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Tax awareness and reform of the welfare state: Hungarian survey results

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Abstract

This paper reports the results of a survey on the tax awareness of the Hungarian population. Knowledge of tax types and levels is investigated, followed by questions on preferences for state expenditures. The design of the survey is aimed at a contingent evaluation of public sector involvement in health, pensions and higher education. The results show that fiscal illusions have their roots in poor knowledge of the tax cost of public expenditures. When people are provided with additional information on these factors, preferences for state involvement seem to diminish. Possible reform scenarios can be modelled with alternative formulations of institutional arrangements. Respondents tend to have most support for mixed strategies, while 'pure state' and 'pure market' solutions receive the lowest levels of support. However, since the outcome of any public sector reforms depends heavily on evaluation of the current regimes, an extensive part of the paper is devoted to the investigation of the 'status quo effect'. The paper, though descriptive in general, provides normative evaluations and suggestions for further reforms.

JEL classification: H31, H51, H52, H55.

Keywords: Hungary, tax awareness, welfare state reform.

1. Introduction

Reform of the welfare sector is on the agenda in Hungary, as it is in other post-socialist countries. Debate is taking place on the financing of the pension system, health care and higher education; on transformation of the social insurance system; and on the role of the welfare state. The actual fate of such reforms is always the result of a political process. Parliament has to pass new legislation to implement any important change. Before this takes place, there is a public debate between those who take various standpoints. This often prompts advocates of various mixes of public and private provision in the welfare system to cite opinion poll findings to support their ideas. However, the empirical basis on which they do so is not always clear. It is especially important under these circumstances to clarify what citizens know about these matters and what position they take on them. There is a great deal of literature on the transmission mechanisms that link together public opinion; political will expressed in votes; political parties and politicians; interest groups and their representatives; and the distortions in these mechanisms.²

The survey was carried out in early 1996³ and was designed to answer two groups of questions: 1) how accurately do Hungarians perceive the taxes that are levied on them? In other words, to what extent are they 'tax aware'?; and 2) is their picture of the link between tax payments and welfare services accurate or distorted? In addition, we wanted more information about the public's preferences for reform of the welfare system.

The research centred on a questionnaire-based survey. The sample of 1,000 Hungarian citizens was confined to the population of active age, and was sufficiently representative of this. The interviewer spent about an hour in conversation with each respondent. One part of the interview was a customary survey by questionnaire. Answers were received about the characteristics of the respondents, and how generally informed and tax aware they were. The other part of the interview had an experimental design. We wanted to know the magnitude of the tax burden that respondents are prepared to accept. In other words, how much income they are prepared to relinquish to the state in return for various welfare services. This approach is analogous to the respondents entering a hypothetical market, where they have to say what 'price' they are willing to pay for each item of public provision. The approach is closely akin to the 'contingent valuation' method used to determine the demand for public goods.⁴ Respondents were invited to choose between alternatives, in a hypothetical decision-making situation, and from their choices we deduced what their preferences would be.

We realize that the survey has various limitations. With hindsight, we regret that the sample did not cover the inactive population as well.⁵ The hypothetical decision-making situations could have been described more clearly and fully to the respondents (so that the reliability of the experiment's findings would be enhanced) if the time available for each interview had been substantially longer than an hour.

As mentioned above, the survey combined public-opinion polling techniques with contingent valuation methods for revealing preferences. This combination, however, is not without its problems. As the interview progresses, the interviewer conveys to the respondent essential items of information that may then influence the respondent's opinion. However, this was precisely what interested us. What position do citizens take if they actually know exactly what they forfeit in favour of the state's welfare services, instead of just guessing rightly or wrongly?

The main purpose of our earlier papers has been to publish the main facts from the data we obtained.⁶ In this paper we go on to emphasise a few of the lessons to be drawn. It contains messages of two kinds. First, we make factual statements, drawn from the survey. Of course, we cannot claim to have proved all of these statements by rigorous empirical tests. This was precluded by the limitations of the survey. However, we can

claim that the credibility of these statements and the probability of them being true are increased because they rest on the survey's numerical results. Secondly, we put forward interpretations and opinions. These relate to the respondents' statements based on the survey. They are conjectural extensions of these statements, but interspersed with the authors' suppositions, prior notions and value judgements. We have tried to word the study so that it is clear where the research-based statements end and the authors' subjective opinions begin.

The issues addressed in the research are closely linked to the theory of optimal taxation and to the theory of preferences about taxation and state expenditures.⁷ These theoretical implications are not covered in this paper, which has the less ambitious purpose of providing a short account of the rich data of the first empirical survey. However, it also sets out to draw some economic policy conclusions from the empirical data.

2. Weaknesses of tax awareness

The classical work that introduced the concept of fiscal illusions was written by Puviani (1903). This became known to economists through the work of James Buchanan, who also employed this theory for current phenomena.⁸ Cullis and Jones (1992) differentiated between two kinds of false awareness in citizens: an 'optimistic' kind, which underestimates the tax load incurred from public services (and corresponds to fiscal illusions) and a 'pessimistic' kind, which over-estimates the tax burden, or perceives falsely and inaccurately the gains from the public service provided compared with the tax imposed.⁹

Our findings suggest that both types of false awareness occur among Hungarian citizens. The survey supported the initial hypothesis that the majority of Hungarian citizens do not clearly discern the tax burdens placed upon them. They have difficulty understanding the structure of the complex, intricate Hungarian tax system. Many are not aware that various other tax-like contributions are levied on them, as well as the charges openly described as taxes (personal income tax, for instance). These earnings-related contributions are partly paid by the employer and partly deducted from the employee's wages.¹⁰ When we asked what other types of deductions employers made from employees' pay, apart from personal income tax, 10.1 *per cent* of respondents said there were no other types, and 4.3 *per cent* replied that they did not know whether there were other types of deductions or not.¹¹ Of those who mentioned some kind of contribution, 16–24 *per cent* admitted that they did not know the rate. Interestingly, the knowledge about the employer's contributions was more accurate.

The taxation levied on the general public includes indirect taxes on the price of goods consumed and services used—general value-added tax (VAT), excise tax, and so on. Rather than analysing the overall data, we just asked about certain products as examples. Table 1 shows a breakdown of the replies when asked about the tax content of gasoline and bread prices. Here, and in later tables, we have differentiated between three grades of tax awareness. The correct reply is taken to be 100 *per cent*. If the response falls within a band of 75–125 *per cent*, we have graded it 'largely correct'. This interval is by no means very narrow. On the contrary, the measure is a lenient one. If the estimate is less than 75 *per cent* of the real figure, we have termed it 'significantly under-estimated', and if it exceeds 125 *per cent* we have called it 'significantly over-estimated'. Under-estimation was high in the case of gasoline. With bread, the opposite was the case. Almost two-thirds of respondents greatly over-estimated the tax levied on bread.

Citizens are not only misinformed about taxes, but also tend to have an uncertain

knowledge of state expenditure and the true costs of certain ostensibly free public services. The observations are summed up in Table 2.¹² Columns 1, 3 and 5 reflect the estimates given by respondents and the actual figures for the total cost of a free, or heavily subsidized, provision. In these cases there are high proportions of respondents (58.8, 40.7 and 62.6 *per cent*) who significantly under-estimate the costs of the service, or, in other words, who live under strong fiscal illusions.

Columns 2, 4, 6 and 7 show the tax 'price' of the various provisions *per* tax payer—the annual average amount of tax imposed on the average tax payer, in order to make the provision 'free' or heavily subsidized. Under-estimates are less frequent here, partly because the question came after respondents had guessed the total cost and learned the right answer. With some tax 'prices', overestimation became more frequent and pronounced instead.

It is certainly surprising that the proportions of largely correct estimates of costs and their tax consequences are a mere 13–25 *per cent*.

To sum up, the tax awareness of the general public seems to be weak. The perceptions of the vast majority are uncertain or incorrect. Many people live under a fiscal illusion, underestimating the tax burden required to maintain state services.

In our opinion, there is a combination of various factors behind this. One factor is that a false tax awareness arose under the socialist system. The tax burden on the population was concealed (notably the huge turnover tax built into the prices of goods, and various levies on enterprises). People had the impression that the paternalist state was providing them with 'free' services.

The tax reform of the reform-socialist period, which began with the introduction of personal income tax and VAT in 1988, made citizens at least partly aware of their tax paying status. However, the present tax system is highly complex and baffling to the average citizen. Politicians, government departments, the press, radio, television and schools have failed to explain adequately the connection between state provisions and taxation.

We do not claim that this situation is unique to Hungary or the post-socialist countries. The authors of the British survey¹³ say that 'failing to specify the tax consequences of changes in the level of public expenditure can lead to significant over-estimates of the popularity of such increases'.¹⁴ The study provides a number of interesting results about the weaknesses and typical distortions of tax awareness in British citizens. It would be worthwhile conducting some international research, based on common methodological standards, that would allow firm comparisons to be drawn between tax awareness in Hungary and in other countries.

3. The distribution of preferences for state welfare services: a preliminary analysis

The survey included questions of various kinds that were designed to discover public opinion about the alternatives for reforming the welfare sector. Let us start by concentrating on one question. We described to respondents three possible kinds of institutional arrangements for various services currently provided by the state. These options appear in Table 3, where the questionnaire is quoted verbatim.¹⁵ Respondents could choose between 'centralized state solutions', 'mixed structures' and 'market solutions'. Before considering the distribution of the responses, there are some remarks to make about the questions themselves.

- The alternatives offered are a tiny fraction of the set of possible alternatives.

Thousands of combinations of state, quasi-state or corporatist, and private elements can be envisaged, and indeed exist in various countries. Since the choice we offered was very narrow, it could be, for instance, that even more people would have chosen a 'mixed' structure if they had been offered several alternative combinations of state and non-state institutions and systems.¹⁶

- The wording of the short explanation given for 'market solutions' was somewhat deficient and, therefore, probably too extreme. Experts who advocate such solutions usually take it as self-evident that there is not unlimited freedom on the market for such services. The operation of the decentralized, autonomous institutions that provide the services will be constrained by law and supervised by state authorities, which regulate the prices for some services, perhaps provide state guarantees, and so on. The 'market solutions' might have been more attractive to respondents if greater emphasis had been placed on these kinds of intervention and control.
- A further problem may have arisen because the interviewer combined the features of a questionnaire-based survey and a decision-making experiment. In a pure questionnaire-based survey, the interviewer does not convey any information to respondents. The aim is to find out how the respondents will react to the questions in the light of the information they already possess. Here the interviewer conveyed information to each respondent, saying what the tax consequences of particular state programmes would be, correcting, if necessary, the respondent's mistaken information, and explaining the alternative mechanisms. However, the explanation attached to this last group of questions was not given in detail. The couple of minutes available proved very short for presenting complex alternative systems. Furthermore, these are not generally known alternatives. Some are merely conjectural possibilities in Hungary, taking forms not directly known to the Hungarian public, about which respondents had little personal experience. To have set up an accurate experimental situation would have required providing more information and giving the respondent a clearer understanding of the hypothetical choices.

While pointing to the survey's shortcomings, we emphatically believe that the responses can be interpreted and evaluated. The numerical results obtained provide a picture of the main proportions, even though the accuracy of them can be questioned.

Table 4 gives a summary of the results. Support for the three types of provision differs from sphere to sphere. The state solution attracts the most support in the field of higher education. With hospital care, only a third of respondents support a centralized state solution while, with the pension system the proportion is just over a fifth. The mixed structures attract the most support in all three spheres, and are chosen by an absolute majority for the pension system. The level of support for the pure 'market solutions' is 12–18 *per cent*.

A fairly small proportion of respondents chose a pure 'state' or a pure 'market' solution for financing more than one of the three spheres. Those who consistently supported the centralized state solution, the *status quo*, in all three fields made up 9.8 *per cent* of the sample. The proportion consistently supporting a purely market solution for all three spheres was an insignificant 0.9 *per cent*. The vast majority preferred the mixed forms, combining state and market elements, for all three, for two, or for just one of the systems.

It can be concluded that there is broad support for reforms of the welfare sector that move away from the existing centralized, paternalist forms funded exclusively out of taxation, and that introduce elements of decentralization, non-state institutions, and competition. However, the majority of the population shrink from extreme forms of *laissez faire*, whereby the state would 'withdraw' from the welfare sector.

The dispersion of preferences was wide, regardless of the form in which we put the questions. We asked respondents how they thought HUF 100 of state expenditure is

currently divided among four areas: (1) defence, police, administration and justice; (2) education and health; (3) other welfare services; and (4) economic purposes. We then asked what division they would prefer, and, specifically, how the shares of education and health spending would fare. Only 6.8 *per cent* of respondents would leave the current proportion unchanged; 50.8 *per cent* would reduce it; and 42.4 *per cent* would increase it.

Let us look at Table 4 again. No majority view emerged about spending on universities or hospitals. Although the mixed structures for the pension system received majority support, respondents would certainly have differed if they had been asked to choose between various kinds of mixed structure.

Public opinion is divided not only over the institutional forms the system should take, but over the desirable level of state funding. One scheme, with which motorists at least are familiar, is voluntary comprehensive insurance. In Hungary, this normally includes a deductible part of each claim that the insurer does not pay—a 'co-payment' by the insured—so that the loss is shared between them. The lower the co-payment, the higher the premium will be. We transferred this idea to the financing of hospital care and drug purchases. Let us take hospital care as an example. The social insurance system currently pays an average of HUF 1,040 a month *per* insured (dependents as well as contributors) to cover the costs of hospital care. Let us assume that a private insurer undertook to finance hospital care in return for the same payment. Having explained this to respondents, we asked, 'Look at this table, where we have shown, alongside various monthly *per capita* insurance premiums, what percentage of the costs of hospital care you would have to pay. In this case, which would you choose?' The distribution of the responses appears in Table 5. We followed a similar line of argument in the question about drugs (Table 6).

With the pension system, one of the questions we asked was whether the pension contribution should remain unchanged, be raised, or be reduced. The questions and the distribution of the responses appear in Table 7.

The lesson to be derived from the quantitative choices in Tables 5, 6 and 7 is the same as for the qualitative choice between institutional forms. People's preferences are not uniform, but are widely dispersed, so that the solution is not to make the procedures uniform. The public should not be forced to accept either a system of completely free provision (and accompanying high taxes) or a system under which they cover all the costs themselves. Both qualitative (institutional) and quantitative alternatives should be offered where feasible, and people should be free to choose between them, according to their own systems of values and priorities.

4. The status quo effect

As we saw earlier, a significant proportion of the Hungarian active population prefers the present situation to the alternative institutional solutions that appeared during the debate on the reform of the welfare state. Furthermore, some 9–10 *per cent* prefer the state solutions in each of the observed fields. Hereinafter we try to analyse, with the application of a simple regression model, the factors explaining the adherence to the status quo in the cases of hospital care, higher education and the pension system.

In the course of analysing public opinions concerning reform of the hospital care system, our dependent variable was SQHOSP, a dummy variable set to 1 if the respondent prefers the centralized state solution ('The present system of hospital care must be retained. The average tax payer should continue to pay the social insurance

system HUF 2,100 a month for hospital care and, if need be, pay the customary gratuities as well.'), and set to zero in any other case. Our data show that a significantly high rate (36 per cent) of the respondents agreed with this option. (For the other two options, see Tables 3 and 4.)

With the help of our model, we tried to identify the factors determining the probability of a vote for the status quo in a given situation. The general form of the logit estimate takes the following form:

$$\text{Prob}(SQHOSP = 1) = 1/(1 + e^{-Z}), \quad (1)$$

where $Z = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n$, the X -es are independent explanatory variables, and the β -coefficients are estimated parameters relying on the data, e is the natural log base. For the estimations of the logistic regression parameters, the maximum likelihood method was applied.

Table 8 shows estimates for the most important results of our regression model. The probability of commitment to the status quo (SQHOSP, dummy), predicted by dummy variables for prior hospital experience (EXPHOSP, set to 1 for those in families having been in hospital or in receipt of medical treatment during the last year), education (EDUC1 for secondary/primary school; EDUC2 for higher/primary school), level of tax awareness (TAXTUD, measuring the existence of the knowledge about employer and employee social insurance contributions) and status quo preference for higher education (SQCOLL, set to 1 if the respondent supports the centralized state solution in the sphere of higher education and set to 0 in any other case).

Variable INCMREL was created to show the actual net monthly income of the household as a percentage of the average in the sample. Variable FIHO is to capture fiscal illusions, its values being defined as the respondent's estimates for the tax price of free hospital care as a percentage of the real costs.

The estimations for the parameters of the logit model can be found in the β column in Table 8. In the light of the estimations at issue, our regression equation takes the following form:

$$Z = 0.1486 + 0.3447 \text{ EXPHOSP}(1) - 0.4109 \text{ EDUC}(1) - 0.3796 \text{ EDUC}(2) - 0.3412 \text{ INCMREL} - 0.1442 \text{ FIHO} - 0.4113 \text{ TAXTUD}(1) + 0.6336 \text{ SQCOLL}.$$

To interpret the regression equation let us assume that last year the citizen in question was not in hospital and there is nobody seriously ill in the respondent's family (EXPHOSP=0); the respondent has a basic level of education (EDUC(1) = EDUC(2) = 0); the net income of the household is equal to the average (INCMREL = 1); the citizen's estimation concerning the tax burden of hospital care is exactly half of the true value (FIHO = 0.5); and on the one hand the respondent does not know what kind of contributions and taxes are deducted from his or her salary except individual income tax (TAXTUD = 0), but on the other hand generally he or she prefers the status quo (SQCOLL = 1). In this case, the value of $Z = 0.1486 - 0.3412(1) - 0.1442(0.5) + 0.6336(1) = 0.3689$, so the probability that the citizen supports the preservation of the free hospital care system, is equal to:

$$\text{Prob}(SQHOSP = 1) = 1/(1 + e^{-0.3689}) = 0.59. \quad (2)$$

But, in the event of another respondent, with the same status in all other respects, except having received medical treatment or had a member of his or her family seriously ill during the last year, the Z -value would be equal to 0.7136, and the probability of support for the preservation of the free hospital care system would increase to 0.67.

The Wald statistics and significance values show at which significance levels the coefficients differ from zero. With the exception of INCMREL and FIHO (which do not differ significantly from zero at the 0.05 significance level), we can reject the hypothesis that the given coefficient does not differ from zero for each of the variables. Odds ratios and the goodness of fit analysis show that our model predicts 69 *per cent* of the sample correctly.

To give an explanation for the resistance to higher education reform we specified this model as follows. Dummy variable EXPCOLL captures the personal interest (equal to 1 if the respondent looks after at least one child), while the dummies for occupational position (OCCUP), which separate three occupational groups (OCCUP1 for managers and the intelligentsia; and OCCUP2 for the self-employed and entrepreneurs, as opposed to workers). INCMREL and FICOLL were defined as INCMREL and FICO earlier. We talk about the lack of tax awareness (TXTDCOLL = 0) when the respondent thought that resistance to the system of free higher education did not mean a corresponding financial burden for the tax payers. And, finally, the general commitment to the status quo is expressed in terms of public opinion on reform of the hospital care system (SQHOSP). We summarized the most important results of our model in Table 9.

We found that signs of the coefficients were what we expected, as for the case mentioned above, and each of the explanatory variables is significant at the 0.05 significance level, except variable FICOLL. To put it properly: managers and the intelligentsia are more likely to reject the status quo than are workers and employees. The really big, statistically significant difference, however, exists between the workers and employees' group and the group of entrepreneurs and independents. The probability that a worker or employee, living in a childless household on an average income, without fiscal illusions, uninformed about taxes, but not inclined towards the status quo in any other respect, would oppose free higher education is equal to 0.38. This value would be only 0.23 if applied to an independent or an entrepreneur, who is the same in every other respect.

In our examination we found that education itself is not significant in the explanation of the adherence to status quo. Our most important explanatory variables are personal involvement (EXPCOLL); occupation (OCCUP) (mainly its 'worker, employee' and 'independent, entrepreneur' dimension); household income (INCMREL); tax awareness (TXTDCOLL); and lastly the general commitment to status quo (SQHOSP).

We applied an extended version of the earlier model to explain the resistance to changing the pension system. In addition to the earlier variables we added to the analysis the age effect (measured by variable KOR), and the variable denoting the individual's preparation for retirement (the dummy INSURE). The variable FIPENS measures fiscal illusions, *i.e.*, the respondents' opinion on what percentage of the present pension is paid from the pension contribution of an active citizen. In a PAYG system the true value is almost 100 *per cent*.

Signs of the explanatory variables fit with our expectations, but regarding variables of household income (INCMREL), tax awareness (TAXTUD) and self-reliance (INSURE) we cannot reject the hypotheses at the 0.05 significance level that the relevant coefficients do not differ from zero. Results of our examination can be summed up as follows: the older a respondent, and the more likely the respondent is to vote for the status quo, the greater the probability that the respondent would oppose pension system reform (Table 10).

At the same time, with an increasing level of education and relative income of the respondent's household, with growing tax awareness and self-reliance, and more accurate perception of the fiscal parameters of the pension system, the greater the likelihood of support for pension system reform.

In summary, our model shows that personal interest and support for the status quo in

other areas of reform will increase the probability of support for the status quo in education, hospital care and the 'classical' PAYG pension system. Factors more likely to decrease support for the status quo are better tax awareness, education and household income, and also decreasing levels of fiscal illusion.

While investigating explanations for opposition to higher education reform, it became clear to us that there is a large difference among the different occupational groups, but not among the different educational levels. In the first place, the 'independents and entrepreneurs', in the second place 'managers and the intelligentsia' are opposed to maintenance of the free higher education system. Concerning institutional reform of the pension system, it is significant that the older a person and the more that person believes that present pensions are paid from the present employees' contribution (this is one of the particular forms of fiscal illusion), the greater the probability of that person voting for the maintenance of the existing PAYG system. Those people who make more provision for retirement (whether by individual accumulation or by joining a voluntary pension fund), are more likely to reject the status quo.¹⁷

5. Question wording and preference change

Earlier we found, from calculations on the effects of tax and cost awareness, that the better a tax paying citizen understands that there are no truly free gifts from the state, since tax payers cover the cost of providing them, the greater the aversion shown towards the state solution.

The relation is rather stochastic, of course, as tax and cost awareness do not form the sole explanatory factor. Some citizens, who are well aware of the link between tax and state provisions, knowingly accept the tax burden those provisions entail. Some people are repelled by state paternalism because of factors other than tax awareness, while their knowledge about taxes is inaccurate. All we claim here is that there is a marked positive stochastic relationship between tax awareness and antipathy to the state solution.

Although the interview lasted only an hour, it was in itself a substantive cognitive process for the respondents. This can be shown from a single example. As mentioned in Endnote 15, we only suggested two institutional alternatives for drug provision: maintenance of the present system of state subsidy, or abolition of the subsidy. Based on *this* knowledge, 75.1 per cent of respondents chose the state subsidy. Later, we presented respondents with a hypothetical graded system of premiums and co-payments (see Table 6). This prompted them to consider that if they paid a higher premium (or, by analogy, higher health-care tax or contributions), the deducted co-payment would be lower, while if the premium or tax were lower, the proportion of the co-payment would be higher. Once in possession of this extra information, the majority of respondents turned away from the principle of full state subsidy.

There was one more form in which we could study the relationship between tax awareness and the position taken by citizens. The following question was put in an earlier public-opinion survey:¹⁸ In the respondent's opinion, did the state have an unconditional responsibility to (1) provide health care for the sick, and (2) provide a decent livelihood for the old? One of the authors of this study, János Kornai, made an objection to this formulation of the question, because an affirmative answer from the citizen was not associated with a conscious acceptance of the tax price of the ostensibly free state services.¹⁹ We think this procedure relies on a fundamentally false methodological premise—the unstated conviction that 'free lunches' exist on a society-wide scale. If questionnaires compiled by this 'free-lunch' methodology inquire about the state's

unqualified obligations (for example, 'Does the state have an unconditional responsibility to care for the sick?'), they conceal the elementary economic truths linking the costs of the state programmes with the taxes paid by the respondents.

Table 11 compares the results of the earlier study with those of the new one. Although the question as formulated does not yield the true preferences in connection with state intervention, it was incorporated into the questionnaire for comparison's sake, in its original form. The following can be established from the table.

During the hour's conversation, the interviewer gave some pieces of information about the actual tax costs of the ostensibly free programmes. Respondents were also made aware through the wording of the other questions that there is a link between the provision of a benefit by the state and the tax imposed on citizens. The interview obviously sufficed to alter the response distribution of the 1996 survey (Column 2) from the distribution found in the 1994 survey (Column 1) by 10–16 percentage points. In other words, far fewer respondents in the second survey endorsed the vaguely expressed paternalist function of the state. More noteworthy still is Column 3, which presents the responses to a question radically different from the 'free-lunch' methodology. Here we are not asking about a general 'responsibility of the state', but about a more tangible choice between state and not-purely-state institutional alternatives. There the proportion of support for the state solution is dramatically smaller, forming a minority of the respondents.

Assessment of the 'real' support for state involvement is always a matter of strong controversy. There are a number of sociological surveys that show how respondents, when asked to give their opinion of the 'necessary' involvement of the state, may take a strongly pro-state position. However, there are at least two reasons for scepticism about this. First, actual voting behaviour may differ strongly from declared opinions.²⁰ Secondly, putting the question differently (for example, asking respondents to express their views on redistribution after revealing at least some tax prices) may lead to changed opinions. Although there are justified arguments for and against this assertion,²¹ we found support for it in our survey results. Pro-state enthusiasm seemed to cool as awareness increased.

There would clearly be further ways of examining the connection between tax awareness and these preferences. We could have asked respondents twice, under experimental conditions, which of the various institutional alternatives they would choose, offering, if possible, a wider choice. First they could answer on the basis of the information they possessed before the experiment, in other words, guided by their 'true' or 'false' tax awareness. Then the correct information could be given to them, and the question repeated. This would yield direct information on the role played by the corrected tax information in revising the respondents' initial decision. This is something we would like to pursue in future research.

6. Acceptance of the principle of self-reliance

One process complementary to curbing the paternalism of the state is to end the child-like treatment to which citizens have been subjected and restore their sovereignty. Citizens must assume greater independence and, concurrently, bear greater responsibility for themselves and their families.

The findings show that support for and acceptance of the principle of self-reliance is dubious. Although some institutional arrangements, such as participation in voluntary private pension schemes, are expanding fast among certain segments of Hungarian

society, opinion polls (sometimes on the same subjects) show that this principle has not yet gained sufficient ground among Hungarian citizens as a whole.

Asked how they would prepare for their retirement years, 50.7 per cent of respondents said they had not thought about it. This is an astonishingly high proportion.²² The disregard is not uniform, of course, but related to age, as Table 12 shows. To some extent it is understandable that those further away from old age should think about it less, but sooner or later citizens will have to learn to prepare for their old age over several decades, throughout their earning lives. Only in part can this task be left to the state. A significant role must be played by various forms of private savings.

A sizeable proportion of the population (although still a minority) already realize the need for self-reliance. This is expressed, for instance, when people take out various forms of voluntary insurance policies. When asked how they were preparing for their old age, 23.3 per cent of respondents mentioned that they are planning to take out an annuity or pension insurance policy, or to join one of the voluntary pension funds.

With the reform of health-care financing, various types of misunderstandings of the principle of self-reliance arise. Many respondents thought there were only two alternatives: to have the state act as a universal insurer, or for individuals to cover the costs out of their own pocket. In fact, developed, mature market economies have non-state insurance institutions, offering medical insurance policies, and covering most of the costs in exchange for a premium. The insured can choose between a lower co-payment with a higher premium, or a higher co-payment with a lower premium. When this hypothetical option was explained to respondents, many of them were inclined to take advantage of it. (See Table 6.)

Those who had become acquainted with the idea of private insurance were more inclined towards reforms that would give greater scope for decentralized, non-state forms of insurance. Table 13 clearly links the number of private insurance policies that respondents hold with an increasing inclination to detach themselves from the insurance monopoly of the state.

7. Support for the principle of solidarity

We agree that the principle of solidarity should apply to welfare policy. On the one hand, this embodies the objective that society should care for those in need of such support. On the other, it requires redistributive taxation, whereby heavier taxes are imposed on those better able to bear them, provided this does not damage the spirit of enterprise, constrict innovation, reduce investment and savings, or dampen economic performance.

There is a view, usually advanced rather timidly, that most people are unwilling to make sacrifices for purposes of social solidarity. The argument goes that if *Realpolitik* sets out to apply this principle notwithstanding, it can only act as follows. While it imposes on the public a levy that it then spends on purposes of social solidarity, it draws people's attention as little as possible to the fact that it is taking money out of their pockets to support others. This is the ostensible advantage of having a baffling system of contributions and redistribution that works without the public's conscious consent. If the public were asked for their permission, they might not have given it to that extent.

By the same argument, it is an advantage (not a drawback) of the so-called social insurance system in Hungary and many other countries that it inextricably mixes a true insurance system with elements of a redistributive system of tax-based financing. What happens is that different recipients of the same service (for instance, the same kind of health care) pay different prices (contributions) for it, depending on their income. This

would be inconceivable for other products and services, including true insurance. Scrutiny of the economic content of the social-insurance 'contributions' reveals that they irretrievably combine the functions of an insurance premium and progressive, income-related taxation.

This question raises some fundamental problems of political philosophy and ethics. Is it admissible to remove money from people's pockets by subterfuge, even for noble purposes? Do the principles of the democratic political process leave room for the state, and the parliamentary majority governing it, to conceal from its voting, tax-paying citizens how it levies taxation and what it uses it for? Should it seek to apply the solidarity principle in this *Machiavellian* fashion, if it fears that the majority of citizens will not endorse its planned use of tax revenues? Or is it legitimate to confuse matters intentionally in the opposite case, when the majority of citizens, after receiving detailed information, can be said to be likely to approve of taxation for solidarity purposes anyway, so that it becomes superfluous to inform them and ask their permission? The authors of this study would answer all these questions with a qualified negative.

Whether the readers' answer is negative like the authors', or affirmative, they will doubtless agree that it is worth examining empirically whether such 'solidarity taxes' need concealing at all. If the question were put to the public openly, would people refuse to pay?

Our research does not yield a clear picture of the public's point of view. For one thing, we were unable to unravel before them the insurance and redistributive strands in the present system, and present the problem comprehensively, within the space of an hour's interview. Nonetheless, the findings have shed some light on this obscure area of public opinion and feeling.

As mentioned in Section 6, over a third of the respondents were prepared to accept the tax price paid for having free higher education, even if they had no children and could not expect any. Similarly, many people were willing to pay the redistributive element in the health-insurance system, even if they were not directly concerned at the time, and could feel more or less that they would be helping others, rather than themselves, by doing so.

We also tried to probe into people's positions in a more direct way. Tables 14, 15 and 16 examine the willingness of respondents to pay taxes in cases where these expressly serve the purposes of social solidarity.²³ In the first part of the interview we checked respondents' tax awareness, and then informed them that a tax payer pays an average of HUF 1,100 a month for the purpose of social solidarity. His or her income could rise by this amount if this assistance through the state were to cease. We then presented the respondent with alternatives. Should the tax levied for this rise stay the same, fall, or cease altogether?²⁴

Over half the respondents replied that the taxes paid for solidarity purposes should remain the same or increase. The groups that would reduce or abolish these taxes form a decided minority.²⁵

It is especially revealing to compare these three tables. With Table 14, the support for the alternatives is not affected by the degree of prior tax awareness. The tax is accepted or not in the knowledge that the present burden is HUF 1,100 a month.

Table 15 shows that the proportion wishing to retain or increase the solidarity-tax level declines slightly as a function of higher level of education. This, however, swells the ranks of those who 'would distribute state revenues differently', not those wishing to reduce or abolish it.

It is especially interesting that Table 16 shows *no* correlation between readiness to show social solidarity and level of income.

From this can be drawn reassuring conclusions that reinforce the position expressed earlier. Even if those proposing welfare reforms admitted openly that they were calling

for sacrifices for purposes of social solidarity, it would not be hopeless to expect the majority of the public to support this principle, or at least to refrain from opposing it.

8. The need to keep citizens better informed

Finally, we would like to point to one of the main lessons of the research: there is a need to improve the level of information among citizens.²⁶ The conclusions are based on a Hungarian survey, but we are convinced they apply to the other post-socialist countries as well.

To start with, people need to realize that the money the state dispenses is the tax payers', not 'state', money. The change of system has made it possible and necessary to change this mentality. One of the main yardsticks for measuring the change is the prevalence and depth of the understanding that what one citizen receives from the state is paid for by the others. This insight should be promoted throughout the society.

Another necessary addition is for citizens to have far more specific and reliable information about the relation between taxes and state services. The better they appreciate what burden some favoured state programme places on the tax payer, the greater the sense of responsibility with which they can take part in the political process.

Citizens should be as well-informed as possible about the alternative ways in which the welfare system might be changed. One road to understanding the alternatives is to be familiar with the variety of foreign experiences. Part of the problem at present is that the status quo, whether good or bad, is known to citizens from their own experience, but there has been little, or in some fields no chance to try other institutional forms of welfare provision. The greater the extent to which new forms are legalized, introduced and spread, so that their practical advantages and drawbacks emerge, the more substance the work of informing citizens about institutional reforms will gain.

Promoting greater tax awareness depends heavily on the behaviour and policy of various government agencies. The process will be advanced if the government and its constituent political parties ensure that they adequately inform and persuade the public when preparing practical measures of reform. When reforming the welfare systems, it is most important to provide patient and effective explanations of the reasons, purposes, and possible effects of the envisaged measures. Though it may not appear to be in their immediate interest, opposition parties can also contribute to more rational debate over taxation and spending, if their arguments link spending priorities with their cost-benefit implications.

We found in the study that people's opinions about various institutional arrangements vary. However, the most important consideration is not the momentary percentage of public support for specific institutional solutions. There may always be measurement errors, and the views expressed may change. The most important aspect to recognize is the dispersion of the public's preferences, indicating that there is no single alternative that attracts overwhelming support. That being the case, we do not consider the answer is to impose the current majority view on those currently in a minority, who will then feel dissatisfied with the mechanism that emerges. The answer is to develop mechanisms that allow for as much *choice* as possible or to widen the existing range of choices. Individuals should not be forced into joining specific schemes. This consideration alone provides strong grounds for replacing the state monopoly in the welfare system with competition among organizations of various forms of ownership, and parallel operation of various forms of finance, provision and insurance.

In a democracy, the policies of the government and the parliamentary majority need

to recognize the political preferences of citizens. However, this does not imply a passive acceptance in their political and moral approach. The government has a responsibility to lead. This includes, if necessary, influencing and attempting to change citizens' preferences. Should the attempt fail, and the government cannot convince citizens that the changes it plans are justified, the electorate has the right to vote it out.

The aftermath of several decades of false teachings and harmful indoctrination cannot be dispelled from one day to the next. All democratic forces that subscribe to constitutionalism, parliamentary democracy and a market economy have a duty to contribute to this society-wide educational undertaking. The ways of bringing about a better understanding of the links between taxes, benefits and the redistribution process include reforming the curricula of schools and universities and conducting debates in the press and on radio and television.

The whole fabric of general government and the economic constitution should be clarified and made more transparent to tax payers. Citizens' tax awareness and the prudence of their choices will increase most when the budgetary and fiscal systems become more transparent and financial discipline consolidates. Then people will come to know from their own experience which new institutions and new forms of property they can choose to replace the centralized, state forms of old. If all these favourable changes take place, the findings of the next survey of this kind will be more reassuring.

Endnotes

1. László Csontos died in 1997 at the age of 44, after the publication of the earlier, Hungarian version of this paper.
2. See Musgrave and Musgrave (1980), Chapter 6; Buchanan (1967), Chapters 9 and 10; and Downs (1957), Part II.
3. The idea for the research came from János Kornai, who outlined the main conceptual framework for the survey. The research team was directed by László Csontos. It took place under the auspices of the Social Research Informatics Centre (TÁRKI) at the request of the Hungarian Ministry of Finance (MF), with financial support from the MF and the Central European University (CEU). Contributions to formulating the concept for the research were made by Iván Csaba (CEU), László Csontos (CEU), Endre Gács (MF), Róbert Iván Gál (Collegium Budapest, TÁRKI), Péter Kaderják (Budapest University of Economics), János Kornai (Collegium Budapest, Harvard University), Erika Révész (TÁRKI), Péter Róbert (TÁRKI), András Semjén (Institute of Economics), József Tarjányi (TÁRKI), and István György Tóth (TÁRKI). The authors wish to express their thanks to Brian McLean for his careful translation of the text, and to Ágnes Benedict and Ildikó Nagy for their valuable research assistance.
4. Contingent valuation is a fruitful and developing methodological device. However, there have been many debates about its strengths and weaknesses. Probably the most important measure for evaluating it is to assess what this method can add to empirical knowledge based on revealed preferences. Methodological debates are also taking place about which questionnaire methodologies, response formats and so on are the most promising. Recent accounts of these debates can be found in Brown *et al.*, (1996), Carson *et al.*, (1996), and Smith (1996). An excellent account of contingent valuation appears in Mitchell and Carson (1989).
5. When we decided on the plan for the research, we wanted to take a representative

sample of at least a thousand persons of active age, covering the vast majority of the tax paying population, as the most relevant group for tax awareness. To have extended the sample to include those of inactive age would have raised the costs of the survey substantially.

6. The studies that have appeared so far are Csonotos and Tóth (1996), and Csonotos, Kornai and Tóth (1996).
7. See, for instance, Atkinson and Stiglitz (1980); Diamond and Mirlees (1971); and Mirlees (1971).
8. Buchanan (1967), Chapter 10.
9. The 'optimistic' kind of false awareness was discussed in more detail by Wagner (1976), while the 'pessimistic' version was amplified by Downs (1957).
10. There have not been many empirical surveys of tax awareness in the international literature on economics and sociology, but there are a few remarkable studies. Recently, the annual survey of British Social Attitudes has contained questions about public expenditure and taxation. The initial results of these seem quite similar to our approach (see Brook, Hall and Preston, 1996). Mitchell (1988), analysing 'pension awareness' among American employees, found their information was deficient and inaccurate in many cases. Older, unionized workers with higher incomes and skills were better informed than younger, non-union counterparts with lower incomes and skills.
11. According to the 1996 regulations, wage earners pay, in addition to an extremely high personal income tax (the marginal tax rate is 48 *per cent*), a compulsory social security contribution of 10 *per cent* of their salaries and a further 1.5 *per cent* into the employment fund for unemployment insurance. Employers are required to contribute to social security a staggering 44 *per cent* surcharge on all salaries.
12. Many of the tables in the study cite monetary data in Hungarian forints (HUF). In February 1996, the Central Bank posted an average exchange rate of HUF 144.4 to USD 1 (National Bank of Hungary, 1996, p.76). During the first quarter of 1996, average monthly gross earnings by full-time employees were HUF 40,369. (See Central Statistical Office, 1996, p.60.)
13. Brook, Hall and Preston (1996), p.192.
14. Gemmel (1997) analyses the explanation of magnitude and distribution of tax awareness and its effects on political elections, using data from British Social Attitudes reviews and other sources.
15. With hindsight we see it as a mistake to have included in the questionnaire only two, instead of three, institutional alternatives for financing the provision of drugs: to retain the present state subsidy, or to abolish the subsidy altogether. For lack of an intermediate alternative, the vast majority chose to retain the subsidy. We consider that the absence of a mixed alternative leaves the responses for institutional preferences for drug provision inconclusive, and have therefore omitted these from this section. However, the chance to consider intermediate solutions for financing drug provision was provided by another question in the survey. We return to this in the next section.
16. Many other studies have asked for citizens' opinions about the alternative institutional reforms of the welfare system and the consequences of tax reforms. The debate about decreasing the tax burden and reforming social security has given these studies immediate relevance. One survey, taken in the American state of Maryland, inquired about willingness to pay the tax price for a series of specific measures, and about respondents' preferences for and against privatizing specific, hitherto tax-based services (see Haynes and Florestano, 1994).

17. The definitions of the variables and the equations used in the regression calculation, along with the results obtained and a few other mathematical and statistical analyses appear in Csonotos and Tóth (1996). We quote only a few partial results here.
18. See TÁRKI (1996).
19. Kornai (1996). Similar arguments were put forward by the British scholars already quoted when revising their earlier results (Brook, Hall and Preston, 1996). In the later surveys they tried to express the links between the public services and their tax price as clearly as they could.
20. This was the observation in Britain, where, despite an increasing share of those supporting pro-redistribution arguments, the Conservative vote continued to rise for a long time (Lipsey, 1994).
21. This debate is an important part of our motivation for continuing the research. When János Kornai conjectured that citizens' opinion on the welfare state's tasks would be different if they were better acquainted with the tax consequences (Kornai, 1996), doubts were cast on this conjecture in several critical articles (for example, Ferge, 1996). The results of this paper seem to support the view that the degree of tax awareness, the knowledge possessed about taxes, and also the chance to choose between alternatives influence the opinion of citizens to a substantial degree. Similar results were found in a completely different British context (Brook, Hall and Preston, 1996).
22. It may be that we, as Eastern European researchers, are mistaken in thinking this is an unusual phenomenon. In Great Britain, where the role of social security has similar significance, and where reforms are planned to restrict the role of government, researchers into public opinions have found similar results. For example, almost 40 *per cent* of the pensioners in Great Britain in a sample of 2,500 persons had never thought of planning their income in old age until they retired (Howard, 1996).
23. These do not include the 'solidarity taxes' paid through the redistribution element in the social-insurance system.
24. We realize with hindsight that it was incorrect to include among the alternatives the response, 'I would distribute the state revenues differently', because this allowed respondents to escape from their *own* dilemma. The proportion of those who supported maintaining or raising the taxes of a solidarity nature increases further when the results are confined to Columns (1), (2), (3) and (4), in other words to the set of those who really addressed the dilemma.
25. Following on from the previous note, we do not know what replies would have been received by those who avoided the dilemma by choosing the alternative in Column (5).
26. It is in the interest of tax payers and of voters to be well informed. This is analysed in detail by Downs (1957), in his democracy theory.

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Tables

Table 1. Estimated tax component of the price of products

	Percentage distribution	
	Gasoline	Bread
Not known	13.4	15.2
Significantly under-estimated	46.0	2.6
Largely correct	39.1	17.0
Significantly over-estimated	1.5	65.2
Total valid responses	100.0	100.0

Note: The tax content of the gasoline price is 68–72 per cent, and of the bread price is 10.7 per cent.

Table 2. Knowledge of the cost and the tax price of certain state services¹

	Full cost of a university student's five-year training (HUF)	Tax price to each taxpayer of having free higher education (HUF/month)	Full cost of care for an average patient (HUF) ²	Tax price to each taxpayer of having free hospital care (HUF/month) ³	Proportion of the price of prescription drugs paid by the state (<i>per cent</i>)	Tax price to each taxpayer of subsidizing drugs (HUF/month)	Proportion of present pensions covered by contributions of those currently working (<i>per cent</i>)	Cost <i>per</i> taxpayer of the present system of social assistance (HUF/month)
Average of respondents' replies	1,527,535	3,019	63,874	2,403	49.7	988	67.0	1,488
Actual figures ⁴	2,000,000	900	46,000	2,100	85.0	1,400	94.0	1,100
Distribution of knowledge about costs and the tax price, as a proportion of the valid responses								
Not known	14.2	28.5	8.6	21.3	9.6	23.9	13.9	23.4
Significantly underestimated	58.8	21.0	40.7	39.4	62.6	46.1	45.3	22.9
Largely correct	13.1	20.0	25.1	21.3	27.8	14.9	40.8	23.3
Significantly overestimated	13.9	30.5	25.7	17.5	0.0	15.2	0.0	30.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Notes:

1. The questioning took place in the following order. First we asked, 'Please would you guess how much the full five-year training of a university student costs under the present system'. Once the respondent had given a reply, the interviewer told him or her the correct answer. Then came the next question: 'In your opinion, what monthly burden is placed on an average taxpayer by having free higher education?' The questions about the other services were put in a similar way.
2. We suggested the respondent should consider the cost to the social insurance system of a ten-day internal examination in hospital, and disregard gratuities paid by the patient to staff.
3. The questionnaire asked for the proportion paid by the public. Here the inverse proportions are given to facilitate comparison with the rest of the table. This entails the assumption that we would have obtained exactly the inverse responses to inverse questions.
4. In 1995. *Sources:* Ministry of Finance, communicated by Endre Gács.

Table 3. Institutional alternatives offered in the questionnaire for higher education, hospital care, and pension-system mechanisms

	Higher education	Hospital care	Pensions
Centralized state solutions	'Higher education should be free even if this costs the average taxpayer 900 forints a month'.	'The present system of hospital care must be retained. The average taxpayer should continue to pay the social insurance system HUF 2,100 a month for hospital care and, if need be, pay the customary gratuities as well'.*	'Everything should remain the same. There should be no change in the present system of pension insurance'.
Mixed structures	'Students should pay part of their tuition costs, while taxpayers continue to pay the rest'.	'An insurance scheme guaranteeing services similar to the present one should remain compulsory, but all should be free to choose whether to contract with the social insurance system or a private insurer. Apart from the compulsory insurance, all should be free to take out voluntary insurance if they want better hospital care'.	'Pension insurance should remain compulsory, but all should be free to choose whether to contract with the social insurance system or a private insurer for the sum received as a pay increase. Apart from the compulsory insurance, all should be free to take out voluntary, auxiliary pension insurance if they want a higher pension'.
Market solutions	'A monthly HUF 40,000 should be paid by those who go to university. This would reduce taxes; net average pay could rise by about 3-4 per cent. (Students who cannot afford it would have access to state-guaranteed loans.)'	'There should not be compulsory insurance for hospital care. All should decide whether to take out insurance or spend the money on something else. Those without insurance to cover hospital care could at most pay the costs out of their own pocket if they went to hospital'.	'There should not be compulsory pension insurance. With the sum received as a pay increase, all should be free to decide whether they want to take out pension insurance, or whether they would rather spend the money. Those without pension insurance would either look after themselves in old age or be looked after by their families'.

*Note:** Although free health care is guaranteed by law in Hungary, a high proportion of patients give a 'gratuity' to the doctor. This is not legal, but tolerated in practice.

Table 4. Institutional choices: support for 'pure state', 'pure market' and 'mixed' solutions (percentage distribution of answers)

	Percentage financing of		
	Higher education	Hospital care	Pensions
Centralized state solutions	42.1	35.5	21.4
Mixed structures	43.5	44.1	56.6
Market solutions	12.1	17.9	18.5
Unable to decide	2.2	2.5	3.5
Total	100.0	100.0	100.0

Note: The alternatives are defined in Table 3.

Table 5. Degree of acceptance shown for various co-payments by patients for hospital care

Monthly insurance premium per family member (HUF)	The proportion of the cost of hospital care the patient will pay (%)	Proportion of respondents choosing the option (%)
156	85	2.4
260	75	2.8
520	50	17.0
780	25	13.6
1,040	0	56.5
Unable to decide		7.7
Total		100.0

Note: The question ran as follows: 'Let us assume that private insurers would charge the same amount for similar hospital care as the social insurance system, in other words HUF 1,040 a month per family member, but would offer you more choice.' 'Look at this table, where we have shown, alongside various monthly per capita insurance premiums, what percentage of the costs of hospital care you would have to pay. In this case, which would you choose?'

Table 6. Degree of acceptance shown for various co-payments by patients for drugs

Monthly insurance premium per family member (HUF)	The proportion of the cost of drugs you have to pay (%)	Proportion of respondents choosing the option (%)
240	70	6.7
390	50	11.1
550	30	16.7
670	15	22.6
790	0	34.5
Unable to decide	-	8.4
Total	-	100.0

Note: The question ran as follows: 'Let us assume that private insurers would charge the insured persons the same amount for similar average price subsidies as the social insurance system, in other words HUF 670 a month per family member, but would offer you more choice.' 'Look at this table, where we have shown, alongside various monthly per capita insurance premiums, what percentage of the price of drugs you would have to pay. In this case, which would you choose?'

Table 7. Distribution of opinions on the size of pension contributions

Response	Proportion (%)
The contribution should not be changed	40.1
The contribution should be raised	20.9
The contribution should be reduced	39.0
Total	100.0

Note: The full description of the alternatives ran as follows:

'1. The pension contribution should not be changed; my pension will be paid by those working at that time.'

'2. The pension contribution should be raised, and the money accumulated in this way should be used to cover our pensions.'

'3. The present pension contribution should be reduced, so that earnings can rise, and everyone can decide what to do with the extra money, for instance, put it aside for his or her old age.'

Table 8. Results of the logistic regression model: hospital care

Variable	Coefficients	Standard error	Wald statistics	Significance level	R ²	Odds ratio
EXPHOSP(1)	0.3447	0.1748	3.89	0.0486	0.0468	1.4116
EDUC			15.2184	0.0005	0.1139	
EDUC(1)	-0.4109	0.2260	3.3046	0.0691	-0.0388	0.6631
EDUC(2)	-1.3796	0.3551	15.0939	0.0001	-0.1231	0.2517
INCMREL	-0.3412	0.2081	2.6875	0.1011	-0.0282	0.7109
FIHO	-0.1442	0.0823	3.0688	0.0798	-0.0352	0.8657
TAXTUD(1)	-0.4113	0.1883	4.7714	0.0289	-0.0566	0.6628
SQCOLL	0.6336	0.1728	13.4433	0.0002	0.1150	1.8845
Constant	0.1486	0.3037	0.2395	0.6246		

Table 9. Results of the logistic regression model: higher education

Variable	Coefficients	Standard error	Wald statistics	Significance level	R ²	Odds ratio
EXPCOLL(1)	0.5704	0.1939	8.6529	0.0033	0.0921	1.7689
OCCUP			4.7557	0.0297	0.0311	
OCCUP(1)	-0.0731	0.2392	0.0934	0.7599	0	0.9295
OCCUP(2)	-0.6634	0.3043	4.7539	0.0292	-0.0593	0.5151
INCMREL	-0.5399	0.1943	7.7216	0.0055	-0.0854	0.5828
FICOLL	0.0159	0.0356	0.1989	0.6556	0	1.0160
TXTDCOLL(1)	-0.5780	0.2115	7.4652	0.0063	-0.0835	0.5610
SQHOSP(1)	0.7425	0.1938	14.6851	0.0001	0.1272	2.1012
Constant	0.0510	0.3057	0.0278	0.8676		

Table 10. Results of the logistic regression model: pension system

Variable	Coefficients	Standard error	Wald statistics	Significance level	R ²	Odds ratio
KOR	0.0276	0.0112	6.0990	0.0135	0.0753	1.0280
EDUC			17.7969	0.0001	0.1381	
EDUC(1)	-0.8538	0.2503	11.6330	0.0006	-0.1154	0.4258
EDUC(2)	-1.6816	0.4576	13.5073	0.0002	-0.1261	0.1861
INCMREL	-0.2636	0.2634	1.0014	0.3170	0.0000	0.7683
FIPENS	-0.9710	0.3586	7.3323	0.0068	-0.0859	0.3787
TAXTUD(1)	-0.3494	0.2259	2.3915	0.1220	-0.0233	0.7051
SQHOSP(1)	1.8100	0.2151	70.8035	0.0000	0.3084	6.1103
INSURE(1)	-0.3266	0.2225	2.1561	0.1420	-0.0147	0.7213
CONSTANT	-1.1875	0.5603	4.4917	0.0341		

Table 11. Opinions on the role of the state. The proportion holding a pro-state position (%)

	(1) 1994 survey Affirmative response to the question about the 'duty of the state'	(2) 1996 survey Affirmative response to the question about the 'duty of the state'	(3) 1996 survey Choice of centralized state solution as the institutional alternative
(A) Health care	82.3	65.9	35.5
(B) Pension system	72.3	62.6	21.4

Notes: Columns 1 and 2: In the 1994 survey, the interviewer began the questions with 'Does the state have an unconditional responsibility ...?' The respondent then had to state whether he or she agreed with the following alternatives for a continuation of the question: '... to provide health care for the sick', and '... to provide a decent livelihood for the old'. In the 1996 survey, we repeated the question in the same way. We have eliminated the inactive respondents from the 1994 sample, so as to make Columns 1 and 2 comparable.

The 1996 survey differed from the 1994 survey because the respondent answered the question *after* about 30 minutes of dialogue, having received information about the tax price of health care and pensions.

Column 3: Here we give the proportion of those who chose the 'centralized state solution', of the three institutional alternatives put before them. (See Table 3)

All three columns refer to data whose economic and institutional content is closely related, but for which the frame of the question differs. This is what we wanted to demonstrate. The method of putting the question has a strong influence on the response.

With Column 3 of Row (A) the question referred only to hospital care, not health care as a whole.

Table 12. Preparation for old age

Age in years	How are you preparing for your retirement years? Have you thought about this? (Percentage distribution)		
	No	Yes	Total
24 and under	78.2	21.8	100.0
25-34	60.6	39.4	100.0
35-44	46.7	53.3	100.0
45-54	38.4	61.6	100.0
55 and over	25.0	75.0	100.0
Total	50.7	49.3	100.0

Table 13. The relationship between the number of private insurance policies held and institutional preferences

Number of types of insurance policy held by the respondent	Proportion of respondents choosing the centralized state solution (%)	
	Hospital care	Pension system
0	40.1	29.9
1	37.3	21.6
2	35.9	23.3
3 or more	29.6	9.5

Note: The question put to respondents enquired whether they had house, life, comprehensive car and pension insurance. The table shows in relation to the responses the proportions favouring the centralized state solution in the two spheres of the welfare sector.

Table 14. Positions taken on welfare allowances: distribution by degree of tax awareness (*per cent*)

Amount spent <i>per</i> taxpayer on welfare allowances:	(1) Raise taxes, including mine, to make more money available to relieve the needy.	(2) Keep the present system of welfare allowances; there is no need to change it.	(3) Reduce taxes, and thereby reduce the money available for assistance.	(4) Abolish all welfare allowances, so raising average taxpayer's income by HUF 1,100 a month; let those in trouble look after themselves and their families.	(5) I would distribute the state revenues differently.	(6) I do not know.	Total
Not known	5.7	43.5	15.3	5.6	18.7	8.1	100.0
Significantly underestimated	5.2	47.1	24.3	4.8	18.2	2.4	100.0
Largely correct	7.1	42.5	20.3	5.7	20.8	3.8	100.0
Significantly overestimated	8.3	45.3	19.1	6.1	18.7	2.5	100.0
Total	6.7	44.7	19.7	6.3	18.6	4.1	100.0

Table 15. Positions taken on welfare allowances: distribution by level of education (*per cent*)

Respondent's level of education	(1) Raise taxes, including mine, to make more money available to relieve the needy.	(2) Keep the present system of welfare allowances; there is no need to change it.	(3) Reduce taxes, and thereby reduce the money available for assistance.	(4) Abolish all welfare allowances, so raising average taxpayer's income by HUF 1,100 a month; let those in trouble look after themselves and their families.	(5) I would distribute the state revenues differently.	(6) I do not know.	Total
Basic or less	9.7	50.9	17.0	5.5	9.7	7.3	100.0
Vocational school	5.5	47.8	24.2	5.1	14.0	3.4	100.0
Completed secondary school	6.5	40.8	19.5	8.5	21.8	3.1	100.0
Higher education	6.8	39.8	14.3	5.0	30.4	3.7	100.0
Total	6.8	44.6	19.6	6.3	18.6	4.1	100.0

Table 16. Positions taken on welfare allowances: distribution by income (*per cent*)

Quintiles according to the <i>per capita</i> income of respondents	(1) Raise taxes, including mine, to make more money available to relieve the needy.	(2) Keep the present system of welfare allowances; there is no need to change it.	(3) Reduce taxes, and thereby reduce the money available for assistance.	(4) Abolish all welfare allowances, so raising average taxpayer's income by HUF 1100 a month; let those in trouble look after themselves and their families.	(5) I would distribute the state revenues differently.	(6) I do not know.	Total
1 (lowest)	6.5	46.7	17.2	4.7	18.3	6.5	100.0
2	7.9	41.5	26.2	8.5	12.8	3.0	100.0
3	7.0	45.9	21.5	8.1	14.5	2.9	100.0
4	4.6	43.1	19.5	7.5	20.1	5.2	100.0
5 (highest)	6.9	44.8	14.4	4.6	26.4	2.9	100.0
Total	6.6	44.4	19.7	8.7	16.5	4.1	100.0