the pension reform of 1997. The reforms implemented so far, however, have not addressed all of the problems and have proved to be largely unsuccessful or even detrimental.

Existing regulations, the functioning of institutions and procedures of decision making in many respects still reflect the forced choices of the regime change or even earlier patterns from before the transition. Risking the charges of superficiality and subjectivity, we shall sketch the major aspects of this unfortunate inheritance, since the feasibility of the strategies recommended in the chapters of this volume is heavily dependent on these surviving institutional conditions.

The current shortcomings of the welfare system follow from distortions in both the setting of objectives and in errors of implementation. The process of identifying targets of social policy may be influenced by a number of factors diverting it from the social optimum. The strongest of these influences is inertia, sometimes called the *status quo* bias, which comes from a tendency of decision makers and voters to perceive the losses resulting from changing the system to be higher than either the costs of no change or the expected gains of change.

Even those would often object to reforms who could otherwise hope to benefit from them, for the simple reason that they are not aware of the actual costs of the welfare system and consequently underestimate how much would be saved by the change. This fiscal illusion was likely to be cultivated by the complex Hungarian taxation system and the myth of cost-free welfare provision *(Csontos, 1995)*.[4] Furthermore, the regime change magnified the uncertainties of future expectations: people could not predict the precise consequences of any individual reform, let alone the outcome of a complete

4 The theoretical discussion in *Csontos* (1995) was followed by an empirical study of fiscal illusions: see *Cserne* (2001) for results and the ensuing debate.

overhaul, in relation to their personal circumstances, which created a barrier to co-operation between groups which could in principle profit from the reforms *(Köllő & Nacsa, 2005, p. 9)*.

Besides information and cognitive barriers, individual interests also exert an especially strong distorting influence. Reforms aimed at enhancing efficiency involve measures eliminating expenses not justified by either productivity or need, which offends the interests of all those who have in some way profited from these. Former beneficiaries are many, since pre-transition welfare redistribution exceeded national income and access to privileges depended as much on loyalty, party connections and good luck as on genuine merit or need *(Hankiss, 1986, p. 46; Kornai, 1983)*.

The phenomenon that competing political parties attach the highest priority to the preferences of the median voter and thus tend to rate the interests of the middle classes higher than those of the poor is, far from being unique to Hungary, by now a classic tenet in the literature on democratic political systems *(Downs, 1957)*. But this effect is augmented by the pre-war middle classes' reviving reflexes of self-defence[5] and by the impatience and selfishness engendered in Hungarian society by the dysfunctions of the previous regime.[6]

In an effort to avoid an escalation of political tensions, the Hungarian government of the regime change tried to compensate those on the losing side. This effort, however, was guided by political rather than economic considerations (which is not unique to Hungary either), and compensation thus tended to reflect the number, political voice, and self-organising skills of the losers, rather than their needs. The gap between the actual loss and compensation was further widened by two other factors: *1.* the practice inherited from the Kádár era where the needs of social groups are assessed by methods that make allowances for group interests rather than in an open bargaining process and *2.* the poor bargaining power of certain groups of losers following precisely from this practice.

A further source of errors is that policy makers often opt for a less than perfect *means* to achieve their objectives. This can also be traced back to the previous regime: the distorted role perception of politicians that implies control over choosing the means (not only the objectives) and a culture of political regulation which attempts to shape and patch the system to suit presumed needs on the basis of inside information rather than derive rules from models construed with reference to interests and aims openly negotiated in public fora. The single minded focus of politicians on increasing gross output is conserved in the practice of the government acting on the advice of macroeconomists concerning issues which require expertise in micro-economics or sociology. Finally, it is equally important that Hungarian state administration has been barely touched by the change of government style observed in

5 "... the debased upper and middle classes put all their efforts into maintaining their old standards and their separate sense of class" – wrote István Bibó in 1947 *(Bibó, 1990, p. 65.)*. See *Wittenberg* (1997) on the reality and measurability of continuity.

6 *Hankiss* (1986) argues that the lack of trust (social capital) essential for the proper functioning of collective norms engenders selfishness, the supression or dysfunction of local democracy and of the rules of social interaction gives rise to mistrust, while excessive economic and political centralization leads to "individualism beyond control".

most countries in Western Europe, where the emphasis of decision making has shifted from expert opinion towards empirical evidence and impact analyses and where accountability and transparency are seen as the key to government legitimacy and success *(Verheijen, 2006)*.

The occasional reform intitative can easily run aground either on the weak autonomy of institutions inherited from centralized administration or on the absence of horizontal co-operation. Also, civil society and the media do not appear to be powerful or autonomous enough to provide sufficient impetus for change.

What the government can do

Relatively little funds would be needed to ease the barriers created by the insufficiency of information. Several thorough evaluations of the costs of delaying reform have been made by international organizations: the government could gain support for the reforms by the widespread dissemination of these results. Fiscal illusions could be dispelled by publishing easy to follow information on budget revenues and expenditures on a regular basis.

The task of improving the availability of expert advice is undoubtedly more difficult – as it may offend interests and sensitivities – but not impossible: more micro-economists and sociologists are needed among government advisors, and evidence-based policy making should be introduced. It could be fruitful to reform the recruitment, motivation and evaluation system applying to the body of civil servants, the first difficult steps of which have already been taken.

What social policy can do

Perhaps the most practicable step for social policy is to monitor results. It is somewhat more difficult – because it requires more complex action and a longer period of adjustment – to improve horizontal co-operation within the government administration, to develop a system of output-oriented incentives in regulations and to build an expert knowledge and information base necessary for evidence-based decision making. Until this is achieved, it is difficult to imagine how politicians could relinquish the illusion of infallibility and assume responsibility for correcting mistakes.

No single, unified solution is likely to exist for individual problems. It is generally true, however, that a policy can only succeed in the long term if it can rely on mechanisms that systematically ensure that the goals can be achieved. This is contingent on a clear statement of the objectives and the regular measuring and monitoring of the results – making results available for scrutiny by academic communities and civil society.

1.5. Brief summary of the conclusions of the analysis of labour supply effects

The remaining chapters of "In Focus" look at the main welfare programmes in Hungary with the aim of highlighting problems affecting the labour market.

Chapter 2 explores the labour supply effects of parental leave benefits using individual level data. Although it is often hailed as an achievement, the current support system is very costly and it allows paid absence from work for a substantially longer period than is usual in the western world. While there is no convincing evidence for the positive effects of an average absence of four or five years on either fertility or the development of the child, the system keeps the employment rate of mothers at a very low level – as a forced choice, in some cases. The receipt of parental leave benefits has increased over the past 15 years. There is a growing number of participants with no previous work experience and poor levels of education, while the likelihood of employment among Gyes or Gyet recipients has fallen. Women who work while receiving parental leave benefits earn less than their peers. These facts suggest that the human capital of women is substantially devalued over the years spent raising children, which is an important and previously neglected factor in evaluating the social utility of parental leave benefits. A policy allowing a more balanced choice between family and work would be one which offers a cash benefit financing a shorter period of staying at home and provides more work related support (child care voucher, travel allowance, retraining opportunities), possibly supplemented with subsidies supporting flexible working hours for parents returning from Gyes.

The results of the study on unemployment assistance discussed in Chapter 3 indicate that this programme appears to function in practice as income support for the long-term unemployed, and neither the activation rules nor the community work schemes attached to the programme achieve their goal of encouraging re-employment. This could be improved by introducing radical changes in four areas: eligibility conditions should be defined more precisely and enforced with greater rigour; the incentives of organizations administering the programme should be realigned too in such a way as to reward efforts to help the unemployed return to the primary labour market and discourage the provision of transfers; capacity building to provide the necessary range of rehabilitation and social services. The fourth component of the reform is the division of the programme into two schemes: a means tested income support for those unable to work (with no work test), and an unemployment assistance including availability tests and rehabilitation services for the long-term unemployed.

Chapter 4 is concerned with disability pension and investigates the explanatory value of labour market causes in the rapid rise in the incidence of

disability pension claims. An analysis of county level aggregate data indicate that a high incidence of claims is not restricted to regions with poor health indicators but also occurs in counties with relatively low employment rates and more opportunities for informal employment. The recently amended regulations on disability pension still fail to provide appropriate incentives to rehabilitation and returning to work. The incentives could be improved by introducing three essential changes. First, the maximum rate of cash benefit claimable without rehabilitation attempts or before the statutory retirement age should be significantly smaller than the expected rate of old-age pension. Second, a wide range of efficient rehabilitation services should be available to help those who would like to regain their work capacity. Third, the organisation providing the services should profit from encouraging the claimant to choose rehabilitation over pension.

Chapter 5 examines the motivations behind claiming old-age or disability pension with the objective of quantifying the effects of incentives of a material nature. Disability pension and old-age pension are taken together as, while clearly not equivalent, they are sufficiently similar from the perspective of labour supply incentives. The investigation is based on individual level data, which allows a longitudinal analysis of the behaviour and income positions of people under observation. Using income expected as a pensioner and income expected as a non-pensioner in an econometric model of the decision to retire, it is found that those who can expect a higher than average income in retirement and a lower than average income without retirement are more likely to choose to retire – this also holds for people below retirement age and is independent of the length of time left until retirement age. The results suggest that low-income groups find a way to escape the challenges of the labour market and we have evidence that the pension programme functions as some kind of automatic and permanent labour market refuge. Changing this practice will require not only the tightening of pension rules but also an increased awareness of labour supply effects and appropriate measures to reduce these effects.

A possible strategy is presented in the final chapter of this volume through an example from abroad. The programme *Pathways to Work* is targeted at increasing employment among workers with reduced work capacity and has proved to be highly successful in Great Britain. The chapter shows that the success of the programme is not only due to its carefully designed structure but also to the way it was introduced: a carefully constructed process, where the first pilots were followed by gradual expansion with thorough impact assessment – and correction, if necessary – after each step. The chapter closes by describing some of the barriers to the successful implementation of policies in the Hungarian welfare system.

WELFARE RECIPIENTS' SATISFACTION WITH THEIR LIVES AND INCOME POSITION[7]

GYÖRGY MOLNÁR & ZSUZSA KAPITÁNY

The primary goal of welfare provision is to secure subsistence for people with no access or substantially reduced access to market incomes. This may be supplemented by the objective to improve access to employment and other assets necessary for wellbeing, or to promote equal opportunities. In short, welfare programmes provide both income (and thus consumption) and security. They improve an individual's prospects but may also cause dependence, especially if the support is only accessible to those who are unemployed. Also, means tested benefits may be perceived as humiliating.

As these factors have an impact on the subjective wellbeing of welfare participants, an analysis of their perceptions of their lives can provide indirect evidence as to the success of the programmes.

Wellbeing and satisfaction (especially satisfaction with one's financial situation) are related to income, but it is not the level of income but its – actual or subjectively perceived – relative value that is decisive, i.e., the actual or perceived difference between an individual's income and the incomes of other people or his/her previous income *(Molnár & Kapitány, 2006)*. Subjective wellbeing is also determined by several other factors which lend themselves to measurement with greater or lesser ease.[8] Factors which are easy to measure include family structure, education, health and labour market status. More elusive, nevertheless significant factors are financial circumstances, expectations for the future, security, prestige, social relationships and self-fulfilment. Also difficult to measure is whether an individual finds pleasure in work activities or whether a welfare recipient perceives the support as humiliating.

Satisfaction may be viewed as corresponding to the utility function of the simple labour supply model discussed in Chapter 1 of this volume: what the individual seeks to maximise.[9] The model is augmented here by considering sources of utility other than leisure time and consumption, such as social relationships, security, self-fulfilment and other subjective factors which may enhance an individual's wellbeing.

This section discusses some factors affecting the subjective wellbeing of welfare recipients based on *Molnár & Kapitány*'s (2006) results. Our data, as in the reference paper, come from the Household Budget Survey of the Hungarian Statistical Office.

Table K1.1 shows the average values of subjective wellbeing for groups of people with different sources of income. Unemployed people, disability pension recipients, people living on casual labour incomes and welfare participants are far more dissatisfied with their financial circumstances and their lives in general compared to other groups.[10]

The average values in *Table K1.1* reflect the combined effects of labour market status, welfare provision and differences in group composition. To isolate the various effects, a logistic regression model was used to control for age, education, health status and level of income (or mobility): the results are displayed in *Table K1.2*.

7 This section is based on research by György Molnár and Zsuzsa Kapitány supported by the EU-COMPPRESS (HPSE-CT-2002-00149) programme. For further details of the data and the analysis, see *Molnár & Kapitány* (2006).

8 The strength of these effects is dependent on an individual's personal values, see *Lelkes* (2006a) for estimations based on Hungarian data, which show, for instance, that religious beliefs decrease the utility attached to income.

9 There is a large literature on the issue; see, for instance, *Frey & Stutzer* (1999), (2002), *Layard* (2005), *Senik* (2005).

10 The category of unemployed status used here is based on self-declaration, i.e. it does not correspond to the ILO definition because the necessary information is not all available due to the structure of the Household Budget Survey. The category of unemployed people with no support includes those who do not receive any kind of welfare support and consider themselves to be unemployed (rather than home-makers, for instance). The classification is based on the status reported at the point of data collection each month; note that often the same person is sometimes unemployed and sometimes engaged in casual labour over the year, so that the two categories are very close to each other.

Table K1.1: Average satisfaction with financial circumstances and life according to activity status, in order of level of satisfaction with financial situation (N = 3398)

	Satisfaction	
Activity	Financial situation	Life
Pensioner in employment	2.96	2.97
Student	2.78	3.24
Employed, self-employed	2.63	2.86
Old-age pensioner	2.63	2.77
Other inactive	2.36	2.68
Widow's or orphan's pension recipient	2.36	2.57
Receiving parental leave benefit (gyes, gyed, gyet)	2.22	2.59
Unemployed on insured benefit	2.13	2.65
Disability pension recipient	2.09	2.43
Casual labourer	1.96	1.73
Unemployed with no support	1.85	1.98
Unemployed on means tested benefit	1.65	1.86
Receiving nursing benefit* or other benefit	1.46	1.75

Notes: The following questions were asked: "How satisfied or dissatisfied would you say you are with your life on the whole?" and "How satisfied or dissatisfied would you say you are with the financial situation of your household?" Average values were calculated by assigning values on a scale of 1 (very dissatisfied) to 5 (very satisfied) to respondents' answers.

* A cash benefit available to those looking after an ailing family member.

Table K1.2: Financial and general satisfaction in Hungary in 2002 (ordered logit estimation with objective variables, N = 3398)

	Financial	General
Activity	Satisfaction	
Casual labourer	–1.06 (0.30)**	–2.06 (0.27)**
Other welfare participant or nursing benefit recipient	–1.40 (0.42)**	–1.30 (0.39)**
Unemployed with no support	–1.10 (0.38)**	–1.38 (0.35)**
Unemployed on means tested benefit	–0.87 (0.24)**	–1.15 (0.28)**
Unemployed on insured benefit	–0.30 (0.49)	0.11 (0.42)
Disability pension recipient	–0.51 (0.18)**	–0.28 (0.18)
Adult family members of people with marginal activity status[a]	–0.55 (0.17)**	–0.61 (0.15)**
In 2nd or 3rd income quintile in 2002	0.92 (0.18)**	0.51 (0.17)**
In 4th income quintile	1.00 (0.21)**	0.59 (0.19)**
In 9th income decile	1.36 (0.26)**	0.68 (0.23)**
In 19th income ventile	1.98 (0.29)**	1.32 (0.30)**
In 20th income ventile	2.32 (0.38)**	1.84 (0.32)**
Young (18–39 years)	0.54 (0.12)**	0.65 (0.13)**
Elderly (55 years and over)	0.54 (0.12)**	0.48 (0.12)**
Student (in full-time higher education)	0.32 (0.28)	1.16 (0.25)**
Completed university degree	0.39 (0.15)*	0.67 (0.15)**
Couple in household (married or co-habiting)	0.37 (0.12)**	0.42 (0.12)**
Child aged 0–3 years in household	–0.71 (0.22)**	–0.46 (0.21)*
Person with long-term health condition in household	–0.27 (0.12)*	–0.28 (0.12)*
Pseudo *R*2	0.09	0.086

* Coefficient significant at 5 per cent level, ** coefficient significant at 1 per cent level.

[a] Adult members of households that include a casual labourer or a member receiving disability pension or social benefit, who themselves do not belong to any of these groups. Reference groups: employed, in the poorest income quintile, middle aged (40–54 years).

Note: The equations included variables of wealth and mobility, which are not shown above. Standard errors of robust estimates clustered for households are shown in brackets.

The coefficient of welfare programmes only shows subjective effects in this estimation: those of relative security, income ambitions (relative to previous income and to the incomes of others), a feeling of being stigmatised, idleness and future hopes. As the stigma effect does not apply to insurance-based welfare participation and there is likely to be less motivation to supply labour, so the effects of these factors mainly reflect the value of security and ambitions.

We shall focus on the results which are important with respect to the success of welfare programmes. As can be seen in *Table K1.1*, people in relatively low income groups are less satisfied with their financial situation and with their lives in general, which corresponds to our expectations. Controlling for income (and some other variables), certain welfare programmes cease to have a significant effect on contentment: the satisfaction of people receiving old-age pension or parental leave benefits do not differ significantly from that of the employed. This suggests that the security offered by old-age and widows/orphans' pension or parental leave benefits compensate for low income as well as for the loss of the possible subjective utility of labour supply. People receiving disability pension are on the whole as satisfied with their lives as old-age pensioners and working people but are less satisfied with their financial circumstances (with the effects of poor health controlled for). However, if we look at the subgroup of people on disability pension who presumably chose disabled status to escape unemployment rather than due to poor health, we find a perceptibly lower level of satisfaction with life as well.[11]

That welfare participation is perceived to be stigmatised is indicated by the finding that in contrast to insured benefit, means tested benefit has a stronger negative effect on general satisfaction than on financial satisfaction. The negative perceptions of people on subsistence benefit are not only related to the stigma, however, but presumably to their insecure prospects as well, since the groups most similar to them, unemployed people with no support and people doing casual work, report the lowest levels of satisfaction.

The satisfaction index of casual workers, unsupported unemployed people, means tested benefit recipients and people on other benefits continues to remain the lowest even after controlling for the level of income: we believe that this result is related to the insecurity of their status. People on unemployment benefit do not display this effect, which suggests that insecurity increases and future hopes decline with the duration of unemployment.

The results therefore indicate that long-term unemployment or insecure employment prospects create a position where the growth of personal welfare is greatly hampered. In other words, it is a situation where there are strong constraints to maximising utility, and welfare support is not the best but the least bad solution: given their education, skills, age and health status, living on welfare support is not an option but a forced choice for the majority of people.

Our results also provide indirect evidence for the hypothesis that the majority of unemployed people and disability pension or means tested benefit recipients are not motivated by a prospect of ancillary black labour in claiming welfare support. If black labour income had a substantially greater weight for this group compared to the unreported incomes of other social groups, and if it could counter-balance the negative effects of unemployment (or quasi unemployment), there would be no significant difference between levels of satisfaction. Our conclusions are further supported by the fact that lower satisfaction also applies to other adult members of these households.

11 The relatively small sample size and the scarcity of information on health status do not allow for more specific conclusions.

2. THE LABOUR SUPPLY EFFECTS OF MATERNITY BENEFITS

MÓNIKA BÁLINT & JÁNOS KÖLLŐ

On returning from their regular yearly visit to Hungary in May 2007, the OECD delegation made a recommendation on the reform of the Hungarian maternity leave system and its implications for the labour market. The recommendation was expressly rejected by the Minister of Finance in the name of the Hungarian government. The firm reaction was unusual in the general context of Western practice and it was downright astonishing in the specific context of this issue considering the statistical data on which the recommendations were based. As shown by the OECD Family Database,[12] a) Hungary spends more than any other member country on benefits supporting parents staying at home with young children, measured by the amount of benefit per child as a proportion of GDP per capita. Hungary spends three times as much as the OECD average, almost twice as much as Austria and one and a half times as much as Sweden. b) A very low proportion of children under the age of 3 attend childcare institutions (similarly to children in Eastern and Southern Europe, Turkey and Mexico). The generosity of provisions is also reflected in low employment rates. c) While the employment rate of *women* is only slightly behind the OECD average,[13] that of *mothers* is lower than in any other member country. d) The Hungarian rate of employment among mothers with *children aged 0–2 years* is the lowest in the OECD and the rate among mothers with *children aged 3–5 years* is the second lowest (after Slovakia). Hungary also has the largest gap between the employment rate of mothers with children of 0–2 years of age and that of mothers with (their youngest) child aged 6–16 years.[14]

It is unlikely that the firm rejection by the Minister was motivated by professional convictions or that any expert on family policy would consider the current family support system to be an exceptionally efficient and extremely promising solution to the problem of balancing the objectives of population policy, child welfare and employment policy which deserves a financial investment two or three times greater than what is usual in the West. The family support system is a legacy from the Kádár era and its major reforms after the regime change (1995, 1999–2000) were clearly motivated by ideological considerations, as convincingly argued by *Ignits & Kapitány* (2006) and *Szakolczai* (2005). None of the interested parties – including those in favour of

12 OECD Family Database 2007, http://www.oecd.org./dataoecd/46/13.

13 It is substantially higher than in Southern Europe but significantly lower than in Western Europe.

14 See Figures PF7.2, PF11.1., LMF2.1. and LMF2.2. in the OECD database for statements a) to d).

regarding child benefits as a social transfer, those who prefer to view it as a means to supporting reproduction and families, those who are engaged in the practice of pragmatic policy making (nor the authors of this chapter) – have a good idea or, indeed, even a rough idea of the effects of this unique system has on population growth, child welfare or the labour market: whether family benefits paid in cash increase fertility, whether raising children in their 3rd or 4th year of life at home has additional benefits – beyond those offered by nursery schools – with respect to their cognitive and emotional development or what individual and social consequences may be expected from the mother's prolonged absence from the labour force (which is *a forced choice* to some extent as the provision of day care in nursery schools has greatly declined). These questions could not, and still cannot, be investigated – with a few exceptions – because no data have been available.

This chapter looks at the system from the perspective of the labour market; population and child welfare issues will only be discussed briefly.

2.1. The effects of family support schemes

A simple visual inspection of the time series data on *fertility* gives the impression that the introduction of the universal flat rate parental leave benefit (Gyes, 1967) and later, the insurance-based benefit (Gyed, 1984, 2000) acted as incentives to childbirth *(Tárkányi 2006)* or, at least, had an effect on the timing of childbirths.[15] *Ignits & Kapitány* (2006, p. 388) argue that "there is well-founded empirical evidence indicating that both general transfers and income support compensating for loss of income have a positive effect on fertility." This claim would, however, be difficult to defend in front of a researcher specialising in the cause and effect analysis of time series data. A "visual inspection" cannot tell whether there is a cause and effect relationship behind the correlation between measures of family policy and fertility or they are both explained by some common factor (e.g., good economic prospects have a positive effect on birth rates and create resources for ambitious measures of population policy at the same time, while the threat of a recession leads to the postponement of childbearing and also to a tighter budget). Neither can a visual inspection tell whether the effects of measures of population policy are statistically significant or robust.

More reliable conclusions may be drawn from econometric analyses. The Granger cause analysis of macro-time series in *Gábos* (2003) and *Gábos, Gál & Kézdi* (2005) indicate a statistically significant long-term positive effect on birth rate: a one per cent increase in *cash* benefits has led to an increase of 0.2–0.25 per cent in total fertility in Hungary over the past four decades. This result is important but not decisive since direct evidence could only be provided by an analysis of the effects on *completed* fertility, which is awaiting further research.[16]

15 Even demographers themselves are divided as to the question of whether family support had an enduring or only a transient effect on fertility. The latter opinion later "... became independent of its professional roots, lost its support among demographers but continues to pop up in places today. Its current supporters – most of whom are not demographers – often use this practical argument to implicitly call the legitimacy of the pronatalist population policy itself into question while avoiding open ideological conflicts." *(Ignits & Kapitány, 2006, p. 388.)* We shall here refrain from ideological criticism and present strictly methodological doubts only.

16 The indicator of total fertility rate captures the number of births per reproductive woman in a given year, while the indicator of completed fertility rate shows the number of children born to a woman up to the end of reproductive life. The Gábos–Gál–Kézdi model uses the immediate effect on total fertility and the effects appearing with a one year lag to draw conclusions as to long term effects.

The magnitude of the effect indicated by the model also suggests that the results should be treated with caution: it would follow from the estimated elasticity that the current birth rate of 1.3 children would not increase further than 1.6 even if the cash benefits were doubled in value.

Furthermore, there is – of course – no way of judging whether another benefit of shorter duration or of a different kind would have had the same impact on fertility. It is not the case that birth rates can solely be encouraged by schemes financing a prolonged absence from the labour market. Sweden, for instance, successfully achieved a turn in demographic trends by implementing a policy of precisely the opposite nature: it focuses on supporting *working women* in child raising by providing a carefully planned network of childcare facilities, introducing the requirement to share home childcare between the parents (a condition of claiming child benefit), supporting individuals rather than families and emphasising the equality of the sexes (rather than the traditional roles of wives and mothers) in public communications *(Hoem, 2005)*.[17]

The impact of mother and child support on *child development* has not been investigated by quantitative empirical research in Hungary. The international experiences are summarised in the literature review by Dóra Benedek in the next section of this volume. The studies discussed there as well as other related studies highlight the risks of returning to work too early. This problem concerns the United States first of all, where around a third of mothers with young children return to work *within three months* of childbirth. This contrasts with the practice in developed European countries (Germany, Sweden, the United Kingdom), where barely five per cent of mothers enter employment after such a short period of maternity leave *(Berger, Hill & Waldfogel, 2005)*. Research results suggest, on the other hand, that the negative effect of returning to work on the cognitive development and the emotional stability of children is substantially reduced if the parent enters *flexible* or *part-time* employment after the child has reached *one to one and a half years* of age or even earlier. There are no quantitative studies, however, on how the well-being of children or mothers is influenced by the exceptionally long leave characteristic of the Hungarian family support system (and in the absence of systems similar to the one in Hungary, there can be no such studies).[18] In Hungary, only 14 per cent of mothers with children *in their third year of life* are in employment and this ratio still remains below 45 per cent among mothers with their youngest children *in their fourth year of life* (average figures for 1993–2005 from the labour force survey of the Hungarian Statistical Office [CSO]). Although there is no consensus among professionals with respect to the "optimum" duration of staying at home with the child *(Herczog, 2007)*, available data and expert opinions both suggest that the positive marginal effect of the third and fourth years spent at home on the development of the

17 These include symbolic gestures – those which are not motivated by financial reasons but are meant to emphasise the equality of the sexes – such as the elimination of the institution of widow's pension.

18 The full-time equivalent parental leave (the number of weeks multiplied by the replacement rate) is highest in Hungary among the OECD countries. See Figure PF7.1./C in the OECD database cited above. The Hungarian system of maternity leave is closest to the one in Romania.

child is *much* smaller than that of the first two years. The returns to professional institutional care are at the same time *much* higher in this period than in the child's earlier years.[19]

The accurate assessment of *labour supply effects* would require a survey recording the child's date of birth; whether the mother was in employment prior to birth; if so, the date of leaving employment; the type of support received by the mother or the father and the period of receipt; the date when the claimant returned to work; if the parent has not returned to work, the reasons for this decision and the current activities of the parent; whether the parent returned to the same job he or she left before birth; how much they earned before and after the leave; who took care of the child while the parent was on maternity leave and thereafter, and so on. Decision makers and researchers in a mature democracy would probably find it difficult to believe – but it is true: *not one survey of this kind has been made in the forty years of operation of the parental leave system annually serving a quarter of a million people.* The Hungarian budget has conferred approximately a hundred and twenty million monthly maternity leave transfers amounting to thousands of billions of Hungarian forints but has failed to allocate, say, fifteen million forints for a survey allowing researchers to carry out an impact analysis. The cost would be roughly equivalent to the amount of maternity leave benefit paid *every hour*.

The analysis presented below is based on the labour force survey data of the Hungarian Statistical Office (CSO). The survey was designed to assess labour market participation and its applicability to a study on maternity leave is therefore limited.[20] It is difficult to establish with reasonable accuracy whom each child belongs to in a given family and with which child a parent is staying at home. Answers to questions on the type of parental leave benefit received (Gyes, Gyed or Gyet) are obviously imprecise. There is no information on the starting date of benefit receipt. The year and month of leaving the last employment before the survey is recorded rather than the date of leaving the last job before child birth. The sample is also too small for our purposes and there are several other problems. Nevertheless, we believe that, given our current complete collective ignorance, even the limited information supplied by the labour force survey may prove to be useful.

2.2. Parental leave benefit as a labour market institution

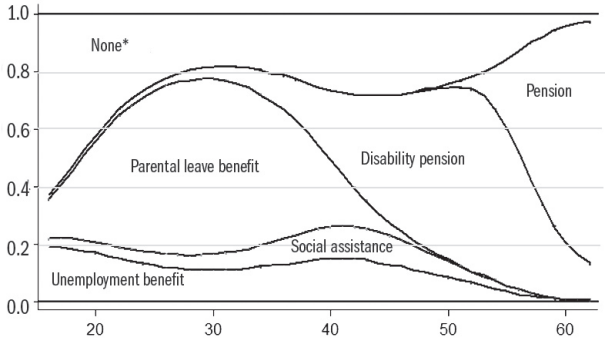
The flat rate benefit (Gyes), the insurance based benefit (Gyed) and the extended paid leave (Gyet) are not simply schemes to assist parents in child raising but constitute by far the most significant form of support for inactive women under the age of 40. This is shown in *Figure 2.1*, which displays the distribution of the non-employed (unemployed or inactive) female population across various mutually exclusive social transfers as a function of age in 2003. It can be seen

19 "... from approximately 18 months of age, children need social interaction with peers as well as professional care from an adult teacher. The reason being, that learning and development processes require support and, occasionally, guidance, which need to be given by a trained teacher. This cannot be provided by parental care, love and attention," write *Bass, Darvas & Szomor* (2007) in their as yet unpublished study.

20 This statement does not apply to occasional complementary surveys targeting mothers with young children, which provide information on labour supply *intentions* and labour market *expectations*. The complementary surveys have given rise to a series of detailed analyses: *Lakatos* (1996), *Frey* (2001, 2002). These, however, cannot replace research on maternity pay claims and actual labour market consequences.

that maternity leave – and later disability pension – is a far more significant form of support than unemployment benefit or unemployment assistance.

Figure 2.1: Non-employed women aged between 15 and 62 by transfer receipt and age



* Respondents in this category may have received other types of support not recorded in the LFS.

Note: Curves in the figure were smoothed by using a multinomial logit function with support type on the left hand side (six outcomes) and age and squared age on the right hand side.

Source: Based on CSO LFS of 2003 last quarter.

The well known disincentive effects of unemployment benefit come into play in the case of paid maternity leave as well. The returns to caring for a child at home immediately after birth obviously exceed the benefits expected from employment but the joy, contentment and financial advantages associated with staying at home to raise a child gradually diminish with time. A generous system of maternity leave delays the point in time where the utility of remaining at home equals the utility of returning to work for a mother previously "habituated to employment."

The optimum period of receiving maternity benefit depends not only on the amount and duration of benefit entitlement but also on factors influencing the returns to work: wages, the fixed costs of employment and non-material benefits of employment. The net benefit to employment is also reduced by factors such as insecurity over the employer's attitude towards any absences due to child sickness; worries about whether the mother risks her job by returning "too early"; doubts over the employer's general attitude towards mothers with young children. Assistance may also be provided to mothers by reducing the costs of returning to work: in the form of nursery schools, home care, travel subsidies and income support. It is important to recognise that the types of support available both to parents staying at home and to working parents (such as family allowance, childcare assistance, child protection assistance and Gyes since 2006) enhance the value of *staying at home*: similarly to other non-labour incomes, they reduce the optimum supply of hours of work.

As far as we are aware, empirical studies on the labour market impact of maternity leave systems allowing prolonged paid absence – in accordance with expectations – uniformly find a negative effect in the sense that relatively longer and more generous maternity leave schemes result in longer absences from the labour market. In kind provisions – typically allaying the costs of employment – are expected to exert the opposite effect and international comparative data corroborate this expectation: while cash benefits reduce labour market participation, benefits in kind increase it *(Scharle, 2007)*.

Cash benefits may also have *positive effects on the labour market* which are difficult to measure empirically. Similarly to other types of unemployment benefit, it is justified to ask whether parental leave benefits improve the quality of match between employer and employee: through allowing workers to devote more time and effort to job search, benefits have the effect of crowding out less productive jobs *(Mortensen–Pissarides, 1999; Acemoglu–Shimer, 1999; Pissarides, 2000)*. As we shall see, however, in Hungary, mothers returning to work after Gyes receive significantly lower wages than other workers with similar observable characteristics (and this still holds when endogenous selection is taken into account). We therefore believe that the *negative* effects of the amortisation of human capital outweigh the *positive* effects of a (potentially) longer job search period on productivity and wages.

The Hungarian system of maternity leave was first introduced with the aim of giving mothers the option of a long period of economic inactivity. The frequent changes to the system primarily affected coverage rather than the conditions of receipt. Gyed has always been tied to employment before childbirth but the entitlement regulations on Gyes and Gyet have been modified on a number of occasions. The most important changes occurring within the period under study are summarised in *Table 2.1* (based on Table 2 in *Ignits–Kapitány*, 2006).

The Bokros austerity package tightened entitlement by abolishing Gyed and introducing means testing for Gyes on the one hand, and substantially extended entitlement by revoking the requirement of employment before childbirth. Over the period from 1996 to 1998, the government essentially treated maternity leave as a *social assistance scheme*. The Orbán administration first made entitlement to Gyes and Gyet universal (1999) and later re-introduced the insurance based Gyed (2000). These rules of entitlement have been left untouched by the current socialist-liberal coalition which came into power in 2002.

Recent government administrations have at the same time tried to ease the tension of the forced choice between employment and staying at home. Employment while claiming Gyed has always been ruled out but part-time employment has been permitted – since 1990 – for Gyes recipients after the child has reached the age of 18 months. The prohibition on full-time employ-

ment has also been gradually relaxed: working full-time from home has been permitted since 1999 and in January, 2006 all restrictions on employment were lifted. The latter measure has eliminated Gyes in an economic sense, as the family allowance and Gyes are now only differentiated in a legal sense, and thus the reform has effectively created a front-loaded family allowance, which provides more generous support up to child's third birthday than in subsequent years. The only remaining schemes specifically targeted at financing a temporary absence from the labour force are Gyed and the childbirth benefit (which is not investigated here).

Table 2.1: Rules of entitlement to Gyes, Gyed and Gyet between 1992–2005

Year	Gyed	Gyes	Gyet	Regime*
1992	*I*	*I*	–	1
1993	*I*	*I*	*I, T*	1
1994	*I*	*I*	*I, T*	1
1995	*I*	*I*	*I, T*	1
1996	–	*T*	*I, T*	2
1997	–	*T*	*I, T*	2
1998	–	*T*	*I, T*	2
1999	–	*U*	*U*	3
2000	*I*	*U*	*U*	4
2001	*I*	*U*	*U*	4
2002	*I*	*U*	*U*	4
2003	*I*	*U*	*U*	4
2004	*I*	*U*	*U*	4
2005	*I*	*U*	*U*	4

I: insurance based (tied to employment before childbirth); *T:* means tested; *U:* universal; –: not applicable.

* The period under study is divided into four sub periods of substantially different systems – indicated in the last column of the table – which we refer to as regimes.

As was mentioned before, unfortunately no appropriate data are, or have ever been, available allowing the individual assessment of the effects of the above changes in regulations. The following sections therefore have far less than that to offer. Using the crude data of the CSO labour force survey, we draw attention to the fact that as a result of changes in regulations, maternity leave claims have become ever greater in number and ever longer in duration over the period from 1993 up to the present. The number of claimants with low levels of education and no work experience has multiplied. The current system of maternity leave is only partially designed to support a temporary absence from the labour market. An increasingly smaller portion of claimants earn an income through work regardless of the changes in regulations to encourage labour supply. A prolonged – over four and a half years on average – absence from work is accompanied by a substantial loss in human capital for those having close ties to the labour market. The length of the actual period of ma-

ternity leave is heavily influenced by the labour market prospects of women with young children and the costs of employment. This suggests that a reduction in the costs could have the effect of shortening claim periods and thus decreasing losses generated by prolonged economic inactivity.

2.3. Childcare transfers in the labour force survey of the Hungarian Statistical Office

A great advantage of the labour force survey over administrative data is that it provides information on the whole population, not only claimants, and provides detailed information on respondents and their environments. The sample analysed here includes women aged 15 to 40 years who were observed in the CSO labour force survey from 1993 to 2005. Each individual is included in a maximum of six waves of the survey, i.e., an individual may be followed for 18 months at the most. The panel comprises 678,420 quarterly observations of a total of 102,737 individuals *(see Table 2.2)*. For each respondent we have information on her age, level of education, marital status, place of residence, labour market status and whether she received Gyes, Gyed or Gyet in the given quarter of the year. The number and ages of children living in the household were established in an indirect way. The structure of the panel allows us to establish whether the respondent quit the maternity leave system between quarter t and quarter $t + 1$ and whether she entered employment after quitting. We have investigated three questions: the *take-up* of maternity benefits, *work activities* in parallel with benefit receipt and the *return to work* after maternity leave (Gyes).

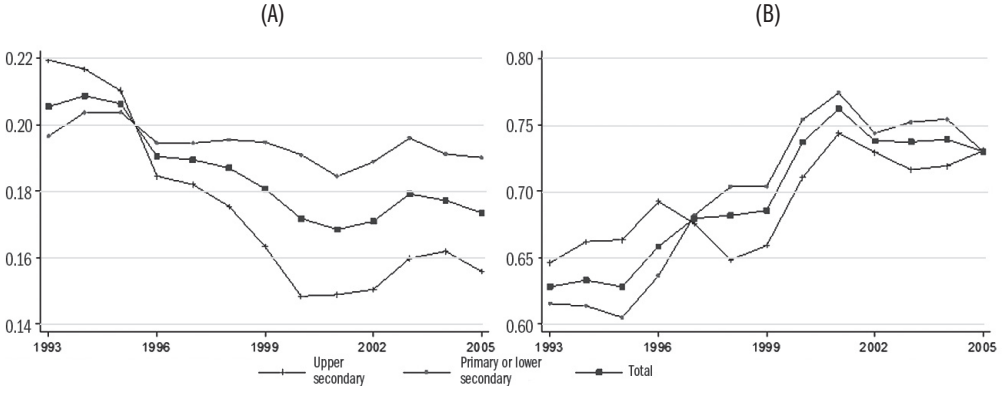
Table 2.2: Quarterly observations of women aged 15–40 years in the CSO labour force survey

Year of observation	Receives Gyes, Gyed or Gyet		Total
	No	Yes	
1993	38,636	6,065	44,701
1994	36,494	5,939	42,433
1995	39,979	7,066	47,045
1996	38,778	6,669	45,447
1997	37,275	6,551	43,826
1998	51,006	9,224	60,230
1999	50,762	8,833	59,595
2000	47,969	8,819	56,788
2001	47,222	8,782	56,004
2002	46,556	8,358	54,914
2003	50,500	9,481	59,981
2004	46,418	8,850	55,268
2005	44,088	8,100	52,188
Total	575,683	102,737	678,420

Take-up

The proportion of *women* living with children under the age of four among the *female population* aged 15–40 years sharply decreased between 1993 and 2005. This proportion is around 16 per cent among women with a secondary or higher education and around 19 per cent among women with lower levels of education; the corresponding figure is just over 17 per cent for the total population *(Figure 2.2)*. The ratio of mothers receiving maternity benefit steadily increased within this group, from about 65 to 75 per cent. The increase was particularly steep after the introduction of the Bokros package and then again following the changes in regulations introduced by the Orbán administration at the turn of the millennium. The Bokros package resulted in a large scale increase in the number of women with weak ties to the labour market and low incomes entering the system (the resulting expansion exceeded the decline caused by the abolishment of Gyed and the introduction of means testing for Gyes). The subsequent re-introduction of Gyed and the cancellation of means testing led to another spell of increase in the proportion of claimants. While the use of the maternity leave system was most frequent among educated women before 1995, between 1995 and 2004 the proportion of claimants was highest among women with less than secondary education. The effects of the tighter regulations of the Bokros package and the relaxed regulations of the Orbán reforms can be clearly recognised in the curve representing the *educated section* of the population.

Figure 2.2: Proportion of women with children aged 0–4 years to all women aged 15–40 years (panel A), and the proportion of those receiving Gyes, Gyed or Gyet within that group (panel B)



While there is only a small difference between women with various levels of education in the likelihood of using the system of maternity leave, there are substantial differences in the type of benefit claimed. This phenomenon is illustrated in *Table 2.3* showing the average figures for the current system beginning with 2000.

Table 2.3: Distribution of maternity benefit recipients by benefit type, 2000–2005

	Youngest child					
	under 12 months of age		between 12 and 23 months		between 24 and 35 months	
	Educational level*					
	high	low	high	low	high	low
Gyed**	59.8	32.7	52.7	29.5	16.6	10.4
Gyes	38.3	63.3	45.6	66.5	80.7	84.5
Gyet	1.9	4.1	1.7	4.0	2.7	5.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Receives maternity benefit***	80.4	81.2	92.1	88.8	82.6	84.2

* Highly educated: secondary or higher education.

** Gyed may be claimed up to the child's second birthday. There may be two reasons explaining figures larger than zero for families with the youngest child in his or her third year of life. First, the person interviewed (who was not the target person in around half of the cases) may not have had the correct information on the type of support received. Second, if the parent received the transfer for the maximum period of entitlement, it may be the case that although the child had reached his or her second birthday at the time of the interview, the last Gyed payment was transferred within the observation period.

*** Among mothers caring for children of the given age. The lower proportion of maternity leave in the first year relative to the second year is presumably related to the relatively high number of mothers receiving childbirth benefit (which is mutually exclusive with maternity leave benefits).

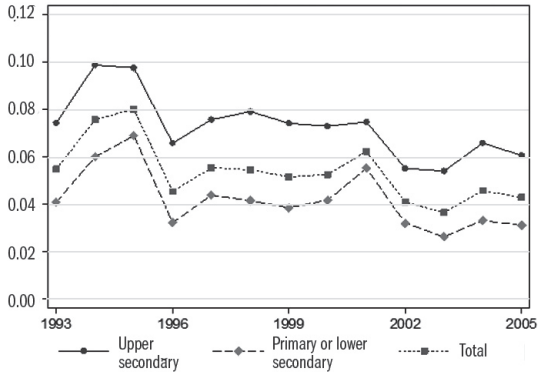
Mothers with secondary education are approximately as likely to use maternity leave as mothers with less than secondary education but while well over half of women in the former group receive Gyed, which is a large sum proportional to their previous wages, less than a third of the uneducated group are in the same position. The difference only disappears after the Gyed period, when the child enters his or her third year of life. The likelihood of maternity leave use is still 83–84 per cent at this point.

Work while on maternity leave

Gyes and Gyet allow simultaneous part-time work and even full-time work (observing certain conditions from 1999 and without any restrictions in the case of Gyes since 2006). The CSO labour force survey, however, records not only legal, formal (reported) employment but also unreported labour, which constitutes around 15–20 per cent of total employment recorded in the labour force survey *(Augusztinovics & Köllő, 2007, Köllő, 2007)*. The proportion of women in paid employment as defined by the ILO and the OECD among the users of the maternity leave system has clearly decreased since 1993, from around 6 to 4 per cent. This is shown in *Figure 2.3* displaying the proportion of mothers in paid employment while claiming maternity pay (those who received support in the quarter of the observation and in the following quar-

ter). The proportion of the employed decreased both among women with low levels of education and among women with high levels of education. The likelihood of employment was twice as high among women with secondary or higher education as it was among women with primary or vocational education throughout the period.

Figure 2.3: Proportion of maternity benefit recipients in paid employment 1993–2005



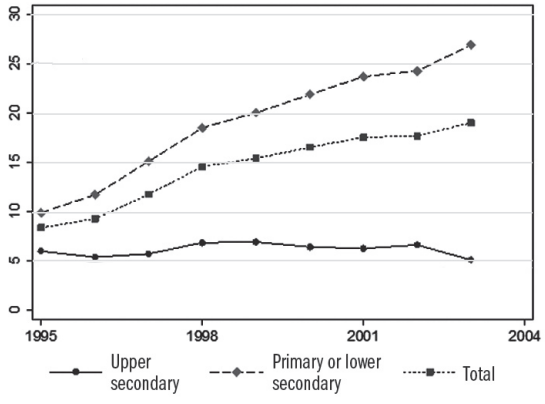
Note: Excluding those who worked in parallel with maternity leave in quarter *t* but left the support system in quarter *t* + 1 while continuing to work. It may be the case in this situation that the formal Gyes period was over by the time the mother started work but payment was received later. This does not qualify as working in parallel with maternity leave but as employment following maternity leave.

The proportion of women with no work experience before childbirth steadily increased over the studied period, which is no doubt a major factor in the declining trend of employment after childbirth. We are not in a position, however, to give detailed evidence of this process because the survey question asking whether the respondent previously worked refers to labour market status *prior to the interview* rather than *prior to childbirth* and only people who are inactive *at the time of the interview* are asked that question. Furthermore, data from before 1995 and data from after 2003 cannot be compared to data from the period in between. *Figure 2.4* shows the development of the ratio of mothers with no work experience before childbirth as a function of the level of education within the period from 1995 to 2003.

The proportion of those with no previous job remained low at 5–7 per cent among women with secondary or higher education but it rose from 10 per cent to almost 30 per cent among women with less than secondary education; this accounts for the fact that the overall likelihood of inactivity approached 20 per cent at the end of the period. It is no longer the case that the system of maternity leave is unequivocally a means of allowing women to temporarily stay *away from employment*. It undoubtedly continues to have that effect

among educated populations but its role in supporting young women with low levels of education who have never participated in the labour force has become increasingly stronger.[21]

Figure 2.4: Proportion of mothers who have never had a paid job, 1995–2003



Note: Inactive mothers in receipt of maternity pay at the time of the interview = 100.

The declining trend of work activities in parallel with maternity leave – which might seem surprising at first sight given that restrictions on employment were gradually relaxed over the period – is probably explained by the growing proportion of those with weak ties to the labour market. Factors that may have contributed to this process include the diminishing significance of the second economy in the traditional sense and of micro-businesses with low start-up costs which could be based in a residential building (second-hand clothes shops, small garage shops selling wine by the litre, etc.).

It must be noted that over the entire period 60 per cent of respondents reported "very irregular" hours of work or less than 40 hours of work per week, while the remaining 40 per cent reported full-time employment. This distribution remained essentially constant throughout the period from 1993 to 2005. In view of the regulations in effect over the studied period, the 40 per cent likelihood of full-time employment seems to be unexpectedly high and the finding that the proportion of mothers in full-time employment did not increase following the changes in regulations in 1999 is also surprising. We do not have an explanation for this phenomenon.

Exit from the maternity leave system, return to work

The major indicators of the process of quitting the maternity leave system are summarised in *Table 2.4*. An average six weeks[22] after quitting the benefit, over half were in employment and the proportion of part-time workers was substantially lower after quitting the system than at the time of maternity leave. On average, ten per cent of those quitting were unemployed and slightly

21 The average age of maternity pay claimants with no work experience before childbirth was 24 years for the entire period in contrast with the overall average age of 28 years.

22 If the respondent received maternity pay in quarter t but not in quarter $t + 1$, it is reasonable to assume that the period of maternity leave terminated halfway between the two dates.

over a third were inactive in the period between 1993 and 2005. The average length of the period between the respondent's last employment and the date of quitting the maternity leave system was 4.7 years between 1997 and 2005. (No data are available for the period before 1997.) The absence from the labour market was shortest among women entering full-time employment (3.7 years) and longest among women becoming inactive (5.5 years). The period of absence was 5.3 years for mothers with two children, 7.5 years for mothers with three children and 10.8 years for mothers with four children. Only 12 per cent of mothers quit the system before the child's second birthday and 59 per cent quit before the child's third birthday.[23]

Table 2.4: Exit from the maternity leave system as a function of educational attainment

	Total	Level of education	
		high	low
1. Status after quitting, 1993–2005		**(%)**	
Full-time employment	47.8	60.8	37.6
Part-time employment	5.5	7.1	4.3
Unemployment	10.1	7.8	12.0
Inactivity	36.6	24.3	46.1
Total	100.0	100.0	100.0
2. The period between last employment and quitting, 1997–2005			
Status after quitting*			
Full-time employment	3.7 (2.4)	3.3 (1.8)	4.2 (2.9)
Part-time employment	4.5 (3.9)	5.6 (4.7)**	3.4 (2.4)**
Unemployment	4.8 (3.2)	4.0 (2.1)	5.1 (3.5)
Inactivity	5.5 (4.7)	4.3 (3.0)	6.1 (4.2)
Total	4.7 (3.4)	3.8 (2.6)	5.3 (3.8)
3. Age of youngest child at the time of quitting, 1993–2005		**(%)**	
Up to 11 months	4.3	4.6	4.1
12 to 23 months	8.2	10.1	6.6
24 to 35 months	46.9	49.4	44.8
36 to 47 months	33.0	30.6	35.2
4 years or older	7.6	5.4	9.2
Total	100.0	100.0	100.0
4. The period between last employment and quitting, 1997–2005			
Number of children aged 0–7 in household***			
One	3.7 (2.7)	3.2 (1.9)	4.2 (3.0)
Two	5.3 (2.5)	4.6 (2.2)	5.9 (2.6)
Three	7.5 (3.8)	6.3 (0.8)	7.9 (4.3)
Four	10.8 (0.7)	–	10.8 (0.7)

* Average number of years, s.d. in brackets.
** Fewer than fifty observations.

Let us now turn to the duration of labour market absence in cases where the mother *started work at the time of quitting the maternity leave system*. Exit

23 We put the date of quitting at a date *after the child's third birthday* if the mother stayed in the system for the full period of entitlement, until the child's third birthday, and started work sometime in the following quarter. The *period between two employment spells* includes pregnancy leave and the period of childbirth benefit as well as unemployment or inactivity prior to childbirth. The different types of absence cannot be distinguished.

probabilities are estimated with the help of a binary choice model based on a pooled sample of data for the years 1993–2005, where exit probabilities are dependent on personal and environmental characteristics, the ages of children, time and the system of maternity leave in effect at the time of the child's birth (the latter information is shown in the last column of *Table 2.1* above).

A few comments of a technical nature are in place before we discuss the results of our estimations *(Table 2.5)*. A methodologically correct analysis of exit probabilities would require information on the duration of maternity leave and whether entitlement had expired at the time of quitting; labour market status should be recorded after a uniform, pre-specified period of time from the date of quitting; and a sufficient number of observations should be available to compute estimates for each year, benefit regime and benefit type. In the absence of necessary data, our model measures the period of time spent among the at-risk population by the age of the child. In the following estimates, observations where the respondent became unemployed or inactive after quitting are treated as censored, i.e., of an unknown outcome. This is because the time period between quitting and the date of the interview was in several cases too short to be reasonably satisfied that the *lack* of employment should be viewed as permanent. The analysis was also performed applying multinomial logit and probit models (outcomes: respondent stayed on maternity leave, quit and found a job, quit and did not find a job), yielding qualitatively the same results as in the binary model.

The estimation is based on a pooled sample for 1993–2005 because the number of observed exits is not large enough. Our attempt to separate the time trend from the effect of the benefit regime is based on the assumption that the reforms broke up a smooth trend reflecting labour market developments and pushed the appropriate sections of the function upward or downward.[24]

Finally, the very small values appearing in the column of marginal effects may be deceptive: the mean value of the dependent variable of the model, the exit probability is 0.015 and the marginal effects estimated by the model are to be interpreted relative to that very low value. A marginal effect of 0.0075 estimated for a binary variable, for instance, means that a change in the given variable (from 0 to 1) increases exit probabilities by *half*.

What do the results tell us about quitting the maternity leave system in general (first and second columns) and about quitting the childcare support scheme of Gyes in particular (third and fourth columns)? The re-employment probabilities of the youngest and oldest age cohorts are lower than those of the intermediate age cohort among the population between 15 and 40 years of age. The exit probabilities of women with primary education, vocational training and secondary education are, respectively, 0.9, 0.6 and 0.4 per cent lower that those of women with higher education (2.8 per cent per quarter on average during the period). The probability of exit is highest when the youngest child

24 Models assuming linear, quadratic and other kinds of time trends yielded similar parameters for the benefit regimes. *Table 2.5* shows the results of the model assuming a linear trend.

is in his or her fourth year of life and declines steeply with the increase in the number of children aged 0–7 years living with the family. With the effects of the children's ages controlled for, exit probabilities are lower for Gyed than they are for Gyes. Estimates on the exit from the maternity leave system and specifically on the exit from the flat rate Gyes yield essentially the same results.

Table 2.5: Estimation of exit to employment probabilities (binary probit)

	Gyes–Gyed–Gyet		Gyes only		Gyes-Gyed-Gyet	
	Marginal effects	Z***	Marginal effects	Z***	Mean	s.d.
Age	0.00119	2.42	0.00189	2.56	28.13	5.026
Age squared	–0.00001	–2.32	–0.00002	–2.39		
Level of education						
0–8 years of primary education	–0.00894	–12.75	–0.01194	–11.31	0.3231	
Lower secondary education	–0.0055	–8.62	–0.00678	–7.09	0.2893	
Upper secondary education	–0.00355	–5.66	–0.00451	–4.79	0.2887	
Number of children aged 0–7 years in household	–0.00323	–7.36	–0.00421	–6.60	1.440	
Age of youngest child						
Up to 11 months	–0.01108	–15.47	–0.01363	–11.89	0.2096	
12 to 23 months	–0.0098	–18.60	–0.01464	–15.89	0.3157	
24 to 35 months	0.00849	10.78	0.01026	9.99	0.1010	
36 to 47 months	–0.003	–4.82	–0.00729	–6.19	0.1027	
The house/flat is shared by more than one households	0.00284	2.85	0.00389	2.71	0.0736	
Local labour market and facilities						
Rate of registered unemployment*	–0.02734	–5.16	–0.0402	–5.32	0.0870	0.0566
Good transport*	0.00365	2.89	0.00368	2.06	0.1287	
Nursery schools/a thousand inhabitants	0.01010	2.92	0.01405	2.75	0.0393	0.0632
Permanent population	–0.00001	–2.12	–0.00001	–1.54	150.8	462.1
Budapest	0.05085	1.93	0.04040	1.31	0.0733	0.2606
Type of support scheme						
Gyes	0.00932	10.01			0.5831	
Gyed	0.00816	5.88			0.3004	
Linear time trend (years)	0.0005	3.14	0.00067	2.49	1999	
System of maternity leave						
1996–1998: gyed: –, gyes: *T*, gyet: *I, T*	–0.00408	–4.80	–0.00557	–4.23	0.2475	
1999: gyed: –, gyes: *U*, gyet: *U*	–0.00459	–4.63	–0.00600	–3.88	0.0845	
2000–2005: gyed: *I,* gyes: *U,* gyet: *U*	–0.00478	–3.32	–0.00567	–2.50	0.3562	
Observed exit probability	0.01518	0.02103				
Estimated exit probability at sample mean	0.00696	0.00903				
Number of observations	95,524	55,705				
Number of quits	1450	1171				
Pseudo-R^2	0.1359	0.1367				

At-risk population: received maternity benefit in quarter *t*. Dependent variable: 1 = respondent quit maternity leave and worked in quarter $t + 1$; 0 = respondent received maternity pay in quarter $t + 1$.
Censored = respondent quit maternity leave but did not work in quarter $t + 1$ or left the labour force survey.
I: insurance based (conditional on employment before childbirth), *T:* means tested, *U:* universal, –: not applicable. Reference categories: higher education, child aged 3, gyet, first regime (1993-95).
* Registered unemployed/working age population. ** There are at least four urban centres within 50 km that can be reached via public transport between 5.30 and 7.30 a.m. at a cost of 4000 HUF/month (at 1993 price levels), data for 1993, source: Köllő (1997). *** St errors are adjusted for the correlation between observations for the same individual.

Exit probabilities would have increased with time if the changes in regulations had not exerted their influence in the opposite direction. The average exit probability of those who entered the system at the time of the Bokros package were 0.4 per cent lower than the chances of those who entered earlier. The situation further deteriorated with the implementation of the reforms of the Orbán administration although this "deterioration" is probably a surface phenomenon: it is not the result of the system encouraging the same population of women to remain on maternity leave for longer in 2005 than they did in 1993 but reflects the fact that the new rules of entitlement had the effect of shifting the composition of claimants – towards populations with relatively weaker ties to the labour market.

The most important information from the point of view of social policy is carried by the factors indicative of the *costs* of returning to work and securing daytime childcare. *The absence from the labour force is shorter if the place of residence is shared by more than one household; if the local unemployment rate is low; if local transport facilities are well-developed; and if there are one or more nursery schools in the local area.* These relationships continue to hold when the effects of settlement size are controlled for, which suggests that the length of maternity leave is reduced when the costs of job search and employment are lower.

2.4. Returning from maternity leave and loss of income

The loss of income resulting from time spent on maternity leave is estimated from data provided in the sample of April to June, 2001 of the labour force survey, which includes details of labour income. The sample is restricted to men and women under the age of 46 who had worked for a maximum of one year in their current job. What we are interested in is the size of the gap between the earnings of women who had been on maternity leave a year before observation and the earnings of other women and men in the first year of employment. The sample size is small: the number of women who had received Gyes a year before is 2216, 1085 of whom had left the Gyes scheme by the time of the observation. The total number of new earners is 3204, 1467 of whom are women and 144 were returning to work from Gyes. The reliability of the data on wages is somewhat compromised by the circumstance that respondents could choose to give information on either net or gross wages. It is evident that high income groups were more likely to report gross wages than net wages and that the conversion between gross and net wage performed by the CSO is not entirely accurate. We introduce a dummy variable (gross wage reported = 1) to correct for this inaccuracy. Other than that, the usual variables used in wage equations (level of education, labour market experience, local labour market and firm characteristics) are included in the model.[25]

25 Functions applying to the population aged 15–40 years included only a linear term in labour market experience since this age group is at the rising section of the age-wage curve. Dependent variable: the logarithm of monthly gross earnings.

A comparison of estimates for all new entrants to young mothers shows the wage disadvantage of those re-employed after quitting maternity benefit to be around 8 to 10 per cent (compare parameters for non-gyes and gyes entrants in the first and second column in *Table 2.6.*). Since we do not have any information on the duration of maternity leave,[26] the estimate of wage disadvantage applies to a maternity leave of *average* length and to the time of *returning to work*. Since workers are not selected at random from the total population, estimates were also computed on a sample of non-student respondents aged 15–46 years applying the Heckman model, which takes unobservable effects into account. The wage disadvantage of women returning from Gyes amounts to 10 per cent in this estimate.

26 There is information only of the length of the current employment spells and not of previous spells.

Table 2.6: The gross wage disadvantage of women returning from Gyes in April–June 2001 based on the CSO labour force survey – Regressions

	Sample and method of estimation		
	new entrants[a]	new entrants with young children[b]	people aged 15–46 not in education
Variable	OLS	OLS	Heckman[c]
Education (years)	0.0634 (17.4)	0.0497 (8.94)	0.0722 (57.8)
Imputed labour market experience (years)	0.0252 (3.04)	0.0229 (1.12)	0.0063 (15.66)
Tenure in current job (years)	–	–	0.0064 (14.38)
Female who was not on maternity leave a year before	–0.0786 (4.58)	–0.1200 (4.48)	–0.1435 (26.62)
Female who was on maternity leave a year before	–0.1669 (4.44)	–0.1963 (5.30)	–0.2524 (11.22)
Female with children aged 0–7 years	–0.0218 (1.15)	–	–
Male with children aged 0–7 years	0.0431 (2.13)	–	–
Highly varied working hours	0.6003 (6.98)	0.7592 (5.74)	0.5622 (24.82)
Weekly hours of work in main job (hours)	0.0153 (8.37)	0.0204 (8.23)	0.0133 (28.18)
Local unemployment rate (log)	–0.1317 (11.52)	–0.1343 (5.97)	–0.0931 (21.49)
Budapest	0.0175 (0.49)	–0.0268 (0.43)	–
Trade union present at work place	0.0502 (2.59)	0.0444 (1.24)	0.0646 (11.29)
Employed by small business ($L < 50$)	–0.0482 (2.50)	–0.0621 (1.55)	–0.0832 (11.25)
Gross wage reported	0.1358 (10.24)	0.1466 (5.86)	0.1517 (31.36)
Dummy variables of branch (10 items)	yes	yes	yes
Number of respondents	3115	797	32,072
Number of working respondents	3115	797	14,697
R^2	0.3450	0.4088	..
ρ (Standard Error)			0.693 (0.018)
σ (Standard Error)			0.343 (0.004)

Dependent variable: logarithm of gross monthly wage.

[a] Respondent entered employment in the current or the previous year.

[b] Respondent entered in the current or the previous year and has children aged 0–7 years in the household.

[c] The variables of the selection equation: male with young child, female with young child, spouse in employment, four dummy variables of marital status, dummy variable of vocational education, squared imputed labour market experience, 20 dummy variables for the counties.

This 8–10 per cent disadvantage in wages (after an average absence of 3.7 years) almost exactly equals the estimated returns to the same amount of

work experience: 9.3 and 8.5 per cent based on the coefficients of imputed labour market experience. This loss of income corresponds to the returns to 1.5 years of education; it is twice as much as the amount of income gained from the presence of a trade union and also twice as much as the wage disadvantage of workers employed by small businesses. Approximately one hour of extra work per day would be needed to compensate for the loss of income (see the parameter of hours of work). These results suggest that the wage disadvantage must be regarded as substantial.

2.5. Conclusions

The system of maternity leave is only partly designed to support a temporary absence from the labour market. Disregarding the intermezzo of the Bokros package, the system has remained what it was before 1990 for educated women with labour market experience: the most generous cash support system (financing absence from work) in the developed world. The majority of women with secondary and higher education receive a generous benefit proportional to previous earnings for two years and over 80 per cent of these women remain on maternity leave with the Gyes scheme for an additional year. The system also fulfils functions of welfare and unemployment support among those with weak ties to the labour market and/or with poor labour market prospects.

Taking the conclusions of previous studies and the results of our analyses into account, we are in agreement with the criticisms voiced by the OECD and other international organisations.[27] The system of maternity leave has developed in an *ad hoc* manner through a series of modifications motivated by political and ideological considerations, without any factual discussion of its objectives, costs, benefits, or overall coherence. The current system provides an incentive for working women to leave the labour market for a (from the point of view of child welfare unnecessarily) prolonged period of time, while it fails to offer appropriate assistance to women with poor labour market prospects in returning to work or entering the labour force for the first time.

So far as the first group is concerned, the results reinforce the hypothesis that the length of maternity leave could be shortened and the loss of human capital resulting from labour market absence could be mitigated by reducing the costs of entering employment, expanding daycare facilities for children and implementing schemes targeted at improving labour market prospects. The situation of those with good labour market prospects (and taxpayers) could be improved by a system which finances absence for a somewhat shorter period of time and offers assistance in entering employment (daycare voucher, travel allowance, retraining schemes) in the third year of the child's life, possibly in combination with subsidies supporting flexible working hours for parents returning from maternity leave – from the resources saved by the withdraw-

27 The views of the World Bank (2007) are in accord with the OECD (2007): "Hungary has the most complex system, with a plethora of fragmented benefits and programs, many of which have no connection with each other."

al of cash benefits. An allowance system – available both to mothers and fathers – compensating employers for lost working days due to child sickness is also worth considering in place of a general wage subsidy. The reallocation of resources to schemes facilitating employment would offer a *choice* for women who are now compelled to stay at home for several years because of the lack of childcare facilities even though they do not wish to give up their careers. An efficient solution would be one where the capacity of daycare institutions for 2 to 4 year old children (nursery schools, family-run daycare, kindergartens) is substantially expanded and the quality of childcare is improved on the one hand and the availability of employment allowing flexible working hours is increased on the other.

The lack of facilities is not the only feature of the current system that encourages or even forces a prolonged maternity leave. The system gives rise to *practices* further hindering mothers' return to the labour market. The Hungarian system of maternity leave is, in principle, job-protected but the regulations are difficult to enforce given the actual duration of the leave: after nearly 5 years the workplace may have closed down or been restructured, or the job requirements may have changed substantially. Older children of mothers on maternity leave with a younger child are often refused nursery or occasionally even pre-school places on the grounds that the "mother is on maternity leave, anyway".

So far as the other group of claimants is concerned, we have seen that the proportion of women on maternity leave with no previous employment has doubled, while the corresponding proportion among women with low levels of education has tripled. For them, and for those living in isolated villages with high unemployment rates, maternity leave is not a system of support for staying at home temporarily but a form of unemployment or welfare benefit – increasingly so as the children grow older. We believe that their options are far from ideal. A cash benefit which is not tied to any sort of effort to find employment – and which cannot offer services enhancing labour market prospects since claimants are not registered as unemployed[28] – constitutes yet another item in the line of institutions encouraging absence from the labour market.

28 Only 2 to 3 per cent of women on maternity leave are registered with local job centres as unemployed although, as we have seen, over 10 per cent are unemployed and almost 40 per cent are inactive when they leave the system (and it may be assumed that an unknown but not negligible proportion remain jobless in the long term).

THE EFFECTS OF MATERNAL EMPLOYMENT AFTER CHILDBIRTH ON THE CHILD'S DEVELOPMENT

DÓRA BENEDEK

A substantial proportion of developed countries maintain some sort of welfare system for parents after childbirth, but there is no consensus as to the optimum period of parental leave. According to one view, centrally regulated parental leave curbs employers' freedom of decision and consequently impairs women's employment prospects. Others argue, however, that an early return to work is detrimental to the child's development.

Studies investigating the reasons behind low activity rates among women – such as Chapter 2 of this volume – usually come to the conclusion that mothers' employment chances deteriorate in proportion to the length of staying at home. The mother's employment, however, affects her child, since institutional childcare facilities (nursery schools or kindergartens) and parental care at home are likely to have different effects on the child's cognitive and emotional development and thus on his or her subsequent achievements. These considerations have led international organisations to encourage the expansion of maternity and child care provisions. The OECD, for instance, emphasises that individual care is the most beneficial form of childcare in the first year of life, and the countries of the European Union are required to offer statutory parental leave of at least three months *(OECD, 2006)*.

The only way of reconciling the two opposing views is to conduct a detailed analysis of both the labour market effects and the effects on children's development. The timing of the mother's return to work, the flexibility and length of working hours and the choice of daycare (parent, other relative, trained nurse or institution) could all have an impact on the child's development – and may either decrease or increase the benefits of labour supply.

This section gives an overview of empirical results shedding light on the effects of the mother returning to work after childbirth and those of daycare options for children between 0 to 3 years of age on the child's development.

In one of the earliest analyses of the relationship between type of daycare and child development, *Ruhm* (1998) finds that infant and child mortality is lowest in countries where longer parental leave is granted. Ruhm analysed aggregate data from nine OECD countries over the period between 1969 and 1994 to investigate the relationship between length of statutory parental leave and child health. Child health was measured by birth weight and mortality indicators, and a difference-in-differences method was used to estimate the effects of the length of parental leave controlling for country specific effects. The main conclusion of the study is that extending the period of parental leave significantly reduces the probability of death: an additional 10 weeks of leave reduces infant and child mortality by 1.6–2.6 per cent under various model specifications. A possible reason suggested by Ruhm is that mothers staying at home are more likely to breastfeed their children. The author estimates the costs and concludes that parental leave is a highly cost-effective means of improving child health. *Tanaka* (2005) uses a similar method of analysis and finds that only paid parental leave has these positive consequences, as unpaid leave is probably left unused by parents.

Aggregate data, however, are not suitable for the analysis of individual level relationships, such as the effects of the time spent at home by the mother on the cognitive development and future achievements of the child. The first studies based on individual data – typically from the United States – found negative effects, i.e., the mother's early return to work had a negative impact on the cognitive and social/behavioural development of the child, especially if the mother worked full-time in the first year *(Gregg & Waldfogel, 2005)*. These analyses, however, did not take the exact *timing* of the return

to work into consideration. The main reason for this is that the social welfare system of the United States grants 12 weeks of paid parental leave and research on the effects of maternal employment has focused on entry to employment after exhausting benefit entitlement.

Waldfogel et al (2002) looked at data from the US *National Longitudinal Survey of Youth* to follow the cognitive development of children of different social groups up to the age of 7 or 8 as indicated by five different measures. The authors find that white children whose mothers entered employment before their first birthday had significantly poorer developmental outcomes by the end of this relatively long period, but the effect was not significant for African American or Hispanic children. A further finding of the study is that the negative effect was much smaller for mothers who worked part-time (up to 20 hours a week) in the first year compared to mothers in full-time employment.

Looking at long-term effects, *Ruhm* (2004) finds that the mother's early return to work has no significant effects on secondary school achievements, which means that there is a possibility that the negative effects shown by other studies are transient. Ruhm also points out that although labour supply in the first year has an adverse effect on the development of the child, this is counter-balanced by employment in the second and third years. Also, while early employment may be detrimental, families where the mother does not work at all become disadvantaged in the long term.

The welfare system of the United Kingdom is somewhat closer to the Hungarian programme, as it is considerably more generous than the US system: mothers are entitled to six months of paid and a further six months of unpaid leave after childbirth. As a result, only 8 per cent of new mothers return to work within three months of childbirth in the UK, while the corresponding figure is 40 per cent for the US *(Gregg et al, 2005)*. *Gregg et al* used a highly detailed database of children born in Avon in the 1990s *(Avon Longitudinal Study of Parents and Children)* to investigate whether previous findings would be replicated given a more generous welfare programme and broader availability of part-time work. The children's development was assessed at the age of 4–5 years and 6–7 years with respect to reading, writing, maths and language skills, and at the age of 7 years with respect to reading, spelling and word formation skills. Mothers were classified according to when they entered employment within three years of childbirth and whether they had part-time (less than 30 hours a week) or full-time employment 21 months after childbirth. If someone other than the mother looked after the child, types of daycare provision were classified as follows: *1* unpaid informal care (partner, grandparent, other relative, friend or neighbour), *2* paid individual care arrangements (for instance trained nanny, nurse, etc.), and *3* paid group care (nursery school, for instance). The effects of observed personal and household factors were controlled for in the model estimations.

The main conclusion of the study is that the mother's full-time employment before the child reached 18 months of age has an adverse effect on the child's development and the effect is usually significant but not large.[29] Part-time employment within 18 months and full-time employment after 18 months has no negative impact on the child's development. The observed negative effect varies across social groups. It is negligible for mothers with the lowest educational attainment, since – as the authors suggest –the difference in the quality of maternal care as opposed to other care arrangements is smallest, and the mother's earnings are relatively more important in this case. At the other end of the scale, the gap in child development outcomes attributed to maternal employment is largest

29 Using a similar method of analysis on data from Canada, *Ram et al* (2004) find that although early employment has a negative effect on the child's development, this only holds for verbal indicators and does not appear in maths skills.

for mothers with the highest educational attainment. A further important result of the analysis is that the negative effect only appears if mainly unpaid, untrained, informal childcare provision (e.g., grandparents or friends) was used as a substitute for the mother's care. Where the child received trained care, the mother's labour supply had no adverse effects on his or her development.

Neidell (2000) looked into patterns in non-cognitive development (e.g., deviant behaviour, self-confidence, motivation). With individual differences controlled for, the author finds that time spent with the mother in the first year of the child's life has a positive effect on the child's development, while time spent together after the second year of life has no notable effects.[30] Interestingly, the mother staying at home over the second year of the child's life tends to have a negative effect on the child's non-cognitive abilities. Neidell proposes the explanation that establishing social relationships becomes an increasingly important part of the child's life after his/her first birthday and spending time with peers rather than parents may facilitate this process. In his analysis of the *Behavior Problems Index, Ruhm* (2005) finds no long-term negative relationship between the mother's early return to work and the child's non-cognitive development.

The common conclusion emerging from the various studies is that the mother's labour supply only presents a risk under certain circumstances and these circumstances can be precluded with the help of carefully planned regulations. It is beneficial for the child if the parent does not work or works part-time up to the first birthday of the child, but in addition to longer statutory parental leave, the developmental disadvantage of children can be reduced by providing flexible working conditions and part-time employment opportunities and by ensuring that trained childcare is accessible to parents.

30 This refers to time spent together during the day on weekdays and not to extreme cases where the mother does not spend time with the child at all.

3. LABOUR SUPPLY EFFECTS OF UNEMPLOYMENT ASSISTANCE

RÉKA FIRLE, ÁGOTA SCHARLE & PÉTER ANDRÁS SZABÓ

Unemployment assistance is the only major transfer available to unemployed people who are no longer entitled to insured unemployment benefit. It is paid to over 150 thousand people on average, which makes it the laregest cash transfer subject to means testing in Hungary. In this chapter we first present an overview of the results of Hungarian and international empirical studies on the labour supply effects of unemployment benefit programmes, and following this we investigate whether there is empirical evidence for the theoretical prediction that unemployment assistance has a negative impact on labour supply.[31]

3.1. Development of the unemployment assistance programme from 2000 to 2006

Regulations on the provisions for the unemployed were tightened repeatedly and substantially during the 1990s. As part of these measures, the means tested unemployment assistance was phased out starting in May 2000 and was replaced by a less generous means tested scheme called "regular social assistance". The new scheme was assigned a dual function: first, it has become the last resort for those not eligible for any other kind of support and secondly it provides welfare support and rehabilitation services for the long-term unemployed. The entitlement conditions of the programme are formulated to include both target groups but the eligibility conditions unequivocally specify proof of availability for work and active job search.

Entitlement conditions and the cash value of the benefit

Act III of 1993 on social administration and welfare declares that as of May 2000 those persons are entitled to social assistance who have poor health or who are unemployed, and have no other means of subsistence. The regulations in effect until April 2006 stated that the benefit could be granted if the claimant's monthly income did not exceed 70 per cent of the minimum pension rate, the family's monthly income per person did not exceed 80 per cent of the minimum pension rate and neither the claimant nor his or her family had any savings. The amount of the social assistance is based on a top-

31 *Firle & Szabó* (2007) gives the details of our calculations and extends the analysis to the targeting policy of the unemployment assistance programme.

up rule that brings the claimant's personal income up to 70 per cent of the minimum old-age pension rate.

The regulations were amended with effect from April 1st 2006. The twofold condition on (family and personal) income was replaced by a system where entitlement and the amount of benefit were determined on the basis of monthly equivalent income[32] in the family. An unemployed worker is eligible for social assistance if the family's equivalent income is below 90 per cent of the minimum pension rate. The amount of benefit tops up equivalent income to 90 per cent of the minimum pension rate. Entitlement and the amount of social assistance are determined by local governments and it is in their discretion to grant a sum higher than the minimum rate specified by the regulations.

Entitlement conditions

Similarly to other support programmes for the unemployed, the claimant must present proof of active labour market status to qualify for social assistance. Eligibility is granted if the claimant co-operates with the local job centre *for 1 year preceding the claim* and *for the entire duration of the claim*. An amendment in 2005 relaxed the previous conditions by adding a provison that proof of only three months rather than 1 year of co-operation must be provided by those who claim social assistance following a period of receiving nursing allowance, maternity benefit, income support for the mildly disabled or other social support.

The rules of co-operation are specified by the local government and it is usually the responsibility of the local job centre to enforce compliance with the rules. Co-operation is initiated by registering the claimant with the local labour office where a programme of integration is worked out which is to be agreed by both parties. The programme specifies frequency of contact with the job centre (usually a visit every 4–12 weeks) and the rules of accepting any suitable job offer or participation in education or training schemes. Failure to keep appointments and the rejection of job or training opportunities may be penalised – for instance by the reduction of the benefit or its temporary suspension – but the enforcement of sanctions varies greatly between individual centres.[33]

One of the objectives of the social assistance programme is to encourage return to work. In addition to uninterrupted co-operation with the labour office, the programme of rehabilitation therefore involves participation in a 30 day community work scheme organized by the local government. This requirement, on the one hand, filters out claimants who are only unemployed on paper and those who are not willing or able to work or are engaged in black labour while in receipt of the benefit. On the other hand, it helps claimants to readjust to a lifestyle of regular work and moderates loss of working capacity (which is usually a corollary of long-term inactivity).

32 The equivalence scale assigns a unit weight to the head of the household and smaller weights to other members of the family, accounting for the fact that household expenses (e.g., utility bills) do not increase in exact proportion with family size. The Hungarian system assigns a weight of 0.9 to a spouse or cohabiting adult; 0.8 to each of the first and second children; and 0.7 to any other children.

33 For a detailed discussion of the administration of unemployment benefits, see *Koltayné* (2002).

Community labour is organised by the local government or the job centre and in most cases it is their responsibility to decide who should participate. A central government subsidy of 70 to 100 per cent may be claimed to fund charity or community work programmes and any remaining costs are financed from local government sources. In most settlements, community workers are assigned to unskilled jobs, such as the maintenance of public places (parks, ditches or bus stops). Other, less frequent assignments may include tasks in social or health services (these are approved by the regulations as of 2003).

The number of people on benefit

Changes in the number of people on social assistance *(Table 3.1)* clearly reflect the amendment of regulations in May 2000. This is when the old unemployment compensation scheme was abolished and social assistance remained the only option for those who had used up their entitlement of unemployment benefit. The number of recipients rose especially sharply in 2001 – although it also showed a major increase in 2000 – as the entitlement period of the old unemployment assistance scheme had expired for the last claimants.

Table 3.1: Number of people receiving social assistance between 1999 and 2005

Year	Number of claims	Average number of recipients	total expense in proportion to total welfare expenditure	Average monthly value per person	
				Nominal value (HUF)	Real value* (1999 = 100)
1999	22,305	34,480	0.14	10,588	100.0
2000	66,426	47,154	0.18	11,056	95.1
2001	126,213	94,779	0.37	13,019	102.5
2002	130,181	125,894	0.46	14,650	109.6
2003	121,324	138,127	0.46	15,010	107.2
2004	127,172	144,853	0.47	15,864	106.1
2005	130,995	158,565	0.47	16,991	109.7

* Based on the average annual consumer price index.

Note: The data include people claiming benefit on grounds of poor health in addition to unemployed claimants. The former group constitutes around 5 to 7 per cent of the population on benefit.

Source: CSO Yearbooks of Welfare Statistics, 2001–2005.

3.2. Labour supply effects of the social assistance programme

The effects of the social assistance programme on labour supply show a similar pattern to the trap situation presented in Chapter 1 (Part *a)* in *Figure 1.5*). Since its value is lower than that of unemployment benefit, the disincentive effect is smaller, but the reduction in labour supply may apply not only to the claimant but also to other adult members of the household due to the income threshold. The latter effect is similar to that observed in the case of income-tested transfers (which do not exclude employment) but without the trap: as

the hours of labour supply increase, the worker's income remains higher than his/her wages for a while although the difference between wage and income gradually decreases (unlike in Part *b)* of *Figure 1.5*, the transfer does not cease abruptly). People receiving social assistance are required to co-operate with the job centre and may be expected to participate in community work: these requirements may encourage labour supply.

The results of international (mostly American) empirical studies tend to suggest that welfare programmes similar to the Hungarian social assistance scheme have a negative or a neutral effect on labour supply. Multivariate estimates relying on individual level data in the United States also find a slightly negative effect in their analysis of in-kind benefits tied to an income threshold (food stamps and health services). *Moffitt* (2003), reviewing American results, concludes that if no means-tested welfare programmes were available, the number of labour hours supplied by welfare participants would increase by 10 to 50 per cent.

The negative effects of welfare benefits on labour supply are confirmed by analyses of the labour market effects of the American welfare reform of 1996. As part of the reform, they set strict job search requirements as a condition of unemployment benefit receipt, set a limit to benefit duration at a maximum of five years and introduced in-work benefits to strengthen financial incentives. The reform – beyond the overall improvement in the economy observed in the late 1990s – increased the labour supply of people previously relying on benefits by 32 to 50 per cent and their rate of employment by 28 to 35 per cent *(Bloom & Michalopoulus, 2001; Ellwood, 2000)*.

There are few studies of the work disincentive effects of means tested unemployment benefit programmes in Eastern and Central Europe and most of these are comparisons with the effects of insurance-based benefits. *Terrel & Sorm* (1998) and *Micklewright & Nagy* (1998) analysed Czech and Hungarian data respectively to investigate changes in the likelihood of re-employment or in the duration of unemployment following an individual's transfer from insured unemployment benefit to social assistance. Their results indicate that the likelihood of re-employment increases as the expiry date of the unemployment benefit approaches, which more likely reflects the disincentive effects of unemployment benefit (possibly relative to the effects of social assistance) rather than that of the assistance programme. The absolute effects of a social assistance programme specifically targeting unemployed people are discussed by *Terrel, Erbenova & Sorm* (1998). The authors analysed data from the Czech labour force survey and found a significant negative labour supply effect but only among families with more than one child, who were entitled to a substantially higher social benefit than other families.

In one of the first empirical studies in the Hungarian literature,[34] *Micklewright & Nagy* (1998) estimated a duration model based on a longitudinal

34 The relevant Hungarian literature is reviewed by *Bódis et al* (2005).

survey.[35] The results show no significant effect of social assistance on labour market participation; that is, no disincentive effect could be observed. The authors conclude that "cutting benefit rates would not significantly boost the labour supply of unemployed workers". (p. 423.)

Köllő (2001) investigated changes in the labour market chances of unemployed people receiving unemployment benefit between 1994 and 2000. The results show that the likelihood of employment was higher in 2001 than it had been seven years earlier, although the observed improvement was much more modest than suggested by the official statistics. Also, the relative employment chances of participants living in disadvantaged regions substantially deteriorated over the period, especially with respect to people with upper secondary or higher education. The size of the difference between unemployment compensation and previous income did not have an effect on the probability of entering employment, which calls into question the appropriateness of targeting policies solely on labour supply (by reducing benefit rates and raising the minimum wage).

Galasi & Nagy (2003) looked into the effects of the restructuring of welfare programmes available to unemployed people who were not eligible for unemployment benefit that took place in 2000. The study sought to find out to what extent the transfer from the old unemployment assistance to the new social assistance programme altered take-up and re-employment probabilities. The authors conducted a follow-up survey on two groups: those who exhausted their entitlement to unemployment benefit in April 2000 and those whose entitlement ended in May 2000. The group that lost entitlement to unemployment benefit in April 2000 entered the old unemployment assistance scheme, while a month later, the other group "only" had access to social assistance. The results show that fewer people applied for social assistance and fewer claims were granted than under the previous unemployment compensation programme. Also, while lower benefit rates and loss of entitlement accelerated re-employment rates, the welfare of those who could not find employment was reduced.

Fazekas (2002) investigated the welfare administration at local governments following the abolition of the unemployment assistance programme and found a higher take-up in regions with higher unemployment rates and a lower take-up in regions where the community work requirement (the availability for work test) was enforced with greater rigour.

The incentive effects of the eligibility conditions on unemployment benefit were measured by *Bódis, Micklewright & Nagy* (2004) in an experiment carried out at the job centres of six counties. The study randomly assigned unemployed people on benefit to either of two groups: the members of the test group were subjected to more rigorous supervision by the labour office than the members of the control group. Although the results show a higher

35 The sample included unemployed people entering the support scheme in April or May 1994 who had 11 to 12 months of entitlement. Respondents were monitored until they started work or for a period of 3 to 4months after the expiry of their entitlement.

likelihood of employment among the test group, the difference only reaches statistical significance among women aged 30 or older. The likelihood of re-employment among older women is sensitive to marital status and the local unemployment rate: married women are 60 per cent more likely to find employment, and the employment advantage of the test group over the control group substantially decreases with the unemployment rate (and almost completely disappears at an unemployment rate of 8 per cent).

Strikingly little information is available on the efficiency of public works schemes and other experimental programmes intended to encourage labour supply funded by the National Labour Foundation (OFA) and other sources. *Galasi, Lázár & Nagy* (2003) find that participants of public works schemes are less likely to find employment than the participants of other active labour market programmes (start-up allowance for entrepreneurs, wage subsidy or training) but this result is in part explained by the composition of the group (lower education levels and higher participation in income support programmes among the former group). Most studies publish raw employment rates only, on the basis of which the effects of the programme cannot be separated from group composition or environmental factors.[36] A survey by the Hungarian State Audit Office (ÁSZ) conducted in 2001 at 95 local governments and job centres concluded that no reliable data were available on the efficiency of public works schemes, while sporadic reports indicate a very low (1.3 per cent) re-employment rate *(ÁSZ, 2002)*. Teréz Laky's analysis also points to the conclusion that while community work was introduced as a temporary resort, it has become the only job opportunity for the uneducated long-term unemployed *(Laky, 2005)*.

3.3. The labour supply effects of social assistance and public works programmes

In addition to the amount of benefit received and the requirement of job search, the labour supply of welfare participants is determined by several other factors, such as the range of available job offers, the fixed costs of employment and various personal circumstances (self-confidence, health, family commitments, etc.) that affect participation and expected earnings. The impact of a welfare programme can only be measured accurately if the effects of other factors are controlled for, which requires individual level data. The individual level analysis of regular population surveys (of the CSO) or administrative databases has some limitations as well, as these only collect easily measurable data on personal circumstances (such as age and education) and usually record the events of only one period or a few consecutive periods.

Keeping these constraints in mind, the following sections investigate whether social assistance has an impact on the likelihood of entering employment. The task requires a data source where the individual's labour market status

36 Data on the efficiency of certain public works schemes are published by e.g., *Orsovai, Palotai & Pálinkó* (2000), *Szabó & Bokor* (2006) and *Tamási* (2005). For a discussion of the methodology of measuring results see *Kézdi* (2004).

and welfare benefit status are recorded at several points in time. Our analysis uses panel data from the quarterly reports of the CSO Labour Force Survey from 2001 to 2004, where the benefit status and the labour market status of each individual can be followed over time.

The effects of social assistance and public works schemes on the probability of entering employment were estimated in two different models. Both models were constructed for a population of unemployed people of an active age who were capable of work and excluded people not seeking employment due to poor health, incapacity, studies or because they were caring for a family member. People employed on public works programmes were regarded as unemployed if they reported receiving social assistance. The final sample included in the panel consists of 15,844 persons.

Over the four years under analysis, on average almost 19 per cent of unemployed people found employment in the next quarter, while only 9.5 per cent of welfare recipients and 11 per cent of those hired for some public works programme found an unsubsidised job after 3 months.

A multivariate analysis was carried out to reveal how much of the raw proportions is explained by the benefit or community work itself, controlling for observable variation in environmental and personal characteristics.[37] Two estimates were made: the probability of exiting the welfare programme was first measured relative to the total population of unemployed people available for work, and second, relative to the group of people who had just exhausted their unemployment benefit entitlement.

Social assistance substantially reduced the likelihood of re-employment for both groups. Among the broader group, the benefit decreased the labour market prospects of both men and women in the next quarter by around 20 per cent. The effect was even stronger among people with expiring entitlement: the probability of entering employment was 75 per cent lower among men and 85 per cent lower among women on benefit compared to people not receiving benefit. Welfare participants accordingly stayed longer in unemployment: they were out of work approximately 2 years (7 quarters) longer on average than those not participating in the welfare programme. Public works schemes also had an adverse effect on labour supply: it reduced the likelihood of employment in the next quarter by 50 per cent among all unemployed men and by 30 per cent among all unemployed women.

The probability of entering employment among the unemployed

Table 3.2 displays the effects estimated for each sex. The estimates indicate that, controlling for other observed factors, people on benefit and those employed on public works jobs are less likely to find non-subsidised employment in the next quarter compared to the inactive or unemployed population available for work and not in receipt of welfare benefit.

37 People on benefit and people engaged in public works may differ from the group of non-workers along dimensions which are not recorded in the CSO Labour Force Survey (e.g., motivation). We here assume that the group of people who had just exhausted their unemployment benefit entitlement is less divergent in this respect and our results will be less likely to be distorted by errors due to unobserved factors.

Table 3.2: Average partial effects on the labour supply of unemployed women and men*

	Men		Women	
Exit	Average partial effect	p	Average partial effect	p
Social assistance	*-0.0679*	*0.000*	*-0.0530*	*0.000*
Public works	*-0.0932*	*0.000*	*-0.0631*	*0.000*
Active labour market programme	*-0.0615*	*0.006*	*-0.0615*	*0.000*
Unemployment assistance for people approaching retirement age	*-0.0865*	*0.000*	*-0.0957*	*0.005*
Unemployment benefit	*-0.0326*	*0.000*	*-0.0231*	*0.003*
Spouse works	*0.0777*	*0.000*	-0.0021	0.678
Nobody works in household	*-0.0535*	*0.000*	*-0.0467*	*0.000*
One person works in household	*-0.0229*	*0.002*	*-0.0145*	*0.038*
No children	*-0.0267*	*0.000*	*-0.0235*	*0.000*
Large family	*-0.0381*	*0.000*	*-0.0706*	*0.000*
Young child (under 8)	*0.0358*	*0.000*	*-0.0846*	*0.000*
Reservation wage (thousand HUF)	*-0.0012*	*0.000*	*-0.000002*	*0.000*
Aged 25–34 years	*0.0332*	*0.000*	*0.0435*	*0.000*
Aged 35–54 years	*0.0245*	*0.003*	*0.0816*	*0.000*
Aged 55–62 years (excluding pensioners)	*-0.0384*	*0.000*	*-0.0328*	*0.003*
2–3 year vocational training	*0.0823*	*0.000*	*0.0673*	*0.000*
Upper secondary education	*0.1077*	*0.000*	*0.1053*	*0.000*
Higher education	*0.3147*	*0.000*	*0.3393*	*0.000*
Months registered as unemployed	*-0.0054*	*0.000*	*-0.0058*	*0.000*
Months registered as unemployed (squared)	*0.00004*	*0.000*	*0.00004*	*0.000*
In full time education a year ago	*-0.0295*	*0.012*	-0.0226	0.105
On military service a year ago	0.0136	0.476	-0.0809	0.278
Home-maker a year ago	*-0.0694*	*0.012*	-0.0241	0.101
Maternity leave a year ago	*-0.1191*	*0.000*	*0.0394*	*0.004*
Other inactive a year ago	*-0.0239*	*0.039*	0.0101	0.543
Unemployment rate in county	*-0.5837*	*0.004*	0.2597	0.228
Central Hungary	*-0.0578*	*0.000*	*-0.0383*	*0.000*
Southwest Hungary	0.0114	0.304	-0.0172	0.107
Northeast Hungary	0.0108	0.338	-0.0067	0.489
Southeast Hungary	0.0157	0.125	-0.0121	0.178
Northern region	-0.0045	0.698	*-0.0175*	*0.095*
1st quarter	*0.0517*	*0.000*	0.0056	0.464
3rd quarter	*0.0691*	*0.000*	*0.1324*	*0.000*
2001	*-0.0535*	*0.000*	-0.0136	0.195
2002	*-0.0403*	*0.000*	-0.0023	0.822
Number of observations	22,153		22,082	
Pseudo R^2	0.1015		0.1404	

* Average partial effects are computed by averaging the (partial) effects of a given variable. The probability of entering employment for men, for instance, is 6.8 percentage point lower than the likelihood for the total sample.

Note: Probit regression with robust standard errors. The dependent variable was employment (exit). Variables significant at the 10 per cent level are printed in italics. Reference groups: members of households with 2 or more people at work, house-

holds with one or more children over the age of 8, people aged 18 to 24, 8 years of primary school or less, in employment one year before, and Mid-West Hungary.
Source: Authors' calculations based on the CSO Labour Force Surveys of 2001 to 2004.

Social assistance reduces the probability of employment on average by 5.3 percentage points for women, and by 6.8 percentage points for man. Women employed on public works jobs are 6.3 percentage points less likely to find unsubsidised employment in the next quarter and the corresponding figure is 9.3 percentage points for men. Given that the overall likelihood of finding employment is 18.7 per cent, the above results constitute a strong effect: employment prospects are reduced by 30 to 50 per cent.[38]

We cannot be certain, however, that it is indeed the work disincentive effects of the benefit and public works programmes that these figures reflect. In theory, an increase in the amount of benefit is expected to be accompanied by an increased disincentive effect. Contrasting with that, we estimated the effect of unemployment benefit to be smaller than that of social assistance, even though the former is higher in amount. This suggests that the parameter estimates on social assistance may not only capture the disincentive effect of the transfer but could also be sensitive to other, unobserved characteristics specific to social assistance recipients. These may include ambition, assertiveness, self-confidence, social connections or poor health, which are not recorded in our data but are known to influence the probability of employment. Studies based on in-depth interviews reveal that long-term unemployment – even with a secure family background – generates a feeling of hopelessness and personal and family tensions *(Simonyi, 1995; Jahoda, Lazarsfeld & Zeisel, 2002)*. Also, a significantly more pronounced deterioration can be observed in the health of people out of work for an extended period compared to other labour market groups *(Tardos, 1998)*, which can further reduce the chances of employment. The actual work disincentive effects of social assistance and public works programmes may thus be lower than our estimates if we allow for unobserved factors of this kind.

The estimated effect of age – measured by age group dummies in the model – corresponds to expectations: returning to the labour market is most difficult for non-employed people over the age of 55, compared to the reemployment probabilities of prime age workers (aged 35 to 54), the size of the negative effect equals that of social assistance for men, and is twice as large for women (6.2 and 11.4 percentage points respectively).[39] Employment chances substantially increase with educational attainment for both sexes and show a decline with the duration of unemployment. Having a young child in the family affects the behaviour of men and women differently: there is a positive effect on the labour supply of men, which is half as strong as the effect of social assistance, while women in these families are less likely to re-enter employment and the effect is one and a half times as large as that of benefit receipt.

38 Unemployment assistance reduces the likelihood of employment to 18.34 – 5.3 = 13.04 per cent for women and to 18.98 – 6.8 = 12.18 per cent for men, which is a reduction of 30 and 35 per cent respectively. Public works programmes reduce the chances of re-employment to 18.34 – 6.3 = 12.04 per cent for women and to 18.98 – 9.3 = 9.85 per cent for men, which amounts to a reduction of 35 and 50 per cent respectively.

39 Men aged 25–34 are 3.3 per cent more likely to start work compared to men under 24, which means that their employment chances are 3.3 + 3.8 = 7.1 per cent higher than those of men over 55. The corresponding figure is 6.2 per cent for men aged 35–54. Compared to women over 55, the probability of employment is 7.5 per cent higher among women aged 25–34 and 11.4 per cent higher among women aged 35–54.

The probability of entering employment and duration of unemployment following the exhaustion of unemployment benefit entitlement

The above estimates may be distorted by the fact that previous work history and the duration of unemployment are disregarded in the model. For this reason, a modified model of the effects of the welfare programme was constructed *(Table 3.3)*. Conditional probabilities of employment (hazard rates) are expressed here as a function of observed personal characteristics of unemployed people and duration of unemployment *within the observed period*. Estimates are computed only for those who exhausted their unemployment benefit entitlement within the observed period, assuming that they constitute a relatively homogeneous group with respect to work history and labour market attachment. Estimates based on variously specified duration models yielded very similar results.[40]

Compared to the total sample of the non-employed working age population, the probability of re-employment within 3 months is far lower among those who just exhausted unemployment benefit: it is 8 per cent among men and 6 per cent among women, compared to an average of 19 per cent for the non-employed.

The effects of public works schemes cannot be estimated for this group as none of the participants (51 out of 1053 men and 31 out of 607 women) entered non-subsidised employment over the observed period. The effects of social assistance, however, are statistically significant and negative: men receiving benefit are 5.9, and women on benefit are 5.6 percentage points less likely to start work compared to people not receiving benefit, controlling for the length of time elapsed since the expiry of benefit entitlement. The size of the effect must be interpreted in the context that the average probability of employment in the next quarter is 7.9 per cent among men and 6.5 per cent among women. That is, the re-employment probability of those receiving social assistance is 75 per cent smaller for men, and 85 per cent smaller for women compared to non-recipients.[41]

Although to a lesser extent, selection effects in this group are still a valid concern, with the possible consequence that parameter estimates reflect the effects of unobserved factors beyond those of welfare participation.

The variables of the duration model show fewer significant effects. One explanation may be the substantially smaller sample size or the greater homogeneity of the group. In contrast with education and household type, age has a significant effect on the probability of employment: compared to people over the age of 55, younger men are 7–10, and younger women are 4–8 percentage points more likely to find work. The length of unemployment and, among men, the local unemployment rate have a negative effect on the probability of employment.

40 Discrete and continuous time-duration, parametric and non-parametric models. Here we publish Jenkins estimates, which is an estimation method using a discrete time-duration model and a logit function.

41 The probability of employment among men on benefit is 7.9 – 5.9 = 2 per cent, and among women on benefit it is 6.5 – 5.5 = 1 per cent in the next quarter.

Table 3.3: The (conditional) probability of employment, average marginal effects

Employment	Men		Women	
	Average partial effect	p	Average partial effect	p
Social assistance	*-0.0596*	*0.005*	-0.0557	0.077
Public works	-	-	-	-
Spouse or partner works	0.0236	0.209	-0.0027	0.891
Young child in the household	0.0109	0.560	-0.0011	0.967
Aged 18-24 years	*0.0990*	*0.088*	0.0827	0.000
Aged 25-34 years	0.0676	0.171	0.0647	0.000
Aged 35-54 years	*0.0790*	*0.085*	0.0406	0.000
Primary education	0.0152	0.666	0.0123	0.784
Lower secondary (vocational)	0.0321	0.433	0.0077	0.878
Upper secondary (general)	-	-	-0.0159	0.709
Upper secondary (vocational)	0.0422	0.368	0.0425	0.494
Months registered as unemployed	*-0.0111*	*0.000*	-0.0104	0.002
Months registered as unemployed (squared)	*0.0001*	*0.000*	0.0001	0.000
Local unemployment rate	*-0.2678*	*0.017*	-0.2318	0.159
Time elapsed since expiry of unemployment benefit entitlement				
2nd quarter	*-0.1976*	*0.010*	-0.5727	0.000
3rd quarter	*-0.1597*	*0.003*	-0.3593	0.000
4th quarter	*-0.1266*	*0.000*	-	-
5th quarter	*-0.1190*	*0.002*	-0.3512	0.000
2001	*0.0981*	*0.064*	0.1438	0.066
2002	*0.0633*	*0.068*	0.0957	0.066
2003	-0.0048	0.924	0.0564	0.461
1st quarter (calendar time)	0.0014	0.953	-0.0506	0.080
2nd quarter(calendar time)	0.0072	0.730	0.0153	0.539
3rd quarter (calendar time)	*-0.0299*	*0.095*	-0.0174	0.459
Number of observations	1023		607	
Prob > χ^2:	0.000		0.000	

Note: Logit estimation, with employment as dependent variable. Variables statistically significant at 10 per cent level are printed in italics. Reference groups: aged 55–62, incomplete primary education, the year 2004, the fourth quarter (of calendar time), and the first quarter following expiry of unemployment benefit entitlement.

Source: Authors' calculations based on the CSO Labour Force Surveys of 2001 to 2004.

Using the above presented conditional probabilities, one may compute the average duration of unemployment after the exhaustion of insured benefit entitlement. Adding this to the length of unemployment prior to exhaustion yields the total duration of unemployment since the last job *(Table 3.4)*. Results indicate that among unemployed people with recently expired entitlement, those receiving social assistance remain without jobs for an average of six quarters (18 months) longer than non-recipients.

Table 3.4: Average duration of unemployment (quarters)

Receives social assistance	Average	Standard error	N
No	9.8	5.96	567
Yes	16.2	7.24	355
Total	12.2	7.19	922

Source: Authors' calculations based on the Labour Force Surveys of 2001 to 2004.

3.4. Ways to improve the employment prospects of welfare recipients

In our analysis of data from the CSO Labour Force Surveys of 2001 to 2004 we find that unemployed people receiving social assistance and those employed on public works projects are both less likely to find unsubsidised employment compared to other unemployed or inactive populations. People on benefit are 30 to 35 per cent less likely to find employment and they remain unemployed for almost two years longer on average than people not receiving benefit. This outcome, however, may in part be explained by unobserved characteristics. The results also suggest that this type of benefit tends to function in practice as income support for the long-term unemployed and neither the availability conditions nor the work test element of public works programmes achieve the intended effect of encouraging re-employment.

Although the effects of unobserved personal characteristics cannot be reliably controlled for, the results unequivocally point to the conclusion that social assistance and related public works schemes keep a sizable group of poorly educated unemployed people in a helpless and hopeless state with a prolonged period of poor employment chances and insecure incomes.

We believe that it is not a lack of good will, but deficiencies in the regulations and the malfunction of the broad institutional environment that have given rise to this situation. The solution would involve the radical reform of the current regulations in four areas.

1. The first task is to amend eligibility conditions. Regulations should clearly specify sanctions for refusal to cooperate, leaving room for considerations of equity (e.g. by allowing temporary suspension in place of termination) and clearly prescribe the responsible body and the procedures of enforcement. It must be ensured that the bodies responsible for enforcement have an interest in and adequate administrative staff for enforcing eligibility conditions. This approach has brought substantial success in some EU countries – *Scharle* (2002) gives a brief overview of these initiatives and their outcomes.

2. The second task is to create incentives for the institutions (local governments) responsible for administering the assistance scheme to give a priority to re-employment in the open labour market. As long as the costs of providing transfers are the same or lower than those of activation services, the local

government will be inclined to choose the former, so that they can please the claimant and also spare the hassle of organising public works projects. One way to correct incentives is to set the rate of subsidies from the central government in proportion to the degree of activation exerted by each programme. Thus, the share of government financing should be lowest for social assistance schemes, and highest for active labour market programmes that facilitate re-employment in non-subsidised jobs. This would not necessarily imply a reduction in public funds available for activation programmes but would change the share of central versus local resources.

3. The above measures can only lead to success if the responsible bodies have the necessary expertise and tools to promote employment. This raises two additional requirements: first, the availability of experts who are able to identify personal characteristics that may impede re-employment (poor social or cognitive skills, family problems, etc.) and to select the services best suited to removing or reducing any such obstacle. This may be feasible at the level of the 174 small regions (LAU1), since some measures have already been taken to build expert capacities in local public employment services *(Busch, 2006)*. Second, an appropriate range of quality services must be available to local governments – some relevant international experiences are discussed through an example in Chapter 6 of this volume. This may also require opening the market of employment services to non-profit or for-profit providers.

4. The fourth task is to separate the two functions of the social assistance scheme. There will always be people among those in need of support who cannot work temporarily or permanently. Both a commitment to human rights and social solidarity call for a solution that grants these groups access to some kind of support providing for basic needs. This is also essential for eligibility conditions to be enforceable, since – fortunately – there will always be compassionate officials who are reluctant to enforce sanctions when they are aware that the claimant may not expect help from any other source.

ADMINISTRATION AND IMPACT OF PUBLIC WORKS PROGRAMMES

PÉTER ANDRÁS SZABÓ

At present there are three public works programmes for unemployed people.[42] *Scheme A* was introduced in 1991: it is organised by job centres and usually involves community services provided by local governments (cleaning public parks, ditches, etc.) As of 2000, Scheme *A* was extended to include any task that "affects the local population or municipality." 50 to 70 per cent of all costs (as of 2002, 90 per cent if Roma workers or people over the age 45 are employed) are covered by the central budget, financed from the Labour Market Fund. County labour offices are authorised to allocate the budget *(Laky, 2005)*.

Scheme B was introduced in 2000; organised by local government and serves as a work test for unemployed people claiming social assistance. The local government may claim 90 per cent of social assistance from the central budget. Workers on the scheme may be assigned to any local government task.

Scheme C was started in 1996, with the objective of using nationwide or regional projects (flood safety and emergency, clearing public areas of allergenic vegetation, forestation tasks) to create job opportunities for the unemployed. Tenders are invited by the Public Works Council and the work activity itself is organised by local governments or participating public utility companies (waterworks, forestry, national parks, etc.). 60 per cent of Public Utility Programmes are financed by the central government budget, the rest is funded by the contracted provider (7 per cent) or other, regional or local sources *(FMM, 2006)*. Table K3.1 shows the number of participants in the various public employment schemes and their costs.

As set out by the regulations, Schemes A and B are intended to encourage employment rehabilitation and a return to the primary labour market. Surveys on the administration and efficiency of the schemes were carried out in Budapest in 1999 *(Orsovai, Palotai & Pálinkó, 2000)* and in four counties in 2001 *(Fazekas, 2001)*, and the Hungarian Audit Office assessed the public works projects of 95 local governments in the same year *(ÁSZ, 2002)*. The results of these surveys and administrative data on return to work following long-term unemployment agree in their conclusion that public works schemes have done little to reduce long-term employment. *Orsovai, Palotai & Pálinkó* (2000) find that 28 per cent of workers hired on public works projects move back and forth between active and passive labour market programmes, and *Kertesi* (2004) argues that it is precisely these schemes which are responsible for large groups of untrained Roma workers being trapped in a situation with no way out: spending years in badly paid and insecure jobs alternating with social assistance.[43]

According to data from the Labour Force Survey of 2003–2004, the proportion of workers returning to public works schemes is estimated at 37 per cent *(Table K3.2)*. The preliminary results of a research project of the Hungarian Institute of Economics led by Gyula Nagy in the summer of 2007 indicate that the situation has not changed over recent years. Local governments tend to offer temporary employment rather than work opportunities that facilitate rehabilitation and improve labour market chances.

Public works schemes – far from fulfilling their original functions – are also used as a supplemen-

42 The Hungarian titles are "Közhasznú" (Type A), "Közcélú" (Type B), and "Közmunka" (Type C).

43 According to data in the Roma survey of 2003, barely 30 per cent of the working-age Roma population is employed and the job loss and job entry rates are around 25 to 30 per cent among Roma people, compared to a rate of below 10 per cent among unskilled non-Roma workers *(Kertesi, 2004)*.

tary source of financing municipal activities. The gradual extension of activities eligible for central government financing, the flexibility of the regulations and the almost complete absence of supervision allows larger municipalities to have their basic tasks and other tasks that do not strictly serve the community performed by public workers *(ÁSZ, 2002)*. The Audit Office survey recorded a case, for instance, where teaching assistants in a Veszprém county primary school were employed on a Scheme B project from the start of the school year in September through to its end in June and were put on unemployment benefit for the summer holiday – in full compliance with current regulations. Another example is the district council in Budapest which was brought into the media spotlight for employing a gypsy band for merry making and labelling them as community workers.

Table K3.1: Costs and participants of public works schemes (2002 and 2005)

	Number of participants (thousand people)		Public costs (billion HUF)	
	2002	2005	2002	2005
Scheme A*	22	22	11.9	12.8
Scheme B*	12	17	9.4	14.4
Scheme C**	14	15	5.6	7.1
Social assistance**	113	159	22.1	32.3

* Monthly average. ** Annual average.
Note: Hungarian GDP was HUF 22,000 billion in 2005.
Sources: National Employment Service CSO, Finance Ministry, Ministry for Work and Welfare.

Table K3.2: Participation patterns among public works employees, 2004 (%)

	Number of observed quarters			
	3+	4+	5+	6+
Staying on scheme	28	21	18	17
Moving on and off	37	48	52	57
Exit from scheme	35	31	30	26
Total	100	100	100	100
Observations	98	75	50	23

Notes: Data were taken from Quarter I 2003 to Quarter II 2004 in the CSO Labour Force Survey. Those people were included who did not participate in public works schemes in the first quarter of 2003 but entered a scheme in the next quarter and were observed for at least 3–6 quarters. The Labour Survey records considerably fewer public workers than suggested by administrative data. Assuming that the majority of workers employed in these schemes by local governments for extended periods consider themselves to be "proper" employees, the above results overestimate the proportion of people moving on and off the programme.
Source: Author's calculations based on the CSO Labour Force Survey of 2003–2004.

The explanation for the use of Scheme B in ways which are far removed from the original intentions is that local governments are not motivated and not appropriately prepared for organising public works programmes that offer rehabilitation. Smaller settlements lack institutions which could arrange public employment schemes *(Fazekas, 2001)*. The Audit Office report *(ÁSZ, 2002)* reveals that local governments rarely have an employment policy of any sort: only three out the 95

municipalities reviewed had a regular report on the employment situation and an action plan for necessary interventions.

Scheme A projects run by job centres have not proved to be any more successful in improving employment prospects, which suggests that lack of expertise cannot be the main reason behind the problems. The main causes are more likely to be found in the fact that neither the monitoring system, nor the financing arrangements create incentives to improve the employment chances of community workers. Monitoring is the responsibility of job centres but they have insufficient resources to cover this task as well as their expanding range of other functions. As a result, monitoring activities are limited to the audit of financial accounts: it is often left unchecked, for instance, whether or not all workers report for work and the job centre may not even know the number of workers registered with the local government *(ÁSZ, 2002)*.

Although the Ministry is aware of the poor efficiency of the schemes, it appears to have resigned itself to the situation. The recommendations of 2002 of the Audit Office concerning the assessment of programme results and the improvement of their efficiency were discarded by the Ministry for Employment on the grounds that "the most important function of public works schemes is to provide employment opportunities as a last resort for unemployed workers who would otherwise find no jobs." *(ÁSZ, 2002)*.

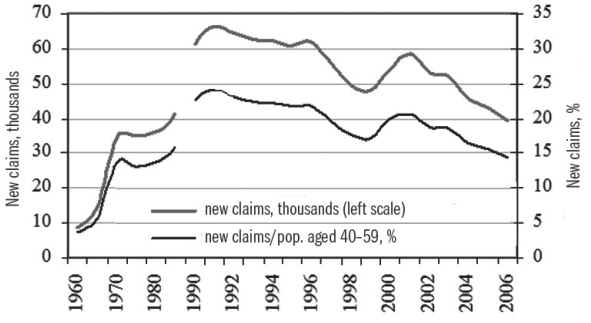
The situation is not entirely hopeless, however, since a number of initiatives have been launched which could succeed in improving long-term employment chances even in multiply disadvantaged regions struggling with an unskilled workforce, scarce capital and isolation. An initiative of this kind is the Cserehát programme launched in 2005 with support from the government and the United Nations. The programme seeks solutions which depart from traditional standardised development projects controlled by an external authority, and rests, instead, on the involvement of local partners. Important elements of the programme are first, that it targets small regions rather than single towns or villages and second, it relies on a collaboration of non-profit, private and public sector agents. It is based on the principle that a programme can only be successful if it relies on the participation of local stakeholders, if it is they who select the solutions best suited for themselves and if external resources and professional support needed for implementation is made available to them. As a first step, the Cserehát Programme Office surveyed local development partners and project ideas. Based on this they provided support to local actors, mostly from disadvantaged municipalities, to develop proposals for some large scale projects that may successfully bid for EU funds as they become available between 2007 and 2013. The first results of the programme were presented at a conference in May 2007, where the organisers reported that a network of around 2500 active local development partners had been created from a hundred settlements in their small region in the first year following the launch *(Cserehát, 2007)*.

4. A LABOUR MARKET EXPLANATION FOR THE RISE IN DISABILITY CLAIMS

ÁGOTA SCHARLE

The number of people under retirement age in receipt of disability pensions stood at 233,000 in 1990, grew by one and a half by 1996 and doubled by 2003. This process started well before the regime change. Annual inflow into disability pension had been stable at around 10,000 up to the mid-1960s, and then rapidly increased in two waves, so that by 1991 over 60,000 new disability pension claims were granted a year. With the effect of population ageing controlled for, we still see sudden surges in the late 1960s and towards the end of the 1980s (*Figure 4.1* shows the number of new disability pension claimants relative to the total number of people aged between 40 and 59). The total number of new applications has increased more rapidly and displayed greater fluctuations than the number of successful claims *(Figure 4.2)*.

Figure 4.1: New disability pension claims, 1960–2006

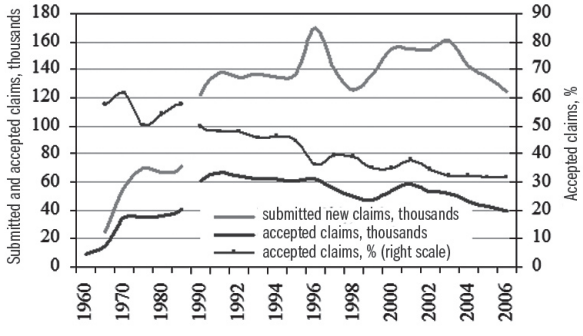


Source: 1960–1990: CSO Yearbooks of Health Statistics and data supplied by the Hungarian Rehabilitation and Social Assistance Office (ORSZI); 1991–2006: Yearbook of statistics of the Central Administration of Pension of Insurance (ONYF). Up to 1990, new claims are as reported by medical experts, and ONYF records thereafter. The former includes all claims filed during the year, the latter exlcudes pending claims.

The upsurge in disability pension claims starting in the mid-1960s was accompanied by a clear and substantial decline in the general health of the population. The situation was different in the late 1980s: the previous declining trend seemed to be reversing. Although the indicators of mortality

only showed improvement from 1993 onwards *(Sándor, 2003)*, *Pauka and Tóth* (2003) affirm that negative health trends had come to a halt earlier than that. The proportion of people living with severe disabilities was stable in pre-retirement age groups between 1980 and 1994 and the self-rated health status of the population showed improvement.[44] These data suggest that factors other than state of health must have also contributed to the changes in disability pension claims. Although at the beginning of the regime change, a generous pension policy could be justified by rational political arguments *(Vanhuysse, 2004)*, it has imposed heavy costs both on society and on the individual. The majority of middle-aged pensioners leave the labour market permanently, which means they do not pay social contributions, while their pensions burden the social insurance fund. These pensioners lose most of their social connections with the workplace and may live for many years in idleness and sometimes isolation. We are not aware of any attempts to compare these costs to the benefits brought by the fact that the political regime was changed peacefully and the transition to a market economy could proceed relatively quickly with no major social resistance. The costs are undoubtedly significant and, even more importantly, we continue to bear the burden today, since current disability pension schemes have retained most of the retirement incentives introduced 15 years ago.

Figure 4.2: Submitted and accepted claims for disability pension, 1960–2006



Source: See Figure 4.1.

4.1. Alternative explanations for the increasing trend in disability claims

The regime change involved several processes which could have induced an increase in disability pension claims, such as the decline in employment rates – including the employment of unskilled workers –, the expansion of the informal economy, changes in pension policies (the alternation of lenient and stringent periods) and finally changes in the quality of rehabilitation services.

44 *Pauka and Tóth* (2003) compare a thorough medical survey of 1980 (Complex National Morbidity Survey, Komov) with a self-rated health survey from 1994 and the demographic survey entitled "Turning Points of our Lives" of 2001. The latter two surveys show improving trends for both sexes in the age groups of 40–49 years and especially 50–59 years.

The sudden and steep decline in the employment rate of unskilled workers and the rapid rise in returns to education are well documented facts. Multivariate analyses of wages and productivity by *Kertesi and Köllő* (1997), *Kézdi and Köllő* (2000) and *Kézdi* (2004) find that the wage premium on secondary education and higher education increased greatly at the time of the regime change. Older workers were found to be disadvantaged not only due to their low educational levels but also because of their age in the first few years after the regime change *(Kertesi and Köllő, 2002)*. Low levels of education are also accompanied by an increased risk of poor health *(Tahin, Jeges and Lampek, 2000; Remák, Gál and Németh, 2006)*, which is partly related to physically more demanding work activities and partly to lifestyle.[45]

The informal economy continued to expand after the regime change, although its structure had changed. *Lackó* (2000) and *Semjén and Tóth* (2002) claim that the size of the hidden economy showed a decrease after 1993 owing mostly to growing foreign capital investment. Data collected by *Sik* (2000) from local governments indicate however that the incidence of black labour was still on the increase in the second half of the 1990s. The study also reveals that illegal employment is significantly more frequent in towns than in smaller settlements and – in contrast with the east-west divide in economic development – the incidence of black labour separates northern regions from southern regions.

While it is widely assumed that pensioners supplemented their incomes by taking up informal jobs, there is little empirical evidence supporting this claim. Studying entries into retirement observed in the CSO household budget survey, *Cseres Gergely* (2005) finds that the net incomes of retiring members of a typical family decrease by about a quarter: pensions and their favourable tax treatment largely compensate for the loss of wages. Retirement does not affect the incomes of partners living with the pensioners, the overall incomes of the households therefore do not decrease dramatically. This could be one explanation for the fact that new sources of income or temporary employment (or changes in consumption indicative of new income) rarely appear in the year following retirement.

A number of sociographic analyses have described family-run farming activities, which provide a means of subsistence for unskilled rural populations excluded from the labour market *(Simonyi 1995, Laki, 1997, Rácz, 2003)*. *Harcsa, Kovách and Szelényi* (1998) observe that, in contrast to rapidly developing specialised large-scale farms, family-run home farms tend to produce for their own consumption rather than for market sale and supplement this with other, typically social, incomes. This practice is not without precedent: *Gábor and Galasi* (1985) and *Oros–Schindele* (1977) show that pensioners, wives (official homemakers) and unpaid family helpers performed most of the work on home farms at the time of the communist regime.

45 *Józan* (2001) argues that the high level of mortality is primarily explained by lifestyle, specifically, by unhealthy diets (in addition to smoking, alcoholism and lack of physical exercise). A lesser role is attributed to the quality of health services and the harmful effects of the environment.

Act II of 1975, currently in effect, states that people with a 67 per cent reduction in their work capacity are entitled to disability pension provided that no improvement is expected in their condition within a year.[46] The entitlement ceases if the claimant recovers and/or his or her income approaches the level at which it was before the onset of disability. The amount of pension is determined with reference to previous income, similarly to old age pension: at 25 years of service, it equals the amount of old age pension, with additional compensation for a total impairment of health. The entitlement to disability pension does not cease when retirement age is reached, the claimant continues to receive the disability pension.

Vanhuysse (2004) argues that the lenient pension policy introduced in order to forestall social discontent or resistance at the time of the regime change was a rational political decision and social insurance institutions were therefore willing to co-operate in granting early pensions to workers facing insecure prospects of employment (see also *Gere, 1997*). In view of the increasing burden on the budget, however, international organisations recommended the tightening of conditions of entitlement as early as the beginning of the 1990s.[47] The regulations on disability pensions were first tightened in 1997–1998 with the aim to ensure that disability pensions were paid in accordance with the claimant's actual state of health. The new act was put into practice in January 1998, when disability pensions ceased to be granted on a permanent basis and some of the previously acquired entitlements were also reassessed as temporary. Temporary entitlement was tied to more frequent medical assessment than before. Disability pension thus became a less secure source of income as a result of the new regulations. No further reforms were introduced until 2006, however, and the share of disability pensions has increased in early retirement as the statutory age of retirement had been raised and the conditions on claiming old age pension before the standard retirement age become more restricted. Furthermore, as discussed in the next section, the conditions of the medical assessment of a possible reduction in work capacity have in effect steadily deteriorated over the years.

Assistance in the labour market rehabilitation of unemployed people with reduced work capacity is provided by job centres in the form of advice and subsidies to employers. Current regulations place labour market rehabilitation mostly in the hands of accredited, heavily subsidised sheltered workshops and factories. Most county level job centres operate a rehabilitation information service. The government has also financed pilot projects on increasing co-operation between job centres and non-profit organisations in providing rehabilitation services. The few studies performed so far indicate that the rehabilitation activities of firms providing sheltered employment tend to be firm-specific and training or services facilitating the return to the open labour market are rare *(Krolify, 2004)*. There is considerable regional variation in the

46 Additional conditions include minimum years of service and a fall in earnings by at least 20 per cent as a result of the disability. The required minimum years of service are determined with respect to age and range from 2 to 20 years.

47 The 1995 World Bank report on Hungary, for instance, recommended tighter regulations on disability pensions as the most efficient means to reduce social insurance fund deficits in the short term provided that a substantial proportion of workers thus excluded from the disability pension scheme found employment in the formal labour market.

quality and efficiency of rehabilitation services provided by job centres and average results remain poor *(Gere, 2000; OSI, 2005; FRSZ, 2006)*. A recent government decree of August 2007 on disability policy[48] sets the objective of developing rehabilitation services to facilitate open labour market participation by the end of 2009 and preparing job centre staff for performing associated tasks by the end of 2010. Services provided by non-profit organisations are more successful but are not widely accessible – partly due to their limited capacity and partly because of short term financing arrangements, which increase financial insecurity *(FRSZ, 2006)*.[49]

The above factors contributing to disability pension claims affect the Roma population of Hungary even more severely, with the various factors reinforcing each other. *Kertesi* (2000) analyses detailed work histories from the Roma survey of 1993–1994 and finds that the proportion of pensioners had already significantly increased in the period from 1984 to 1989 among the older Roma population (men aged 45–54 and women aged 45–49). The Roma survey of 2003 showed no signs of trend reversal at the end of the millennium. The incidence of early retirement among the Roma has now been stabilised: the proportion of pensioners below the statutory retirement age remains around 9 per cent among men and 8 per cent among women *(Kertesi, 2004)*.

The general health of the Roma population is poorer than the national average *(Mladovsky, 2007, Kósa et al, 2007)* partly because a greater proportion of Roma work in occupations causing health damage *(Kertesi, 2000)* and partly due to the fact that health care services are less accessible to the Roma population because of their disadvantaged position in terms of place of residence, financial circumstances and, on occasion, ethnic discrimination *(Gyukits, 2000)*.

In his analysis of labour market chances, *Kertesi* (2000) concludes that early retirement was a dominant form of exclusion from the labour force, which is explained by low levels of education and poor health on the one hand and by labour market discrimination against the Roma on the other.[50]

The expansion and stabilisation of government financed public works schemes has led to an increase in the instability in Roma employment rather than facilitating return to the primary labour market, which indicates the failure of the current approach to rehabilitation services *(Kertesi, 2004)*. This is reflected in the striking gap between transition rates: while the average annual exit and entry rates are under 10 per cent for the Hungarian population with low levels of education, the corresponding rates are around 25 to 30 per cent for the Roma minority.

It does not follow from the above however, that the incidence of disability claims is specifically a problem of the Roma: the scale of the problem is far too large to be explained by a decline of the employment rate in the Roma population. The number of people receiving disability pension under retirement age was over 460,000 in 2003, while *Kertesi's* (2004) data suggest that

48 Government Decree 1062 of 2007 (August 7.) on the preparations for the implementation of the new National Disability Programme for the period 2007–2010.

49 The Salva Vita Foundation, established in 1993, is one of the most successful non-profit organisations, which provides extensive services to assist the open labour market participation of workers with altered work capacity and which has made efforts to propagate its methods across the country since 2001. (*OSI,* 2005 and www.salvavita.hu).

50 *Otlakán* (2007) has measured employer discrimination using an experimental method based on job advertisements. The results show that 10 per cent of Roma applicants were explicitely rejected and 18 per cent got some reaction from the employer suggestive of discrimination.

the number of Roma pensionerss under retirement age was at most 50,000 in the same year.

4.2. The effect of demographic and labour market factors on disability claims

Labour market factors may mostly affect *applications* for disability pension since claims are evaluated with reference to the state of health, i.e., the number of new claimants in receipt of disability pensions should in theory reflect the decline in the state of health only. We can isolate the two effects by analysing the data on filed applications. As no individual level data are available on applications,[51] our analysis is based on county level panel data. 18 counties are included in the panel,[52] with ten observations between 1996 and 2005 for each. Estimates have been computed in various model specifications, only one of which will be discussed here.

The estimates were computed using a random effects model with the assumption that unobserved characteristics are independent of the effects of observed variables. The dependent variable is the number of submitted disability pension claims relative to the size of the adult population. State of health is measured as the proportion of people aged 40 to 59 years and as the number of visits to the family practitioner relative to the size of the population. Labour market conditions are characterised in terms of the employment rate of the population aged 15 to 74 years as indicated by the labour survey data of the Hungarian Statistical Office and in terms of the share of the Roma population (computed after *Hablicsek* [2000] based on the census of 1990 and the 1993–1994 Roma survey). The size of the informal economy is measured as the proportion of people living in cities: a low share of the urban population indicates a possibility of home farming while a high share indicates opportunities for black labour. This U-shaped relationship is captured by two variables: the linear term (share of urban population) measures the effects of home farming and the quadratic term (share of urban population squared) measures the effects of black labour. The effects of regulations are signalled by sudden and large deviations from the long term trend in the number of claims observed around the date of a change in rules. What we are interested in is whether the observed leaps were associated with poor health or with poor labour market prospects, i.e., which group was most motivated to file a claim fearing that they would not be able to do so following the changes in regulations. This is indicated by the interaction between the state of health or employment rate and the years from 1996 to 1998. The results summarised in *Table 4.1* correspond to our expectations.

These results indicate that the relative number of disability pension applications is significantly affected by labour market conditions in addition to factors related to the state of health. Relatively more applications are submit-

51 Population surveys only register accepted claims while administrative data, where all applications are shown, do not indicate labour market status – it has not yet been possible to link the two sources of information at the individual level.

52 The Hungarian Pension Insurance Authority publish annual statistics on claims and evaluations initiated or completed in the given year. This source merges data from Budapest and the surrounding Pest county, and therefore both were excluded from our analysis. The incidence of claims shows a substantial degree of dispersion but the difference between the minimum and the maximum values displays a decreasing tendency: the number of claims in proportion to the size of the population was 3.7 times higher in the eastern county of Szabolcs than in the western county of Győr-Moson-Sopron in 1996, while the ratio for Tolna county was barely twice as high as the ratio for Fejér county in 2006.

ted in counties with lower employment rates and where black employment is more accessible. A high share of the Roma population tends to dampen the negative effect of good labour market conditions on disability claims, suggesting that the Roma minority are disadvantaged due to their places of residence as well as discrimination.

Table 4.1: Health and labour market causes of disability pension claims

	Coefficient	Standard Error	P > z
40–59 years of age	0.069	0.048	0.154
Poor health	3.907	1.118	0.000
Poor health/higher ed.	–0.399	0.165	0.015
Poor health × Roma	–0.399	0.082	0.000
Employment rate	–0.022	0.009	0.021
Employment rate × Roma	0.007	0.001	0.000
Urban population	–0.129	0.051	0.012
Urban population squared	0.204	0.085	0.017
Poor health × 1996	3.474	0.674	0.000
Poor health × 1997	1.252	0.614	0.041
Poor health × 1998	–0.582	0.109	0.000
Employment rate × 1996	–0.030	0.007	0.000
Employment rate × 1997	–0.015	0.006	0.012
Constant	0.017	0.016	0.272
R^2 within	0.553		
between	0.396		
overall	0.422		
Wald $\chi 2$ (df.)	194.08 (13)		
$\sigma(u)$	0.0034		
$\sigma(e)$	0.0016		
ρ	0.8308		
prob>$\chi 2$	0.0		

Observations = 180.

4.3. The relationship between state of health and receipt of disability pension

Individual level data allow us to investigate the effectiveness of disability pension claim evaluations in filtering out applications submitted for reasons related to labour market prospects. Data for the first and the second quarters of 2002 from the labour force survey of the Hungarian Statistical Office are linked to identify individuals who were granted disability pension in the second quarter but not in the first quarter of the year. The data for the second quarter include additional information on state of health. The estimation is carried out in two steps: first we estimate the likelihood of being in employment and predict a probability of employment for each individual.[53] In the second step we use this predicted probability as an indicator of labour mar-

53 This estimate uses age, level of education, state of health and regional unemployment rate as explanatory factors.

ket prospects and estimate its effects on receiving a disability pension. The results of the second step are shown in *Table 4.2*.

Table 4.2: Probability of entry into disability pension

	Coefficient	Standard Error	t	P > t
Employment prospects	–1.49	1.08	–1.38	0.17
Limb or back problem	1.19	0.19	6.16	0.00
Mental illness	0.76	0.32	2.38	0.02
Heart or lung disease	1.16	0.20	5.87	0.00
Other problem	1.21	0.22	5.56	0.00
Years in employment	–0.01	0.01	–1.04	0.30
Constant	–1.69	1.08	–1.57	0.12

Probit estimates, Number of observations = 17,079, LR χ 2(6) = 90.68; Prob > χ2 = 0, Log likelihood: –224.724 4; Pseudo R2 = 0.1679.

With the effects of health controlled for, poorer employment prospects increase an individual's chances of receiving a disability pension. The effect is not statistically significant but this could be due to the relatively small number of observed entries into disability pension status in the sample.

Multivariate models analysing the entire pensioner population – and using a larger sample size – show similar and statistically significant effects. *Cseres Gergely* (2005) investigates the probability of changes in labour market status in the period between 1993 and 2002. The author finds that the likelihood of retirement increases with poorer health (measured by sickness payments) while it significantly decreases with expected earnings. *Köllő and Nacsa* (2006) estimate the likelihood of pension receipt for men aged 44–62 years and women aged 44–58 years using the 2000 Q4 CSO labour force survey. According to their results, the probability of a man retiring five years before the statutory retirement age was 37 per cent for the entire sample, ranging from 18 per cent in the region with the best labour market conditions to 56 per cent in the region with the worst employment prospects. The likelihood of pension receipt was higher for the low educated and for people living in low-wage small regions.

4.4. Alternative approaches to easing labour market tensions

It is safe to conclude then that the rising incidence of disability pension receipt was largely a consequence of labour market tensions and it served to ease that tension. This raises the question of whether the government could turn to alternative solutions for soothing labour market disruptions without imposing lasting negative effects on the budget, the competitiveness of the country and lives of the workers affected.

The task is twofold: on the one hand, the current system needs to be restructured in order to reduce incentives to leave the labour market permanently and

on the other hand, alternative solutions need to be offered to those with low chances of finding secure jobs in the primary labour market. A number of Western European governments have faced a similar problem and starting from the 1990s, some have implemented policy measures which appear to be viable.

British, Danish, Dutch and Swedish experiences suggest that the solution has three key components. The first two components are aimed at reducing incentives: tighter regulations on eligibility conditions and a reduction in benefit amounts. The third component offers an alternative: active labour market policies or social services which enhance productivity and employment prospects.

The tightening of eligibility conditions involves the requirement that the claimant should make efforts to regain work capacity and re-enter the labour force and failure to do so will lead to the suspension or reduction of the disability benefit. The job centre provides continuous assistance in these efforts and at the same time monitors progress: they offer individual rehabilitation services and job opportunities but impose sanctions if co-operation is refused.

The amount of potentially available benefit is reduced by making access to the full pension amount conditional on previous participation in a series of rehabilitation attempts. The income gained on retirement is also lowered as the risks associated with fraudulent claims are increased by improving the efficiency of detecting abuse and applying stricter sanctions both for doctors and applicants. In addition, in the case of Hungary, old-age pensions received at early retirement should be substantially lowered as compared to the amount of regular old-age pensions (at least until the statutory age of retirement is reached).

The alternative offered is the improvement of employment prospects. This task requires a wide range of effective rehabilitation services, from among which the personal adviser assigned to the claimant can select the services deemed most appropriate. These are funded by the public employment service but may be operated by non-profit or for-profit private organisations. This scheme may be supplemented by a system of income support which compensates for the expected drop in earnings resulting from the reduction in work capacity and by communication tools mitigating labour market discrimination or information gaps.

The British "Pathways to Work" programme discussed in detail in Chapter 6 of this volume is a good example of such an approach. In a nutshell, the programme requires claimants of a disability pension to attend monthly interviews starting within 8 weeks following the filing of their claim, they are assigned to a personal advisor who offers job opportunities and recommends a programme of maintaining the applicant's physical and emotional condition. Participants who enter into employment are entitled to a small wage subsidy covering travel costs and incurred clothing expenses and are assigned to a mentor who helps them with any problems that may arise. The scheme is fairly expensive but has proved to be very successful: employment rates among

disability pension claimants increased by a quarter over a period of one and a half years in regions where the scheme was introduced.

The reform of July 2007 of Hungarian regulations on disability pension was prepared in the spirit of the approach discussed above but it focuses on just one of the three components, that of improving employment prospects, and leaves incentives essentially untouched. The new regulations prescribe a detailed assessment of the state of health and the remaining work capacity of the claimant and health-related, social and labour market rehabilitation services are offered in accordance with the results of the assessment. The claimant receives rehabilitation benefit for the duration of the rehabilitation programme but for no longer than three years. The amount of benefit given is, however, effectively the same as the amount of disability pension. The new regulations state that the claimant is required to co-operate with the local job centre but do not give precise details of the sanctions applied in case of refusal to actively participate.

Disincentives to labour market participation could be reduced within the new framework as well by tightening sanctions and by reducing income gains. One way to do this would be to adjust the amount and the taxation of rehabilitation benefits to match those of unemployment benefits rather than disability pensions. Also, the pension received before retirement age could be substantially lower in value (in proportion to the missing number of years of service) than old-age pension. The likelihood of detecting benefit fraud should also be enhanced in order to lower the pontential income gains from claiming benefit.[54] As long as the probability of disclosure is low, disability pension in combination with black labour remains the most lucrative option.

The new regulations take the first important step towards the improvement of employment prospects by focussing on the assessment of remaining work capacity rather than on health impairment. The next step is to make a well-informed choice of the necessary rehabilitation services and to assure the quality and efficiency of these services. Some steps have already been taken towards this goal: a large scale pilot has been carried out to introduce a simple screening tool at job centres (see *Busch, 2006*) and a number of smaller projects have been launched in the framework of the National Labour Foundation (OFA) or the EQUAL Initiative of the EU to develop and use various rehabilitation services (e.g., *FRSZ, 2006*). For the successful operation of public employment services, these experimental programmes should be systematically assessed to identify best practices and the conditions for nation-wide implementation. Programmes that pass both tests should than be systematically introduced. A similar intention is expressed in the government decree of August, 2007 mentioned above, which prescribes that a system of basic and social rehabilitation services should be developed by June, 2008 in order to facilitate access to the employment rehabilitation scheme.[55]

54 A claimant is considered to abuse the scheme if he or she obtains a medical report certifying a greater reduction in work capacity than is justified by his or her state of health, if the claimant works in the shadow economy or fails to notify the authorities of received wages (in excess of the limit specified by the regulations).

55 Government Decree 1062 of 2007 (August 7.) on the preparations for the implementation of the new National Disability Programme for the period 2007–2010.

ASSESSING WORK CAPABILITY

FERENC JUHÁSZ

Disability pension claims are submitted for evaluation to the claimant's local pension insurance authority. Claims must be supported by a medical diagnosis of disability and proof of the number of years of service. The local GP or the specialist who issues the diagnosis usually attaches to the claim their detailed opinion and some documentation of the health condition. Based on this information, a panel of medical experts examines the claimant and issues a medical certificate/assessment.

Currently there are almost 70 such panels involved in the assessment of disability pension claims operating under the supervision of six regional centres and one in the capital city (the seven county centres have been reorganised into six regional centres).[56] Up until the late 1990s, decent professional conditions were secured: a panel was made up of two physicians, the typical medical assessment lasted 45 minutes and a second round of assessments (following an appeal) lasted 50 to 60 minutes on average. Panels had access to various kinds of specialist advice from contracted or – mainly in Budapest – full-time specialists, as well as to diagnostic tools, x-ray facilities and medical laboratories. Tools and equipment later became increasingly difficult to access, while the number of disability claimants substantially increased. While expert capacities have not expanded, work load has considerably increased: the case load increased to 10 to 15 patients per day for each physician and in some cases now claims are assessed on the basis of written documentation only.

The assessment centre in Budapest currently employs 140 to 150 specialists carrying out around 300 to 330 thousand examinations each year. Appeal cases are assessed by a panel of two senior physicians. For initial claims the physical examination of the patient may be done by one doctor only, but the written assessment has to be made by a team of two experts. An examination session usually lasts approximately 30 minutes, while in the Netherlands, for instance, the average length of an examination is 3 to 3 and a half hours.

Panels issue assessments on claims for 21 different types of welfare provision and receive patients referred to them by any of 12 different authorities and organisations. The majority of assessments are requested in connection with new disability pension claims or disability pension claim revisions. The medical assessment always sets a date for the next reassessment in view of the patient's health condition. Reassessment is typically prescribed at two or three year intervals.

In the assessment process, the panel collates the relevant medical records, arranges them in chronological order and according to the type of condition, quickly scans the details (in about 10 minutes) and finally, makes a record of the information supporting their assessment.

The documentation supporting a claim always includes a referral issued by the local GP or specialist. These referrals describe all health conditions for which the claimant has been treated or which have been diagnosed, but in most cases only 15 to 20 per cent of these documents contain information of any value to the panel. A typical file includes dozens of often contradictory, occasionally untruthful reports and documents compiled in an *ad hoc* manner. No information is provided on the claimant's

56 The central administration of specialist assessment services, named the Institute of Medical Expert Services, was overseen by the Hungarian Health Insurance Fund (OEP) up to the end of 2006. Currently it is under the supervision of the Ministry of Welfare and Employment. When a claim is made for the new employment rehabilitation benefit introduced in July 2007 to encourage return to work, the claimant's unimpaired work capabilities and social circumstances are also assessed in addition to the state of health. The institute responsible for the central administration of assessment was renamed to reflect the new function and is now called the Institute of Rehabilitation and Social Expert Services (ORSZI).

current or previous occupations, employment history, education, or living conditions.

The health condition of a substantial proportion of referred claimants is not properly investigated, their treatment is far from comprehensive and only around 10 per cent of them have had access to medical rehabilitation. Most claims do not include a recommendation by a rehabilitation expert, nor the assessment of an occupational health expert.

For claimants in an acute phase of their condition at the time of the consultation (e.g. immediately after an operation and before going through rehabilitation procedures), the loss of work capacity cannot be appropriately determined, since the patient is not in a stable state. Nevertheless, the physician must make a decision as to the extent of the reduction in the patient's work capacity if the claimant has no other income and could not have his or her basic needs covered for the duration of the rehabilitation. The decision on the patient's work capacity is made for at most one year in this situation.

Claimants can request to have their work capacity evaluated on the basis of documents – certified by the local GP or specialist – on grounds of health problems. This usually occurs in cases of severe disability. If the information submitted with the claim is not sufficient for the issuing of the medical certificate/assessment, the expert panel may request further examination results or, if justified, can request to see the patient for examination. In certain cases the patient may be visited by the physician in their home. A claim can only be rejected on the basis of a face-to-face examination, with the exception of some claims for mental disability benefit and certain international cases.

The physical examination of the claimant is carried out using traditional medical equipment (phonendoscope, reflex hammer, ECG). This suits the minimum requirements concerning the availability of equipment in an outpatient clinic but is insufficient to assess unimpaired or restorable capabilities. Until recently medical panels did not use the International Classification of Functioning and Disability (ICF) standards in making their assessment and the reduction in work capacity was evaluated in accordance with guidelines issued in 1989. Assessments/certificates issued by the medical panel usually include suggestions for rehabilitation but do not specify concrete procedures leading to rehabilitation or to facilitate employability. Recommendations for rehabilitation mostly involve negative or prohibitive statements (such as "patient cannot work standing up," "patient cannot perform tasks requiring sustained walking," etc.). In summary, current practice tends to focus on health problems rather than the functional capabilities of the claimant.

5. INCENTIVE EFFECTS IN THE PENSION SYSTEM OF HUNGARY

ZSOMBOR CSERES-GERGELY

Pension (and disability or old-age pension by themselves) constitutes the highest expenditure in the budget among all welfare programmes. This holds for every country with a developed welfare system, not only for Hungary. The issue of pensions is a major concern of an army of economists – starting with the question of optimal regulations through to the analysis of unintended effects reaching beyond old-age support. A number of researchers have investigated the pension programme of Hungary on the basis of aggregate data and theoretical constructions (see for instance, *Augusztinovics, 2000; Augusztinovics et al, 2002; Simonovits, 2006*). We are not aware, however, of analyses using individual level data which are aimed at isolating the effects of incentives arising from the nature of the system from the effects of individual traits. This chapter undertakes to fill this gap with the help of a simple empirical model of the decision to retire. Data collected on individuals in two consecutive periods will be used to examine the effects of the accessibility of pensions, the size of the difference between incomes expected from a pensioner and a non-pensioner status, and other individual factors on the decision to claim a pension.

The question of the decision to retire deserves special attention: following its relative consolidation in 1997, the pension fund is once again struggling with serious problems of balance over the long run. According to estimates by *Burniaux, Duval & Jaumotte* (2004), the effective (including disability pension participation) retirement age of Hungarian men is the lowest after Luxembourg among the EU countries. *Vanhuysse* (2006) explicates and substantiates the hypothesis described by *Gere* (1997) that there are definite socio-political objectives behind the rapid expansion of the pension programme. The process of political and economic transition gave rise to a situation where former socialist countries had to face significant political risks as they prepared for privatization. The restructuring or, in several cases, total closure of state owned companies led to a complete loss of security among the often unskilled workforce on such a large scale which, as indicated by historical experiences, tends to lead to major discontent, demonstrations and other forms of protest. That this essentially did not happen in the former socialist countries is undoubtedly due to the fact that the governments had largely anticipated this danger and found effective methods of forestalling it. It must be this strategic

social policy, argues *Vanhuysse* (2006), that has led to a situation in Hungary and Poland where the increase in the expenses of the pension programme exceeds population ageing by far and pensioners are granted a financial status far above that of the poor strata of society.

In its pure form, the pension system is an insurance service made compulsory. As long as the condition of payment to the social security system over a given period of time is met, it provides life-long cash support from the time when the "loss event" of attaining a pre-defined age occurs. The intended effect of pension, then, is to secure a fixed, guaranteed income to the insured party after a certain age.

If participation in the pension programme was only tied to the age requirement and stringent rules applied with no exceptions, we would "only" need to face the problem of defining eligibility conditions and the pension rate. In practice, however, most pension systems allow for several exceptions. The Hungarian system includes many of these, such as a provision that the statutory age limit may be relaxed if certain conditions are met provided that the claimant agrees to a lower pension rate. Conversely, a higher pension rate may be attained by delaying retirement. Also, the old-age pension programme makes exceptions in the case of occupations classified as having outstandingly high health risk factors and on the basis of other social considerations: these allow a preferential retirement age without a reduction in pension rate. Thirdly, other, highly similar programmes are available in parallel with the old-age pension scheme: these include pensions for widowed or orphaned people and disability pension. With respect to labour supply effects, disability pension is the most significant type of welfare in this group.

In contrast with other countries, participation in the disability pension programme usually means permanent absence from the labour market in Hungary.[57] For this reason, our analysis treats disability and old age pensions as parts of a coherent welfare programme with two, formally distinct components: their accessibility and entitlement conditions differ but the pension rates are determined in effectively the same way. With respect to labour supply effects, the most important feature of the pension system is the incentive system which is embodied in the regulations specifying eligibility and the amount of pension to be paid. With reference to the categories discussed in Chapter 1 of this volume, this is a secure transfer of a predetermined amount [see ***Figure 1.4a)***] which substantially enhances the financial circumstances of the recipient (the payment almost always ensures "a decent living standard," assuming a complete absence of labour activities and taking the needs of an elderly person who owns his or her home). This outcome has an unequivocal negative effect on labour supply, since the pension grants an income necessary for subsistence without the need to work or in combination with part-time employment. If the availability of part-time work is limited, complete inactivity is the (second) best choice.

57 The number of exits not due to death is so low that it is not included in the annals of the Hungarian Central Administration of National Pension Insurance (ONYF). According to the Health Annual of 1981, the combined proportion of exits due to death, rehabilitation or other causes is 5 to 6 per cent *(KSH, 1981)*.

The simple model and figures in Chapter 1, however, cannot show all the effects of the system. If the programme allows early entry at the cost of certain financial sacrifices, the promise of a secure income will have an effect before the start of entitlement, not only following it. The attractiveness of the offer depends on the expected utility of the pensioner and non-pensioner status, which can be characterised by three factors: the ratio of the pension to labour income (substitution rate), the security of obtaining and retaining either type of income, and the possible use of available leisure time. Let us consider the following simple examples as an illustration.

If no major changes occur in the individuals' life courses – i.e., people who are successful in the labour market have always been successful, and those who are unsuccessful have always been unsuccessful –, the substitution rate will be roughly the same for different people (regardless of the number of years taken into consideration in calculating the pension). If, however, someone is hit by adversity at a given point in life – loses a previously secure job, for instance, and the chances of finding a job in the labour market with an income comparable to his/her earlier income are close to zero –, the substitution rate may be above average. The availability of this option encourages early retirement even if labour supply is possible. When there are significant obstacles to employment, however, pension remains the only source of income and the effect will be multiplied.

For our second example, let us assume that the worker is in employment but expects to lose his/her job shortly. The worker also knows that job seeking will require some effort and will have an uncertain outcome. The worker's income has not yet changed but its future availability is highly insecure. This threat alone makes pension an attractive option.

Finally, let us consider a worker who has worked in a windowless office with neon tube lighting for 30 years, has permanent backache and overstressed eyes. This is a person who enjoys gardening and being outdoors and has no significant financial commitments. Retirement will be quite an attractive option for this worker, even if it means financial sacrifices.

While even these simple examples involve more than one factor, it is quite conceivable that these effects are accumulated. Our imaginary worker has been sitting in a dark office or standing in an assembly line for years, their low, but so far sufficient, wages are about to be lost because of privatization or the sale of the business. The worker's specialised training means that only unskilled work would be accessible to them in the village and they would be in competition with young and far more capable workers. All our worker needs to do is get a certificate of disability to secure a decent living. This would not only guarantee an income, but would also allow the worker to help their daughter, who would like to commute to the town 80 miles away but has a two year old child to care for. The story could be further coloured in various ways, including a threat of losing the job, the difficulty of employment and other factors.

Our imagination, however, does not tell us anything about the weights of the individual factors in making the decision. To measure that, we need a large number of observations and multivariate methods of estimation.

5.1. Data

To estimate the factors influencing a pension claim, we need a database which supplies information on income as well as data on individual circumstances. Only one such large database is available in Hungary, the Household Budget Survey, for which data have been collected by the Hungarian Central Statistical Office (CSO) for several decades and which has been made available in a virtually unchanged format commencing with the years following the regime change up to the present day. Households participating in the survey supply data every year on their incomes and expenditures for the given year and for a single month of the year,[58] as well as on various demographic and other traits. Data on people living in the same household can be linked and the details of individual household members can be included with individual traits.

In addition, the panel allows data to be linked over time as well as within a given year. One third of the households in the sample is replaced each year, with the result that (in theory) each household can be followed for three years. Since however people move or, more frequently, drop out, the number of households and individuals that can be linked in practice is smaller than theoretically possible – this phenomenon and the details of linking are described by György Molnár, the person responsible for developing the panel data *(Molnár, 2005)*. In an attempt to counter-balance the loss of data due to drop-out for the present analysis, two periods were linked in so-called stacked panels, which were then ordered "successively" such that the first and the second periods of each pair could be treated the same way, as if data were collected during the same time period. The procedure was carried out for each start year between 1993 and 2000 with the exception of 1995, where this was not possible. The method has the consequence that the time of individual observations is "lost," which we attempt to compensate for by including effects typical of the given years and some characteristics of the environment which vary over time (such as regional employment rate). Income measured in cash is expressed in terms of its value in 2001 for the same reason. After linking the data, people claiming and receiving pension in a given year are identified as those who did not have a pension income in the first period but had one in the next period.[59]

5.2. Differences between pensioners and non-pensioners

The decision to retire depends on the relative weights of the advantages and disadvantages of pensioner and non-pensioner status. It is assumed to be a genuine decision, although – some may rightly object – there may be no al-

58 With the exception of food expenditure, which only appears in monthly data.

59 This working definition of start of retirement is clearly not perfect and, although it is suitable for our purposes, it cannot be used to enumerate people entering retirement in the given period. Since in theory there is no seasonal effect in retirement, people may enter the pension programme in any month of the year. If, however, people are only observed in one month of the year, the odds of someone retiring without the change being observed is exactly 0.5 (the month of retirement is smaller than the month of the observation). The fact that half of the retiring events are left unobserved may be a significant loss, but unfortunately, we have no other option. The main reason for this is that a method of almost complete capture would require the use of yearly income data, which would not allow us to determine pensioner and non-pensioner incomes over the entire period with reasonable accuracy.

ternative to retirement under the given circumstances due to various pressures. Strictly speaking, it is the different forces of the various constraints which are investigated in this case. Financial incentives are important, but of course not the only factors that contribute to the level of welfare that may be attained in either of the two situations. Other considerations include first of all the temporal distance from retirement age, as well as leisure activities and family commitments.

If we are to estimate the probability of pensioner status (i.e., the effects of individual factors on the probability of an arbitrarily selected person being retired), we can use cross-section data from a given period. The probability of pensioner *status* (the state, being part of the stock), however, may deviate substantially at a given point of time from the probability of entering retirement (the change, being part of the flow). Since, however, in most cases only cross-section data are available, for reasons of comparability, we shall first use a simple model with cross-section data to investigate the effects of individual factors on someone being retired or not. The set of independent variables used in the equations includes the usual human capital type variables and also others which may have an effect on labour market success due to different conditions on regional labour markets.

Table 5.1: Estimate of the probability of pensioner status among people aged 25–64 based on cross-section data (average marginal effects from probit regression)

Explanatory variable	(1)	(2)	(3)	(4)
Activity rate of region of residence (%)		–1.043*** (0.17)	–0.846*** (0.17)	–0.342** (0.15)
Activity rate of region of residence squared		0.761*** (0.16)	0.612*** (0.16)	0.238* (0.14)
Education: vocational training			0.00216 (0.0058)	0.0283*** (0.0042)
Education: upper secondary			–0.0333*** (0.0059)	0.0237*** (0.0047)
Education: higher education			–0.0844*** (0.0057)	0.00152 (0.0054)
Female			–0.0512*** (0.0025)	–0.0390*** (0.0021)
Partner is retired			0.0893*** (0.0032)	0.0691*** (0.0027)
Working				–0.311*** (0.0034)
N	113,348	112,854	112,854	112,854
R^2	0.461	0.472	0.496	0.645
Control variables not shown	+ control variables of distance from retirement age	+ control variables of distance from retirement age, region, settlement type and year	+ control variables of distance from retirement age, region, settlement type and year	+ control variables of distance from retirement age, region, settlement type and year

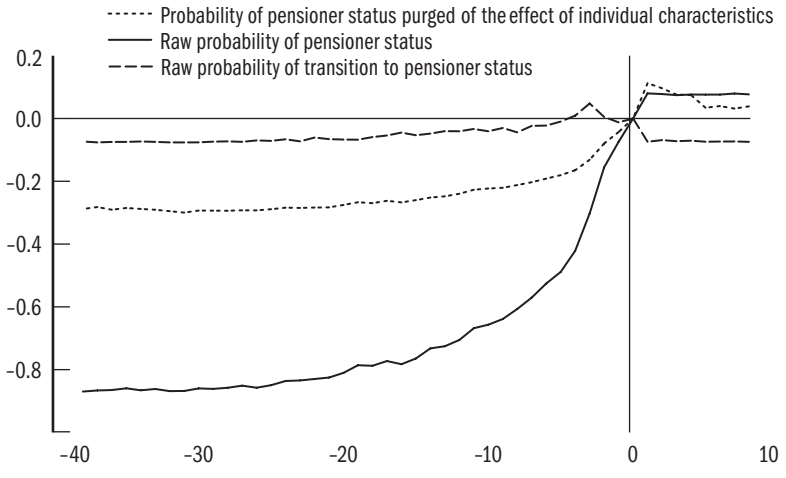
Robust standard errors corrected for arbitrary heteroscedasticity and the recurrence of observation units (clustering) are given in brackets.
*** $p<0.01$, ** $p < 0.05$, * $p < 0.1$.

The estimates over the observations of every person between the ages of 25 and 64 in the sample are shown in *Table 5.1* using four different specifications.

The figures in the table indicate the magnitude of change in the probability of an arbitrarily selected person being retired due to a change in a given variable, independently of the effects of every other observed trait. Column (2), for instance, shows that given a group of people of the same age, the same educational attainment and living in regions with similar unemployment rates, the probability of being retired is 8 per cent lower for a female member of the group than it is for a male member. Individual effects appear independently of each other. Thus, the effect of temporal distance from retirement age, for instance, is not mixed with the effects of educational differences in the composition of various age cohorts.

It is clear that the distance from retirement age is perhaps the most important indicator that distinguishes pensioners from non-pensioners. The exponentially rising curve alone (shown in *Figure 5.1*) accounts for 46 per cent of variability in pensioner status. To achieve the greatest possible flexibility, this curve was estimated with a non-parametric method (using a different indicator variable for each distance in number of years). As it is highly space-consuming to display the results in a table, this information is not shown in the data columns of *Table 5.1*, although it was included in each estimation. The outcome of this estimation alone can be seen in *Figure 5.1*. The variable has such a strong explanatory power that the model's success in predicting retirement only improves by one percentage point if we add the variables of local activity rate, region, settlement type and year of observation (see Column [2] in the table). Including the variables of education, sex and partner's activity in the model has a more significant but still moderate effect (Column [3]). The results indicate that relatively highly educated people and women are less likely to be pensioners, similarly to those who live in a region with better employment prospects or whose partners are not pensioners. The observed effects of these factors correspond to our expectations to some extent, since employment prospects are related to training, and partners or spouses often synchronize their retirement. It may come as a surprise, however, that women are less likely to be pensioners than men. The explanation is that although the statutory retirement age is lower for women (which should increase the odds), there is a lower incidence of disability pension among women compared to men (which decreases the odds) and there is a large number of untrained women, the effects of which are captured by the inclusion of the variable of education. With these effects controlled for, the probability of pensioner status is reduced. A major change can be observed with the inclusion of individuals' employment status (Column [4]): working people are less likely to be pensioners compared to non-working people. Now we are in a much better position than before to explain pensioner status; it is not clear, however, what was first: the pension or the lack of employment.

Figure 5.1: Probabilities of pensioner status and retirement as a function of the number of years left until retirement age (differences are relative to retirement age as reference value)



Source: Author's computations based on cross-section and panel data from the HCSO Household Budget Survey.

There are two reasons why a cross-section analysis is not suitable for assessing the incentive effects of the pension programme. First, it shows the cumulative result of factors motivating retirements over a relatively long period of time (which is also influenced by deaths) and therefore it cannot provide a reliable estimate of the incentive effects of the current pension system. Secondly, it does not allow us to measure the effects of considerations arising before the decision to retire is made (which is our main concern). To measure that, panel data are needed and flows rather than status need to be observed.

The results of a simple estimation concerning entry into retirement are shown in *Table 5.2*. In the simplest model, only the factor of temporal distance from retirement age is included as a variable predicting the probability of entering retirement. Similarly to the cross-section estimation, the effects of this factor are only shown in *Figure 5.1*, together with the raw cross-section probability of retirement. Although the explanatory power of the model using panel data is smaller (accounting for around 6 per cent of variability), the curve displays an exponential shape similarly to the raw cross-section data and corresponding to our expectations based on the standard duration model.[60] A notable difference between the two curves is that while the probability of pensioner status based on stocks peaks at retirement age, the raw probability of entering retirement based on flows peaks three years before, at exactly the point when early retirement becomes available without any penalties. The determinants of entering retirement are added to the model gradually.

60 Note that we do not expect equivalence: the two curves could only be equivalent under highly exceptional circumstances.

Table 5.2: Estimate of the probability of entering retirement among people aged 25–64 years based on panel data (average marginal effects from probit regression)

	25–64 year old						40–64 year old
Explanatory variable	(1)	(2)	(3)	(4)	(5)	(6)	(6)
Activity rate		–0.0242	–0.0193	–0.0238	–0.0439*	–0.0418*	–0.0669
		(0.015)	(0.015)	(0.015)	(0.023)	(0.022)	(0.041)
Education: vocational training			–0.00191	–0.00415	–0.00232	0.0335*	0.0484
			(0.0035)	(0.0036)	(0.0079)	(0.019)	(0.033)
Education: upper secondary			–0.00740**	–0.00911***	–0.00409	0.0611	0.0733
			(0.0035)	(0.0035)	(0.0078)	(0.045)	(0.065)
Education: higher education			–0.00941**	–0.0121***	–0.00459	0.169	0.133
			(0.0037)	(0.0034)	(0.0082)	(0.14)	(0.16)
Female			–0.00732***	–0.00804***	–0.0230***	0.0915	0.0619
			(0.0017)	(0.0017)	(0.0028)	(0.10)	(0.12)
Partner is retired			0.00703***	0.0215***	0.0296***	0.0240***	0.0311***
			(0.0020)	(0.0022)	(0.0034)	(0.0032)	(0.0054)
Partner is retiring				0.142***	0.168***	0.140***	0.121***
				(0.010)	(0.015)	(0.014)	(0.018)
On sick leave in base period				0.0377***	0.0313***	0.0289***	0.0426***
				(0.0040)	(0.0039)	(0.0037)	(0.0065)
Net income (log)					–0.159***	–0.157***	–0.275***
					(0.049)	(0.045)	(0.094)
Net income (log) squared					0.00652***	0.00684***	0.0119***
					(0.0023)	(0.0021)	(0.0044)
Work experience (years, potential)						0.00726**	–0.00528
						(0.0034)	(0.0071)
Work experience squared						0.0000	0.000194***
						(0.000019)	(0.000059)
Net income (log) × female						–0.00535	–0.00482
						(0.0049)	(0.0091)
Number of years before retirement age						–0.000795	–0.0132**
						(0.0032)	(0.0056)
Number of years before retirement age squared						0.000151***	0.000652***
						(0.000020)	(0.000074)
Over retirement age						–0.0126	–0.0360***
						(0.012)	(0.013)
Working				0.0184***			
				(0.0025)			
N	45,385	45,385	45,385	45,385	21,264	20,834	10,298
R^2	0.064	0.072	0.076	0.14	0.23	0.223	0.195

Each equation includes the control variables of year, region and settlement type, which are not shown here. With the exception of the last two, each estimation includes a row with the indicator variable measuring the difference between age and retirement age, i.e., people's temporal "distance" from the effective retirement age. The final equation also includes year indicators which interact with income.

Robust standard errors corrected for arbitrary heteroscedasticity and the recurrence of observation units (clustering) are given in brackets.

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

The explanatory value of the model is substantially improved when individual traits are added which capture temporal changes and motivations predicting the decision – this is shown in Columns (2)–(4) in the table. Factors in this group include sick leave status in the first period of observation, which approximates health status, the partner entering retirement and the net income received over the first period. Since labour income will also be taken into account in later analyses, the models shown in Columns (5)–(6) use the sub-sample of people in employment. Disregarding the fact that the effect of education disappears, the results are qualitatively similar to our previous findings. The effect of education is replaced by a highly significant effect of income. The last column shows a re-estimation of model (6) where the finding that the incidence of entering retirement displays a steep increase from the age of 40 is taken into account and the sample is reduced to people in the age cohort of 40 to 64 years. The results indicate that the effects of most of the variables are highly similar to those observed before. One exception is work experience, which displays a linear effect for this age group.

5.3. A more complete model estimation of entering retirement

Our previous models do not reveal the effects of the income that may be attained under pensioner or non-pensioner status. Although some of the variables have an indirect effect on income, their combined indirect effects on rate of income cannot be determined and cannot be isolated from their direct effects. In this section the model is modified to address this problem.[61] Since the estimation hinges on the observation of labour income in the first period, only those people are analysed who worked at the time.[62]

The estimation procedure needs to bypass the problem that pensions remain unobserved for people who work in the second period, while wages remain unobserved for people who enter retirement. The final model measuring the relationship between expected income and the decision to retire is therefore built in three steps. First, the income expected without entering retirement is estimated – this will be primarily, but not exclusively, labour income. The estimation is based on the section of the population who are not retired. Second, the level of income expected after retiring is estimated on the basis of the data on people who are observed to enter the pension programme. The two income estimates together cover the population of people in employment in the first period of observation and indicate how much income each of them can expect as a function of the decision whether to retire or not. These values can then be included in the equation explaining the decision.

Estimation of income in the second period as a non-pensioner

Table 5.3 lists the results of classic Mincer wage equations augmented by the income measured in the previous period. It is an important difference compared

61 The modification is motivated by the option value model of *Stock & Wise* (1988). The option value model describes the decision to retire made at a given point as a decision which takes future costs and gains into account in addition to immediate consequences. At each point, the decision maker considers the immediate and all future gains of retiring. If the gains are greatest in the present, the individual will retire, if greater gains are expected in the future, he or she will wait. The estimation is greatly simplified by the assumption that retiring is typically accompanied by inactivity and both are irreversible once the decision has been made. One of the important consequences of the Stock & Wise model is that if this condition is satisfied, the incomes expected in retirement and outside of retirement can be used directly in the estimation. *Lumisdale, Stock & Wise* (1990) demonstrate that if motivations are specified with sufficient detail, the model can be built using a simple econometric procedure, binary probit estimation. Our circumstances unfortunately do not allow specifications at the required level and we are not in a position to use Stock & Wise's procedure directly. To be able to regard our equation as an estimation of the option value model, we must assume that the income expected in the next period is indicative of all successive future periods. In this case, an expectation of higher pension means that the total income of the entire pensioner period is expected to be higher than the total income of the entire non-pensioner period.

62 Also, based on the data displayed in *Figure 5.1*, the group under analysis was restricted to people over 40 years of age – the upper age limit of 64 years was kept.

to the estimation of earnings that although the majority of pensioners work as employees, a lot of them also receive income from other sources, which supplements or substitutes for labour income. These include casual payments, second jobs, premia and even unemployment benefit. As these are taken into account in predicting income, the result is a good approximation of the income to be expected in the next period corrected for the risk of changing status. Similarly to the Mincer equations, our equation shows the impact of education on wages but with the parameter of delayed income assigned the value of 0.7, it is the *growth* of income rather than its *level* that we predict (subtracting 0.7 times the income expected in the next period from both sides of the equation, the relevant element is cancelled on the right and we get an outcome variable approximating the growth of income on the left). A notable result is that the coefficient of the delayed income is rather small, which to a large extent can be attributed to our decision to include every possible activity status to estimate the income of the second period rather than only people in employment.

Table 5.3: Net personal income expected in the second period without pension (monthly, log) as a function of individual traits – sample: people aged 40–64 years working in the first period

Explanatory variable	Heckman	OLS
Net monthly income (log) in first period	0.707*** (0.017)	0.699*** (0.020)
Work experience (years, potential)	0.0144 (0.014)	0.00454 (0.013)
Work experience squared	–0.000313 (0.00023)	–0.000109 (0.00022)
Education: vocational training	0.0813 (0.053)	0.102 (0.082)
Education: upper secondary	0.181*** (0.055)	0.204** (0.084)
Education: higher education	0.288*** (0.059)	0.318*** (0.085)
Female	–0.0593*** (0.014)	–0.0563*** (0.015)
Local activity rate	0.273** (0.13)	0.254** (0.11)
Constant	2.702*** (0.29)	2.909*** (0.28)
Lambda	0.165** (0.079)	
N	10,062	9474
R^2	.	0.27

Both equations include the control variables of year, region and settlement type, not shown here.

Robust standard errors corrected for arbitrary heteroscedasticity and the recurrence of observation units (clustering) are given in brackets.

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

A shortcoming of the simple estimation using the method of least squares (OLS, second column) is that it disregards the possibility that a pensioner may not become a pensioner at random, but under some pressure where factors determining future success play a major role. If this is the case, there may be factors which have not been observed but have an impact both on expected income and on labour market success. What we have in mind are traits such as creativity, motivation, assertiveness or communication skills. Our model corrects for the effects of these features using *Heckman's* (1979) two step

method. The first data column of the table shows the corrected values. The effect to be corrected for is measured by the "lambda" variable; the importance of the correction is indicated by its level of significance.

Estimation of income in the second period as a pensioner

The equation predicting future pension is formally similar to the labour income equation. Here, however, pension is the function of personal income, which is a relationship that approximates the formula used to compute pensions. The degressive nature of the pension formula is to be captured by income squared in addition to income, while differences assumed to hold between women and men mainly in the number of years of work are captured by allowing the effects of income to differ between the sexes. The estimation allows us to predict what income could be expected by people who delay retirement if they chose to retire.

Table 5.4: Net personal income expected in retirement in the second period (monthly, log) as a function of individual traits – sample: people aged 40–64 years working in the first period

Explanatory variable	Heckman	OLS
Net monthly income (log)	–1.003 (0.91)	–1.383* (0.71)
Net income (log) squared	0.0677 (0.043)	0.0853** (0.034)
Net income (log) × female	–0.00953** (0.0044)	–0.00844** (0.0038)
Work experience (years, potential)	0.0305 (0.034)	0.0183 (0.022)
Work experience squared	–0.000544 (0.00051)	–0.000243 (0.00032)
Constant	13.17*** (4.78)	15.08*** (3.66)
Lambda	–0.127* (0.066)	
N	10,298	588
R^2	..	0.19

Both equations include the control variables of year, region and settlement type, not shown here.
Robust standard errors corrected for arbitrary heteroscedasticity and the recurrence of observation units (clustering) are given in brackets.
*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

As we can see in *Table 5.4*, the equation once again has a moderate explanatory power, and the effect of net income does not appear to be statistically significant. One reason is that one of the variables not shown here which captures those effects of net income that vary between years is highly significant. Another reason is the strong significance of the lambda variable, which captures selection bias and shows a strong correlation with net income. It is clear, however, that although the results of the estimation where there is no correction for unobserved effects (OLS in the second data column) are qualitatively similar, the parameters of the key variables are greater, as we expected. A somewhat surprising result is that the quadratic term indicates growth rather than degression[63] – we have no explanation for this phenomenon.

63 The apparent negative effect is due to the fact that the data points are on the ascending part of the function.

Estimation of the decision to retire as a function of expected income

With the pensioner and non-pensioner incomes expected in the next year available for each person observed, their effects can be directly estimated. Variables previously included as an indication of income type (such as education) are now replaced by the estimated values of incomes and only those variables remain in the model which exclusively affect retirement – partner's retirement status, partner's transition to pensioner status, sick leave in the first period and distance from retirement age. The results of the estimation are shown in *Table 5.5*, corrected and uncorrected as before. Similarly to previous results, we can see that there is no substantial difference between the estimated effects, although the results of the model controlling for selection effects are more pronounced, which is, again, what we expect considering the effects of unobserved factors.

Table 5.5: Average effect of income incentives on the probability of entering the pension programme – sample: people aged 40–64 years working in the first period

Explanatory variable	Heckman	OLS
Net monthly income if working (predicted, log)	–0.134*** (0.022)	–0.115*** (0.017)
Net monthly income if retired (predicted, log)	0.186*** (0.038)	0.161*** (0.030)
Partner is retired	0.0292*** (0.0053)	0.0292*** (0.0053)
Partner starts retirement	0.123*** (0.018)	0.123*** (0.018)
On sick leave in the base period	0.0416*** (0.0065)	0.0415*** (0.0065)
Number of years before retirement age	–0.0234*** (0.0015)	–0.0223*** (0.0015)
Number of years before retirement age^2	0.000815*** (0.000067)	0.000796*** (0.000067)
Over retirement age	–0.0169 (0.018)	–0.0200 (0.017)
N	10,298	10,298
R^2	..	..

Structural probit estimation. Each equation includes the control variables of year, region and settlement type, not shown here.
Robust standard errors corrected for arbitrary heteroscedasticity and the recurrence of observation units (clustering) are given in brackets.
*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

The above estimation indicates that the financial incentives have a significant effect. A one per cent increase in expected non-pensioner income decreases the probability of entering retirement by 0.11–0.13 percentage points, while a similar increase in pension income increases it by 0.16–0.18 percentage points. As before, having a retired or retiring partner also increases the probability of entering retirement, by 3 and 12 percentage points respectively. Considering that the raw proportion of people entering retirement is around 6 per cent in the sample, this effect appears to be fairly important. The probability of entering retirement continues to increase with a decrease in the temporal distance from retirement age, independently of other factors.

What is the interpretation of the results? Two strong conclusions of practical relevance can be drawn. *1.* The number of years left before retirement age is reached and the respective incomes that can be expected as a pensioner and a

non-pensioner both have a strong impact on the decision to retire. The higher the income that can be expected in retirement, the more likely it is that pensioner status will be the chosen option and the higher the income expected from work, the less likely it is. Since the values of the two coefficients are not substantially different, we would get similar results if we replaced incomes by a single variable: the substitution rate of pension. In this case, the results indicate that retirement becomes an increasingly attractive option as the substitution rate increases, i.e., as pension income becomes a better substitute for labour income. *2.* Besides individual traits, unobserved factors presumably related to labour market success also have an effect on retirement. These skills increase the expected non-pensioner income and reduce the probability of retiring. If the goal of economic policy is to delay average retirement age, the impact of expected income and personal skills needs to be considered.

Let us start with skills. In many countries, adult education is an active labour market intervention aimed at improving employment chances, but there are indications that these programmes are moderately efficient (at least in comparison with programmes enhancing human capital at a younger age, as argued by *Carneiro & Heckman* (2003) for instance). *Köllő* (2006) finds that the most pressing problem of people who have difficulty adjusting to the labour market is a lack of basic skills of literacy and other skills needed to absorb and process information. While this conclusion may well hold for our data as well, in the absence of accurate measurements, we can only speculate. This important issue can only be settled on the basis of targeted data collection focussing on the relationship between skills and retirement.

Among politicians and economists alike, a general consensus appears to emerge now that given the phenomena of population ageing and improving life chances, raising retirement age is inevitable. The results of the analysis indicate that raising the age of retirement is an efficient tool. It must be emphasized, however, that we do not know either the indirect effects of a delayed retirement age on the labour market success of affected people or its direct effects on other economic actors. The investigation of these is a research question, while the assistance of people in disadvantaged situations is the task of social policy.

Finally, a discussion of possible ways of regulating expected pension incomes is in place. A sensible policy would not aim at reducing the incomes of people entering the pension programme at or after retirement age. This would in fact be diffidult to do in a fully or at least partially insurance based pension system. Reducing the level of pension income attainable before retirement age is reached is, however, all the more important. One method may be to lower pensions granted before retirement age to a greater extent than previously, or reduce the probability of access to early pensions. We have seen in Chapter 4 of this volume that there is a fairly wide margin of freedom to do that, especially with respect to disability pensions.

CHANGING CONDITIONS OF EARLY RETIREMENT

MÁRIA AUGUSZTINOVICS & JÁNOS KÖLLŐ

Over the few years immediately before and after the regime change, large numbers of people chose early retirement as an escape from imminent or expected job loss. The incidence of early retirement remained high after the transitional recession, despite the gradual rise in the statutory retirement age and the abolishment of the special early pension scheme previously introduced to ease labour market tensions. To illustrate the orders of magnitude: of the cohort born between 1945 and 1959, 23 per cent had retired by 2005 – when they were 46 to 60 years old. Within this cohort, the ratio of pensioners was only 8 per cent among graduates, 20 per cent among people with secondary education and 35 per cent among people who had only completed 8 years of primary education.

The chapters discussing disability pension and early retirement have shown that an important factor to consider is that the pension programme provided a relatively high and secure income compared to potential – insecure – wages. The choice of early retirement was not constrained by "penalty" deductions in the old-age pension scheme and in the case of disability pensions was facilitated by the – well documented – tacit consideration of poor labour market prospects in the evaluation of claims.

Over the next few years, the conditions impacting choice between employment and early retirement are expected to change profoundly, quite independently of changes in early retirement rules or in disability assessment procedures. The available (imperfect and incomplete) data suggest that large groups of people will be unable to obtain sufficient years of service required for a pension by the time they reach retirement age. Or, if the current requirement of 20 years of accumulated service were lifted they could expect a pension so small in amount that it would not present an attractive alternative to incomes offered by casual labour or welfare benefit programmes. This is a new phenomenon in the pension system and, in a broader sense, in the entire system of social transfers.

The analysis of administrative data in *Augusztinovics and Köllő* (2007) indicates that, in the first five years of the new millennium, each year about 37 to 40 per cent of the cohorts born between 1945 and 1950 failed to have accumulated the service time required for pension eligibility as specified by the current regulations. The ratio is somewhat lower, at 32 per cent, when considering the total of the five year period, owing to the fact that people move between eligible and non-eligible status. As the degree of mobility is practically unknown however, and predictions on the future always contain some uncertainty, it is difficult to estimate the number of people who will not obtain pension eligibility. According to a cautious estimate with very broad margins, there will be 250 to 500 thousand people over the next decade and a half who will not attain pension eligibility by the time they reach retirement age because they will fail to meet the requirement of 20 years service. Taking the median of the top and the bottom values of the estimated range, around a third of the population will fail to be eligible potentially reaching 50 per cent among people with only primary education. People in this subgroup are not only threatened by the prospect that they will not be able to retire if they wish to, but can also expect very low pension rates of barely 40 per cent of the average pension of university or college graduates.

These circumstances will gradually reduce the role of the old-age pension scheme in social and unemployment assistance aquired over the past twenty years, since they block the escape route precisely for those with the worst employment prospects. While the long years of service accumulated – by almost everyone – over the period of socialism

held the door open well after the end of the full employment era, it will soon be shut by the persistenly low employment rate and low wage rates of uneducated workers.

The trend described above will put unprecedented pressure on the disability pension programme. However, tightening the regulations on disability pension claim evaluation cannot solve *this* problem by itself; it can at best steer claimants who are denied employment and old-age pension towards other welfare programmes. What is needed, instead, is a rehabilitation programme of the kind presented in Chapter 6 of this volume – and a race against time. These developments also make it imperative to make a decision on how the old-age pension scheme should handle those not attaining eligibility or only to very low pensions: whether they should be granted a basic or minimum pension or be provided for by an old-age welfare programme outside the pension system.

6. EVIDENCE-BASED SOCIAL POLICY: AN EXAMPLE OF A WORK INCENTIVE PROGRAMME

ÁGOTA SCHARLE[64]

The number of people receiving disability pension has almost tripled since the 1970s, reaching a proportion of 7.5 per cent of the working-age population in 2001. With the decline of heavy industry, the proportion of people on disability pension is twice the national average in regions with scarce job opportunities and much of this group have permanently left the labour market. The government has made substantial progress in reducing unemployment and welfare dependence but the labour market prospects of people on disability pension have not improved.

The above summary of the situation in Great Britain may sound familiar to Hungarian readers. This chapter describes the reaction of the British government to the challenge of such a situation as an example of the implementation of evidence based policy making. The final section of the chapter points out some lessons for Hungarian policy making, highlighting some bottlenecks and promising initiatives as well.

6.1. Good governance and evidence based policy making

The cooperation between government decision makers and researchers has a long history in Great Britain, and the Labour government taking power in 1997 under Tony Blair's leadership has placed an even greater emphasis on this cooperation. In its modernisation programme announced in 1999, the government pledged to be "forward-looking in developing policies to deliver outcomes that matter, not simply reacting to short-term pressures" *(Cabinet, 1999)*. Evidence-based policy making was highlighted as one of the most important tools in achieving this goal *(Davies, Nutley & Walter, 2003)*.

The task of improving government efficiency has recently received increasing attention in the European Union, at international organisations and in certain countries.[65] *Better Regulation* initiatives are especially strong in Britain, Ireland and the Scandinavian countries. The common element in the initiatives ranging from cutting red tape through to introducing systematic impact analyses is that they seek methods for improving efficiency and attempt to integrate these into the daily practice of policy making.

64 *Zsombor Cseres-Gergely* contributed to the writing of this chapter.

65 At an international conference in June 2007, the representatives of the European Committee, the OECD, the World Bank and the UN issued a common statement, where they call for governments to support the propagation of an evidence based culture of policy making in every aspect and state that transparent and responsible policy making makes a substantial contribution to the growth of welfare *(Istanbul..., 2007)*.

In Britain, the need for change and the modernising agenda were outlined in two reports published by the Cabinet Office in 1999 *(Bullock, Mountford & Stanley, 2001)*. The report on *Professional Policy Making for the Twenty-First Century* identified nine core features of modern policy making: outward looking, innovative and creative, forward looking, evidence-based, inclusive, joined up, learns lessons, evaluates and reviews *(Cabinet, 1999)*. An efficient process of policy making involves the regular and systematic assessment of delivery, the recognition and dissemination of implications for policy, and the correction of existing measures as needed. Every effort is made throughout the process to rely on the most accurate evidence available: facts and research findings and the opinions of professional organisations and stake-holders. Finally, co-operation between government institutions is sought from the start of the policy making process through to its delivery.

Evidence-based policy making was given an especially strong emphasis in the British modernisation programme. New units and working groups were set up under the supervision of the Cabinet Office, The Treasury, the Audit Office and the Economic and Social Research Council and commissioned to develop various areas of organisational culture and expert capacities. Training programmes were organised for government experts and politicians, a nationwide publicity campaign was launched to raise awareness and support for evidence-based policy making, and new forms of cross-departmental collaboration between working groups, secondment of specialist staff and collaboration with external experts were introduced. A resource and management centre was established to co-ordinate the collaboration between academic research centres engaged in developing management tools. These initiatives were strengthened by legislation and the requirement to support government decisions by evidence and make background studies publicly available is systematically enforced in government policy making *(Bullock, Mountford & Stanley, 2001)*.

6.2. The British *Pathways to Work* programme

The implementation and success of the new approach to governance is aptly illustrated by the launch of *Pathways to Work* in 2002, a new programme aimed at helping unemployed people with reduced work capacity to return to work. The success of the scheme rests on its carefully designed structure as well as on the method of its introduction, where the first pilots were followed by gradual expansion and thorough impact assessment after each step, with corrections made as necessary.

The Green Paper – problems, proposals and consultation

Plans for the *Pathways to Work* programme were published in a green paper by the UK Department for Work and Pensions *(DWP, 2002)*. The green paper

surveyed the labour market participation of the population living with reduced work capacity, reviewed the experiences of the existing New Deal scheme for disabled people and concluded that it had brought no major improvement in comparison with other programmes, as the employment rate of the target group had not increased significantly. The last chapter of the paper outlined a proposal for a programme which was expected to improve results.

The new government coming into power in 1997 introduced a range of welfare to work schemes targeted at various groups in 1998. On top of general active labour market programmes, three measures were introduced to encourage the re-employment of people with reduced work capacity:

1. people making a claim for incapacity benefit are required to attend an interview where employment opportunities are discussed; the interview is repeated at least every three years;

2. people actively seeking work are assisted by job brokers who specialise in disabled workers;

3. people over 50 entering long-term part-time or full-time employment are eligible for additional financial support for a year, also available to participants of training programmes for a month.

The Green Paper of 2002 found that while the overall employment rate increased and unemployment decreased from 1999 to 2000, there was an increase in the number of people on incapacity benefit, claimants stayed on welfare for an average of eight years[66] and most of them did not work during this period. The evaluation of the operation of the employment programme led to the conclusion that although people with impaired health conditions received more help than previously, this was not sufficiently focused or sufficiently intensive.

Standard job centre services are sufficient for the average unemployed going through a rough phase in their career but people applying for incapacity benefit have more specific needs. Health problems are usually accompanied by other impediments: low educational attainment and a lack or insufficiency of basic skills (such as literacy, communication, adaptation). These cases require personalised assistance that first helps to compensate for these missing skills and then helps to acquire them. Assistance needs to be supplemented by close supervision: one of the most frequently absent skills is in fact motivation itself, which can be encouraged by a requirement of regular checks and by financial incentives.

The first programme introduced in 1998 needed to be amended in a number of ways: the three year interval of mandatory interviews proved to be too long, the staff at job centres were not appropriately trained to deal with customers with special needs, job brokers did not have sufficient information on appropriate job opportunities, the different schemes were not suitably integrated and failed to cover the entire range of problems that came up. The

66 The work capacity of claimants is reviewed every three years and permanent entitlement is granted in very rare cases.

2002 Budget allocated supplementary resources to piloting new methods in an effort to correct these deficiencies.

The Green Paper was published on the DWP web site on 20th November 2002 and the proposal was open to public debate until 10th February 2003. Several professional and interest groups commented on the paper – its reception was on the whole positive. The Department published its response in June 2003 summarising the main reactions and explaining how the original proposal was to be modified to accommodate the new suggestions *(DWP, 2003)*.

The structure of the new programme

The new programme outlined in the *Pathways to Work Green Paper* consisted of four main elements: *1.* claimants attend interviews and a screening tool is used to determine whether they need the special service provided by the programme; *2.* those who do are required to attend further work focused interviews to discuss an action plan of return to work activity; *3.* the service most suited to the needs of the claimant is selected from a wide range of programmes aimed at improving employability and labour prospects; and finally *4.* people returning to work are given improved financial incentives *(Riddell, Banks & Tinklin, 2005)*.

The new programme was built on the existing scheme introduced in 1998 and necessary changes were decided on the basis of previous programme evaluations. Most of the modifications involved the administrative procedures, the timing of services and the improvement of collaboration between the various experts involved.

The work capacity and health of claimants are assessed in a series of tests usually taking 12 weeks before a decision is made on their entitlement. Eligible claimants who are found capable of work attend a work-focused interview within eight weeks after making the claim.

The first work-focused interview is thus held two months into the programme rather than at the time of making the claim: this ensures that participants' attention is not occupied by the outcome of their claim and thus they can better concentrate on job search. The capability assessment is spread over a number of sessions to allow the activity programme to proceed on the basis of interim results. Claimants had previously had to wait six months for the results of the capability assessment and had not been able to start seeking employment during this period.

Clients complete a questionnaire at the first interview: their replies are evaluated by a computer programme that estimates the client's prospects of finding employment within a year without special assistance. Those with low employment chances are required to attend follow-up interviews, while others have access to further services on a voluntary basis. A series of five follow-up

sessions are held, one every four weeks, where the client's progress in returning to work is discussed.

The screening tool helps identify the appropriate target group of the services: people with little chance of return to the labour market without special support and encouragement are given more attention. The purpose of having more frequent interviews is twofold: first, the sessions help identify and address the obstacles to work faced by claimants and second, they serve as a test of availability for work. Attendance is mandatory and failure to comply is sanctioned by a reduction in benefit.

New clients of the welfare provision are assigned to the same personal adviser for the entire duration of the programme. Advisers help select the services which are best suited to helping the client return to work. These are grouped into 16 packages, each targeting a life event or problem commonly hindering re-employment and may include work trials, internet access, job interview skills training, vocational retraining, lifestyle advice and other support. A new Condition Management Programme has been developed for people living with disabilities: these 6 to 13 week programmes help claimants manage the physical symptoms of their health condition or disability (such as pain).

Unemployment and incapacity benefits are administered by the same institution, *Jobcentre Plus,* which has an extended range of functions, but several services are contracted out to non-profit or for-profit organisations. Staff receive training in identifying the complex problems of workers with reduced work capacity and in selecting the services best suited to them.

Financial incentives are enhanced by offering a small return-to work credit for one year (40 pounds per week, which is 20 per cent of the minimum wage, in the form of a tax credit) to people who enter employment of at least 16 hours per week if their earnings are below 15,000 pounds per year (one and a half times the minimum wage). People participating in work-focused rehabilitation programmes can be given financial support of 20 pounds per week (to compensate for travel costs, for instance). The tax credit is paid in cash directly by the job centre rather than as a refund from the tax authority.

Programme pilots, evaluation and roll out

The first pilots of the *Pathways to Work* programme were launched in October 2003 in three job centre districts with local unemployment rates substantially higher than the country average (Derbyshire, Renfrewshire and Bridgend all used to be industrial areas). At pilot job centres, programme participation was compulsory for new claimants and existing incapacity benefit recipients could join on a voluntary basis. The programme was subsequently rolled out to further districts. Four new districts joined in April 2004, and the next expansion was implemented in February 2005, when the programme was extended to all incapacity benefit claimants in the pilot districts. Another four

areas joined in October 2005 and in January 2006 the programme was extended to all highly disadvantaged districts (the bottom third of all districts in terms of unemployment rates).

19 million pounds were invested in the experiment in its first year and 47 million in its second. The latter figure corresponds to 0.3 per cent of all budget expenditure spent in connection with people with reduced working capacity *(House of Commons, 2006)*.

In her reply to a House of Commons interpellation, the Secretary of State for Work and Pensions said in June 2007 that the programme was active in 40 per cent of job centre districts *(Flint, 2007)*. Further roll out is planned to be implemented through contracting private sector and non-profit organisations. The contracts are tendered in two waves: the services of the programme will be available in a further 15 districts by the end of 2007 and in the remaining 16 districts by April 2008. Contracts had been signed with six private sector providers by September 2007. Participation in the programme is voluntary for existing provision recipients and mandatory for new claimants. Trials of compulsory participation for everyone were started in 2007 in seven districts.

The DWP regularly surveys the operation of the programme and assesses outcomes with the help of a purpose built evaluation database. The database contains data from various administrative sources: Jobcentre Plus data on registered unemployed people and on the participants of active labour market programmes, data from the registry of people on welfare benefits, data from the screening procedure, and data on the clients of the old (but still available) incapacity benefit scheme. The database records information on every client of the programme and their participation can be followed at all phases of the procedure.

Most of the programme evaluation is undertaken by a consortium of independent research centres. The first evaluation used qualitative methods of assessment and was conducted by researchers from the *National Centre for Social Research (NatCen)* at the beginning of 2004 *(Dickens, Mowlam & Woodfield, 2004)*. Its main purpose was to provide rapid feedback on the experiences of the first phase of the experiment (the first three pilot districts) and to identify problems in implementation. The evaluation involved interviews with job centre staff, external experts participating in the pilots and clients. Apart from their experience with the programme, respondents were also asked for suggestions as to what could be improved and how. This formed the basis of recommendations to amend the programme with respect to the training of personal advisers, avoiding staff overload, the quality of the screening tool and the coherence of work availability requirements and supportive services.

A second wave of evaluations was prepared by three research centres in collaboration and used a longitudinal panel survey design to analyse the behaviour of participants (clients) of the pilot programme *(Corden, Nice & Sainsbury, 2005)*. These investigated attitudes towards the new services and the compulsory interviews and assessed claimants use of the range of services provided. The data was then used to evaluate the impact of the programme on employment chances and to identify areas where amendments were needed.

A total of 11 surveys were conducted using different methodologies between 2004 and 2007: the first qualitative interviews were followed by quantitative data collection on a larger sample and the administrative data of the Department were analysed. The pilots were launched in several districts and at different times, which made it easier to isolate external influences from the effects of the programme *(Blyth, 2007)*.

The evaluations covered every component of the programme and several factors that may have influenced outcomes. They covered the various medical examinations, the screening tool, the effects of withholding the benefit, employment difficulties specific to older people, adult education opportunities for people with learning difficulties, the ambitions and attitudes of older people, attitudes towards disability, the functioning of integrated service provision, the costs and benefits of motivating non-profit service providers, the experiences of the return-to work tax credit administered by Jobcentre Plus, methods of paying pensioners' benefit entitlements, moves between sick leave and work, the relationship between employers and people with long-term health conditions and potentials for self-employment.

The latest evaluation report was completed in June 2007 on the basis of a questionnaire survey and administrative data *(Bewley, Dorsett & Haile, 2007)*. The results of the multivariate analysis indicate that one and a half years into the programme the proportion of clients successfully returning to work increased by 7.4 per cent. The number of people exiting the programme increased by 6.3 percentage points in the first six months but this effect diminished to 1.5 percentage points after one and a half years. The probability of employment primarily increased among the group who had left the scheme. The programme reduced the incidence of health impairment seriously limiting clients' ability to carry out everyday activities by 10.8 percentage points.

Publicity and professional networks

The UK Department for Work and Pensions publishes the entire text and a summary of up to four pages of every completed report on its website (http://www.dwp.gov.uk), by both internal and external researchers. In addition, a separate report on *Pathways to Work* summarising existing evaluations and results has also been published *(Blyth, 2007)*. The results of programme evaluations have also been published by researchers in working papers and jour-

nal articles. The studies are available to download from the web pages of the Department and the research centres involved. Wide publicity serves several purposes. First, it allows the government and the scientific community to have access to the body of knowledge emerging from the research results and to the conclusions and lessons learnt from the exercise. Second, it encourages researchers to keep to high quality standards in their analyses. Finally, by publishing brief summaries accessible to the media and to a wider audience, the Department can gain or enhance public support for its goals and policies.

To ensure high standards and enduring co-operation, research is commissioned from experts carefully selected through competition and research contracts are signed for several years. The Department established a research procurement framework to allow the straightforward and uniform handling of commissioned external research activities. The framework ensures that minor research projects need not be individually handled in the public procurement process. The research contract system further allows the Department to support the activities of research centres in certain cases. This practice has the advantage that with long-term collaboration, the supported organisation gains better insight into the needs of the Department. It also carries the risk, however, that support may be difficult to withdraw should the changing needs of the Department require the expertise of other research centres. According to the head of the Social Research Division, this type of co-operation is successful provided that it is limited to well-defined research activities *(Bridgwood, 2003)*.

The heads of units responsible for commissioning research usually have direct experience of research institutions: one of the senior research officers at the Social Research Division, for instance, held previous positions at the Institute for Employment Studies of Sussex University and the Social Survey Methodology Unit at the Office for National Statistics and worked on policy evaluation methodology at the Cabinet Office.

The Department itself also employs researchers and encourages the secondment of its employees to conduct research at academic or other research centres *(Bridgwood, 2003)*. The DWP in turn admits researchers and experts from other government departments or research centres on secondment. The separate research unit of the Department provides services concerning measurement, methodology and analysis for the entire organisation. The unit is responsible for the research budget of the Department and supervises dozens of external research projects in parallel. The Department not only commissions secondary analyses and small-scale surveys but also participates in major endeavours, such as the English Longitudinal Survey of Ageing (ELSA), where tens of thousands of respondents are involved.

6.3. Lessons for practices in Hungary

The majority of experts and decision makers involved in the formulation of employment policy in Hungary have a thorough knowledge of their fields and are committed to build an efficient welfare system which provides social security and encourages labour supply at the same time. They seek to ensure that job centres offer quality services and are open to using the results of academic research – the very existence of this volume being the perfect proof. The web pages of the Ministry of Welfare and Employment and the Hungarian Employment Agency publish a growing body of up-to-date and relevant information; the National Employment Fund (OFA) finances innovative experimental projects. The Ministry maintains an in-house research centre, finances policy-relevant research activities and regularly invites researchers to participate in the policy making process.

However, the impact of employment policy has been very limited in the past 15 years and has failed to bring substantial improvement in the activity rate. One of the main reasons appears to be the inattention to four functions which – as exemplified by the British model – are essential for efficient policy making. Efficient policy making is based on evidence, is able to learn, evaluates and revises. It evaluates results, identifies mistakes, makes the experiences available to others, tries new, better solutions and improves existing ones.

Each of the individual components of a model of learning-based policy making appears somewhere in Hungarian social policy but they are not integrated into a unified whole. In the current practice of government policy making, ex-ante impact analyses are usually formal or completely missing and policy outcomes are not regularly monitored *(OECD, 2007b; Kovácsy, 2005)*.[67] The impact of active and passive labour market programmes is not assessed regularly, programmes that prove to be unsuccessful are not removed from the system *(Gere & Szellő, 2006)*. Experimental projects are either not subjected to a review process where the best tools could be identified or, if assessments are made, their results are not easily accessible to stakeholders and programmes that prove to be successful are not rolled out on a national scale *(FRSZ, 2006)*. Monitoring and evaluation reports are either completely inaccessible to the public or are published sporadically, on the websites of different institutions or in other difficult-to-reach formats.

The new system of rehabilitation services and provisions for unemployed people with reduced work capacity also includes several features which have proved to be successful in the British *Pathways* programme. An assessment procedure focusing on unimpaired capacities is available and there is some expertise and experience available in job centres concerning screening tools, the special services required by clients with reduced work capacity and methods for successful workplace rehabilitation *(Juhász, 2004; Busch, 2006; Dávid,*

67 Improving government efficiency has been on the government's agenda and as of 2005, the Justice Department and the Public Administration Reform Committee has expert groups and divisions which are assigned the task of maintaining high standards of law making and propagating better governance. The requirement of impact assessment and evaluation receives special emphasis in the *New Hungary* development plan. These initiatives, however, have so far had little practical impact.

Móricz & Szauer, 2007). There are also good examples of collaboration between job centres, local governments and non-profit service providers *(HEFOP, 2005; Progress, 2005; FRSZ, 2006)*. A framework for collecting data that would allow precise measurements and the methodology of evaluation are also available *(Kézdi, 2004)*.

The British experiences suggest that three further steps are needed for success. First, the outcomes of completed pilot schemes and existing nationwide programmes should be systematically assessed and evaluated, in order to identify best practices and also the factors that contribute to the success or failure of the various schemes. The results should be summarised in a publicly available report and offered to professional groups for consultation. In the second step, a new system of provisions can be outlined, building on the comments and suggestions that emerged in the consultations. The new scheme should integrate the isolated initiatives into a unified system which takes the client from the point of claiming benefit, through the screening procedure, to in-work mentoring, and should encourage lasting return to the labour market. The third step is to plan the pilot and evaluation procedures of the new scheme and then the national roll-out of the system corrected in accordance with the results of the evaluation. At this stage the Ministry would also need to collect data, regularly assess the working of the scheme, commission researchers to evaluate the results and regularly publish results on its website. The European Union allocates ample resources to projects of this type, thus we hope that Hungarian policy makers will soon take these steps leading to success.

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