András Svraka – István Szabó – Viktor Hudecz

Employment Stimulating Tax Incentives in the Hungarian Labour Market

Summary: Owing to a number of distinct groups in the labour force, the labour force participation rate in Hungary and most other Central European economies lags behind the European Union average. Empirical literature shows that tax policy can effectively incentivise the labour supply of these groups at the extensive margin. In this paper we discuss arguments for targeted employers' tax reliefs from a labour market perspective. Based on household income, we analyse the attributes of households receiving the employment tax credit phased out in 2012 and the targeted tax incentives implemented in the 2013 Job Protection Act. Our results show that numerous beneficiaries of the general employment tax credit live in households above the median income, while a higher share of low-income households benefit from the targeted incentives.

Keywords: labour force participation, taxation, targeted tax incentives*
JEL codes: H24, J21, H31

In response to the growing trend of unemployment and the challenges posed by the economic crisis, structural reforms of the tax regimes of European economies have been focused increasingly on improving the labour force participation rate without imposing a major burden on the state budget. As a result, growth-inducing tax reforms have gained ground progressively across the region. This trend manifested in raising sales taxes, reducing income taxes and adopting incentives with a view to boosting activity. In Hungary, the share of taxes and contributions on labour and capital in tax revenues increased rapidly until 2008. However, as a result of a series of contribution reductions in 2009, the previously observed upward trend faltered, and on the back of the tax policy reforms implemented after the spring of 2010, the weight of labour taxes began to show a gradually declining trend. Meanwhile, the role of sales-type taxes and the taxes on negative externalities increased, and special taxes were imposed in certain sectors.

Over the past 3 years, taxes on labour were subject to a significant taxation reform in Hungary. As a result, the previously applied degressive contribution system and the double-rate personal income tax – which includes the general employment tax credit and is imposed on the basis of the super gross income (i.e. gross wage plus employer's social security contributions) – have been replaced by a flat rate, linear taxation system featuring a broad based family tax allowance and targeted incentives for employees on the employer's side.

The second part of this paper provides an overview of the general trend of the measures implemented in the European Union over recent years. Section 3 describes the changes af-

E-mail address: andras.svraka@ngm.gov.hu

fecting taxes and contributions on incomes in recent years in Hungary and the effects of the changes on the tax wedge. Section 4 presents the characteristic features of labour market participation in Hungary and the specificities of the wage-related black economy. Section 5 is devoted to the tax incentives of labour market adjustments and the range of tools available for encouraging willingness to work. In Section 6 we rely on micro data to identify the respective income groups affected by the tax allowances on labour incomes. Section 7 is a summary of our key conclusions.

INTERNATIONAL TRENDS FOLLOWING THE CRISIS

In order to tackle the crisis and curb unemployment, the recommendations of the European Union advised Member States to adopt labour market incentives and improve the situation of disadvantaged labour market groups. Improving the labour market situation of young people is a priority objective for the European Union. With that in mind, the Youth Employment Initiative has been launched for the reduction of youth unemployment in the period of 2014–2020. The initiative aims to provide support to countries with a youth unemployment rate above 25 per cent (European Commission, 2013).

In the context of growth-oriented tax policy reforms, several European Union Member States have lowered the taxes on labour in recent years. The tools they used for this purpose varied, with some countries implementing across the board tax cuts, while others curtailed the employment costs of disadvantaged labour market groups through, for example, corporate tax incentives or allowances granted to disadvantaged regions. Moreover, based on data released by Eurostat, nearly 20 EU Member States decided to increase their respective VAT rates in or after 2010. Another emerging trend was the introduction of sector-specific taxes either on a temporary, or on a long-term basis. In 2013 nearly half of EU Member States impose a form of bank tax.

Taxes on labour were cut across the board in several countries, including the Netherlands, Latvia and Malta. The labour market participation of disadvantaged groups was targeted by incentives to low-income or elderly employees in Belgium, Portugal and Sweden, among others. Some countries, such as Belgium and Spain, introduced tax incentives to facilitate the labour market entry of young employees, with incentives also offered to boost employment among low-skilled employees in Belgium, for instance. Companies employing certain disadvantaged labour market groups are entitled to tax allowances in Italy and France, while Italy stepped up the incentives available in disadvantaged regions.

These measures clearly demonstrate that, due to their limited fiscal elbow room in the wake of the economic crisis, besides implementing an overall tax reduction, European economies tend to offer targeted incentives to the groups that are easy to incentivise, while attempting to shift the tax burden toward consumption taxes and partly to certain sectoral taxes.

LABOUR TAX REFORM IN HUNGARY

The reform implemented in recent years in respect of the taxes on labour affected the income of employees and the wage costs of employers in many respects. In summary, the most important changes were the following:

- As of 2011, the flat-rate personal income tax system came into effect with a tax rate of 16 per cent. The eligibility threshold for the wage tax credit was reduced and its level cut. At the same time, a far more

generous family tax allowance was introduced and made available even for families with one or two children, with the allowance amount significantly increased for those with three children. The level of individual pension contribution was raised by half a percentage point.

- As of 2012, the wage tax credit was eliminated altogether, and the phasing out of super grossing commenced, in the first step, up to a cumulated tax base below HUF 2,424,000. Health insurance contribution was raised by one percentage point.
- As of 2013, super-grossing was eliminated altogether, the cap on pension contribution (HUF 7,942,200 in 2012) was removed, and the Job Protection Action Plan was adopted.

As the targeted measures of the Job Protection Action Plan are of key importance for the purposes of this study, they merit a more detailed analysis. The measures aim to improve the market position of small and medium-size enterprises through the introduction of an optional small company tax, the itemized taxation of small taxpayers and cash-flow based VAT accounting. Moreover, as of 1 January 2013, social contribution tax allowance and vocational training contribution allowance were introduced and are available for employers in the case of five target groups. Based on the allowances, the groups affected can be classified into two types:

- employees under the age of 25 and above the age of 55 and those employed in jobs not requiring a professional qualification (hereinafter: FEOR9), employer's burdens are reduced without a time limit, the rate of the allowance is 14.5 percentage points;
- long-term job seekers (i.e. those registered as job seekers for a period of at least 6 months during the 9 months preceding their employment), young entrants to the labour market (employees under the age of 25 with a maximum of 180 days of employment) and those employed during or after the disbursement of maternity benefits are eligible for a temporary tax reduction: the rate of the allowance is 28.5 percentage points in the first two years of employment and 14.5 percentage points in the third year of employment.

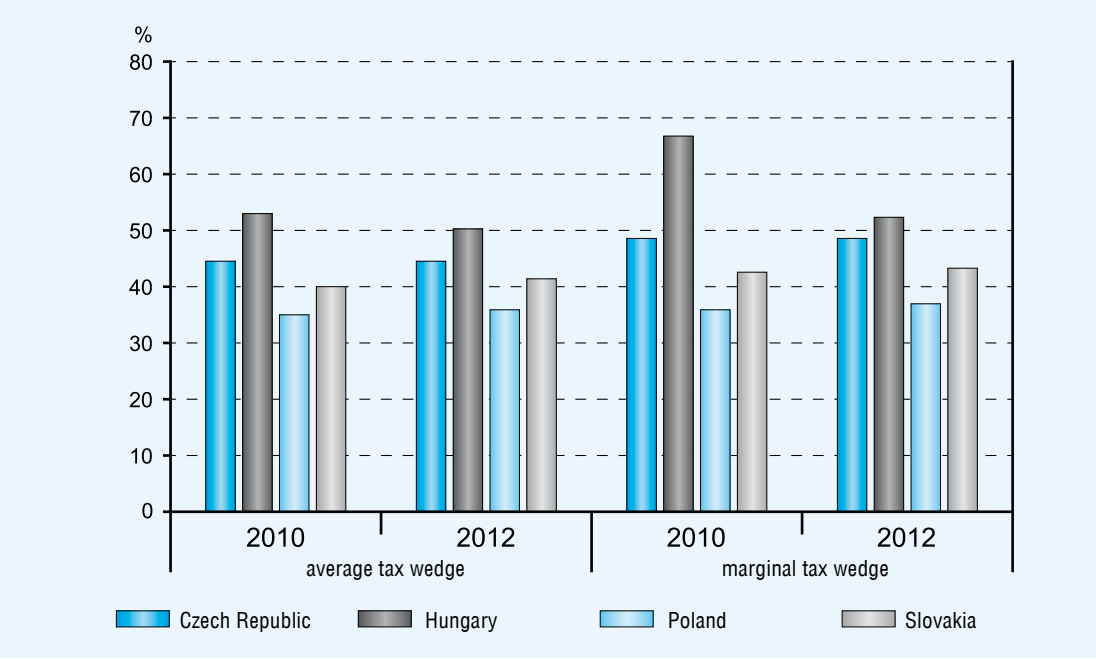
Under the tax allowance scheme, employers may apply for a social contribution tax allowance and vocational training contribution allowance for the eligible employees on the first HUF 100,000 of the employee's gross monthly salary.

The sum of the above measures was a significant structural transformation of the tax burden on labour. We attempt to illustrate this transformation through the tax wedge, i.e. the sum of the taxes and contributions on labour expressed as a percentage of labour costs. Based on the tax wedge, in 2010 the Hungarian tax system was the most progressive in the region. Owing to the increased marginal tax wedge resulting from the phasing out of the tax credit in higher income brackets, markedly high taxes were imposed on extra incomes even directly above the average wage. Thus those earning 167 per cent of the average wage prevailing in the national economy (excluding the family tax allowance) faced extremely high average tax burdens. By 2012 Hungary was the only country in the region to pass measures that changed the tax wedge significantly. Nevertheless, owing to high employer burdens (previously the social security contribution and from 2012 the social contribution tax) the Hungarian tax wedge continues to exceed that prevailing in the rest of the Visegrád countries *(see Chart 1).*

It is also worth examining how the tax wedge changes in higher income brackets. While numerous countries have degressive so-

Chart 1

CHANGES IN THE TAX WEDGE OF THE VISEGRÁD COUNTRIES AT 167 PER CENT OF THE AVERAGE WAGE, EXCLUDING FAMILY ALLOWANCES



Source: OECD, 2011a; OECD, 2013a

cial security and contribution systems which are offset, in several cases, by a progressive personal income tax system, due to the elimination of the contribution cap, as from 2013 the ratio of the tax wedge does not get any lower in Hungary even at higher labour income levels. *Chart 2* shows a comparison between the Czech and Slovakian tax wedges (2012) and the Hungarian one (2013). While all three countries had a flat-rate personal income tax in the years under review, in the context of tax incentives provided to lower-income taxpayers, the Czech Republic and Slovakia initially had a progressive tax system which, however, turned degressive at higher income levels owing to the application of the contribution cap. By contrast, the flat-rate personal income tax combined with an unlimited contribution obligation engendered an entirely linear taxation system in Hungary.

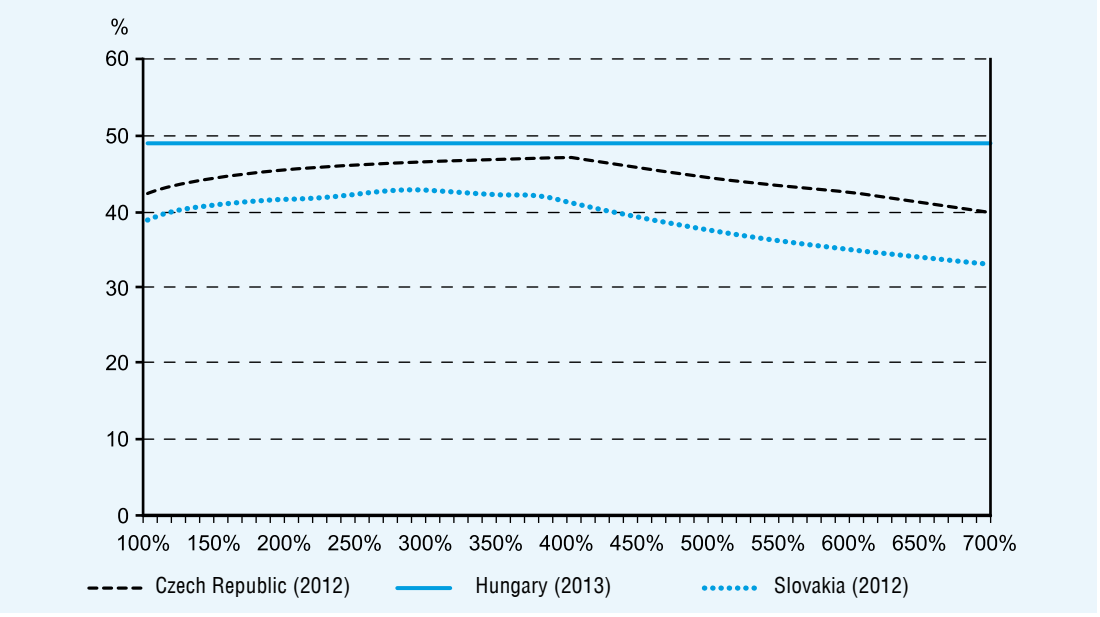
Chart 2 does not include the impact of the Job Protection Action Plan, targeting lower-income taxpayers, on the tax wedge. As we will show below, the targeted tax incentives introduced as of 2013 are available for the vast majority of lower-income taxpayers; therefore, it is worth looking at the tax wedge in conjunction with the incentives. Thus examined, the tax wedge proves to be closer to the regional level at lower income levels. *Chart 3* sums up the tax burden on those not eligible for the family tax allowance in 2013.

SPECIFICITIES OF THE HUNGARIAN LABOUR MARKET

Before analysing the tax incentives, we should point out a number of country-specific characteristics: on the one hand, for several rea-

Chart 2

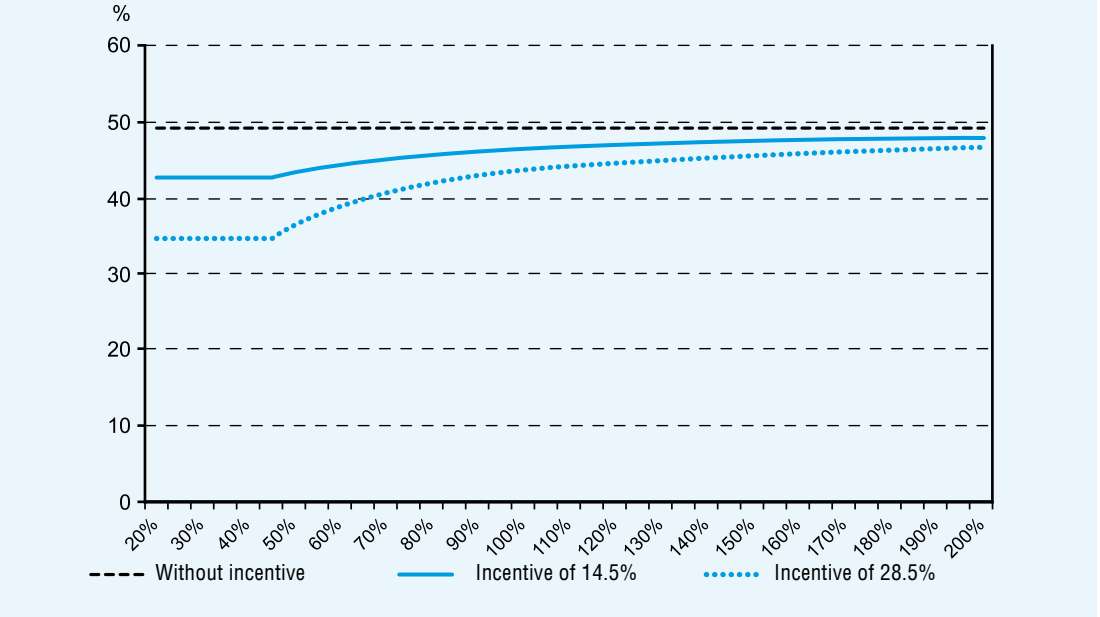
TAX WEDGES OF ABOVE-AVERAGE INCOMES EXCLUDING FAMILY TAX ALLOWANCES IN THE CZECH REPUBLIC, HUNGARY AND SLOVAKIA, AS A PERCENTAGE OF AVERAGE WAGES



Source: OECD, 2013a; own calculation

Chart 3

AVERAGE TAX WEDGE IN 2013 IN HUNGARY WITH AND WITHOUT TARGETED TAX INCENTIVE AS A PERCENTAGE OF THE AVERAGE WAGE, EXCLUDING THE FAMILY TAX ALLOWANCE



Source: own calculation

sons, Hungarian economic activity lags behind the European Union; on the other hand, the Hungarian labour market is crucially influenced by the high prevalence of black and grey wages.

Characteristics of the Hungarian economic activity

According to Eurostat data, by 2012 the negative gap between the Hungarian economic activity and the EU–28 average has shrunk to 7.4 per cent in the 15–64 age group, compared to 9.3 per cent in 2009. As regards the participation rate, by 2012 Hungary, which three years earlier ranked last, moved up three positions in the ranking of European Union Member States (including Croatia). Nevertheless, based on economic activity, the Hungarian economy lags significantly behind not only the developed countries of the European Union, but also those of the region. Having said that, as is the case with Hungary, the labour force participation rates of countries in the region also fall behind the average participation rate of the EU–28.

The analysis of *Kátay* and *Scharle* (2012) of 2011 labour market activity data was focused on the consistently low level of employment compared to the EU average, and attempted to find the reasons for Hungary's deficiency. In their analysis, the authors divided the shortfall into two main components: the structural mismatch between the populations of the countries concerned (composition effect) and the deficiency attributable to the characteristic features and participation rates of individual groups in the labour force. The economic activity deficit of the Visegrád countries relative to the EU average can be partly attributed to the low level of labour market participation among the population above the age of 50. On the other hand, low-skilled workers and women of childbearing age also contribute significantly to the difference in activity. Indeed, the participation deficit of the above groups accounts for the difference between the average participation rate in the EU and that in Hungary almost entirely.

Chart 4 presents the difference between the Hungarian participation rate and the EU average broken down by age groups and gender. The deficit observed for the younger and older age groups is clearly demonstrated by the Chart 4. In addition, it is also shown that the deficit is largely due to the childbearing group among women, whereas the participation rate of the 40–55 age group in fact slightly exceeds the EU average.

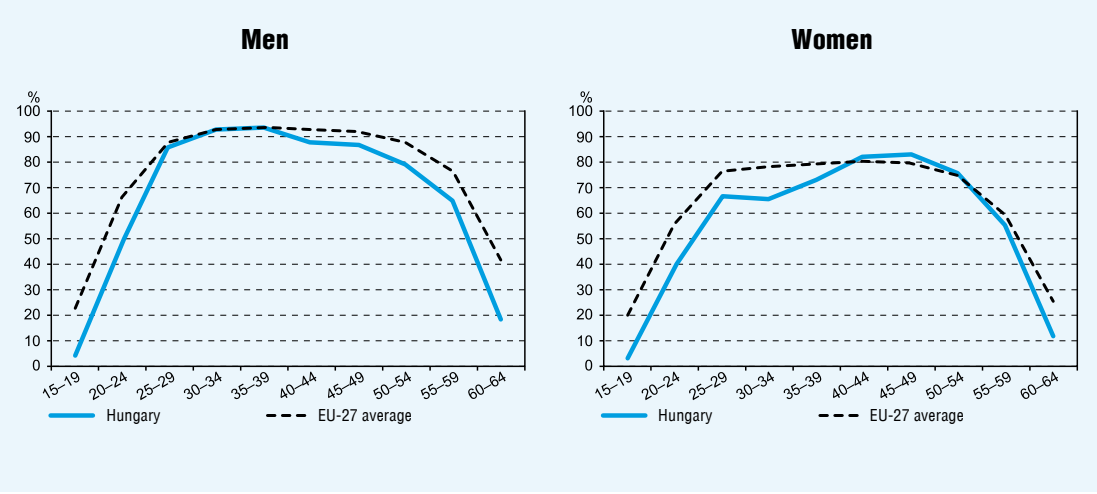
Hidden economy and undeclared income

Our analysis of the labour market should not overlook the country-specific effects of the black and grey economy. In order to examine black employment and the concealment of income, the study of *Elek at al.* (2009) analysed a series of Hungarian data, including the Labour Force Survey of the Hungarian Central Statistical Office, administrative data (National Health Insurance Fund, Central Administration of National Pension Insurance) and the Wage Survey. Based on their estimates, the magnitude of black and grey employment varies in the different employment and demographic groups of the Hungarian society.

According to the analysis of data pertaining to 2001–2005, unregistered employment reached a rate of 16–17 per cent in the 15–74 age group, while the rate of black employment stood at 12–14 per cent among employees. The authors estimated black employment data in a breakdown of gender, age, residence and job as well. According to their findings, black work is more prevalent among men, and the majority

Chart 4

PARTICIPATION RATE OF AGES 15–64 IN 2011, BROKEN DOWN BY AGE GROUP AND GENDER



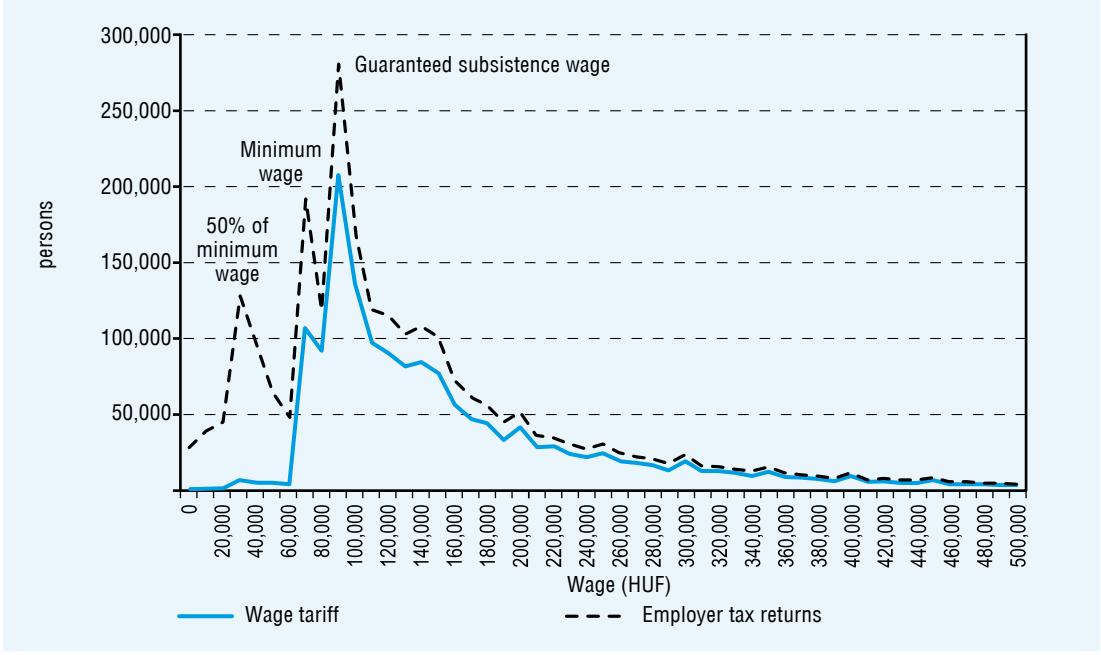
Source: Eurostat

of those accepting black employment belong to the younger generation (ages 25–39). Relying on the wage tariff system, the rest of the analysis is devoted to wage under-reporting. The authors found that, by 2003, 45–65 per cent of those officially earning the minimum wage may have actually earned more than the reported amount. However, the breakdown by employment indicated that low-performance employees, such as cleaners and unskilled workers were less likely to accept black employment and envelope wages; this group typically earned true minimum wages.

It should be noted, however, that the above estimates are based on the Wage Survey, which primarily covers the more transparent, institutionalised segment of the labour market. Indeed, the Wage Survey only involves companies with at least 5 employees, and includes data pertaining to workers employed during the entire month. Moreover, in the case of full-time employees the companies concerned are to report only those whose days of absence did not exceed three days, and in the case of part-time employees only those who worked at least 60 hours per month. Therefore, the data of the survey should be also compared to those included in the monthly contribution returns which, while less detailed than the wage tariff database, provide a more comprehensive view of the totality of registered employees. In addition, the use of data from contribution returns help eliminate the distortion caused by annual personal income tax returns, which overestimates the number of minimum wage earners significantly, given that a large part of employees does not work throughout the entire year. A comparison of employer's contribution returns pertaining to the private sector for May 2011 with the wage tariff data for the same month indicates (*See Chart 5)* that, while the two distributions are roughly the same for higher-income employees, the wage tariff database practically excludes the labour market segment reporting the lowest – minimum wage or less – income. Therefore, there is reason to assume that the ratio of disguised minimum wage earners may well be even higher than that indicated in the study of *Elek et al.* (2009).

Chart 5

DISTRIBUTION OF WAGES IN MAY 2011



Source: National Tax and Customs Administration, Wage Survey

Analysing the data of a survey pertaining to the pre-crisis years of 2006 and 2007 based on a cohort of 1,000 people, *Semjén* and *Tóth* (2010) summarised the characteristics of the different forms of black and grey wages. Given that the results are based on own reports by the individuals concerned, this study should be also viewed as a conservative estimate. Similar to the findings of Elek et al. (2009), the results suggest that around 15 per cent of ages 18–60 receive envelope wages, while those earning a part of their income in grey wages can be estimated to 13–14 per cent. The gender breakdown, once again, pointed to a higher ratio of unreported employment among men than among women. Moreover, the analysis points out that nearly 17 per cent of employees under 30 years of age and casual workers receive their earnings in the context of concealed employment; significantly higher than the values – typically around 10 per cent – estimated for other age groups.

IMPACT OF TAX RATES ON EMPLOYMENT

As we have shown in the previous section, certain distinct groups in the Hungarian labour force have a rather low participation rate. What economic policy instruments are available to facilitate the labour market entry of these groups? Similar to labour supply, economic activity is influenced both by the tax rates and the transfers; therefore, the transfer system could have a substantial incentivising role in the activity of the groups concerned. Our analysis, however, concentrates on the effects of the tax system.

As regards the impact of labour taxes on labour supply decisions, two types of adjustment should be distinguished primarily: decisions at the extensive and at the intensive margin. Apart from these, numerous other decisions may be likewise influenced by taxes, including the in-

vestment in human capital; however, these are not relevant for the purposes of this study.

The intensive margin implies the decision about the hours worked and the intensity of the work invested, while the decision at the extensive margin is manifested in the probability of labour force participation. Adjustment of both at the intensive margin and at the extensive margin can be stimulated through the tax system. The intensity of labour can be improved primarily by changes in the marginal tax rates, which implies the level of taxes imposed on the extra income generated by the increased labour supply. Labour market participation (i.e. the extensive margin), however, is less influenced by the marginal tax rate, given that certain labour market rigidities may give rise to significant barriers to entry; for instance, the majority of jobs are available only in fixed working hours. Therefore, the decision about labour force participation – which is made at the extensive margin – is mainly influenced by the average tax rate on the income level available for the specific employee, i.e. by the tax payment obligation on the total wage (wage increased by employer's burdens).

Adjustment at the extensive margin

OECD (2011b) provides a broad overview of the results of empirical studies on taxpayers' reactions to changes in marginal tax rates. Higher-income employees tend to adjust to tax changes less frequently through the number of hours worked; however, their tax base typically reacts to changes in the marginal tax rates more flexibly. Changes in the tax base involves adjustments at several margins beside the number of hours worked, including the intensity of labour, the source of the income earned (labour or capital income), or changes in consumption habits.

The study of *Bakos et al.* (2008) estimates the tax elasticity of taxable income, using Hungarian data. Based on estimates from data taken from individual personal income tax returns complied by the Hungarian Tax and Financial Control Administration for 2004 and 2005, the study found that lower-income taxpayers did not appear to be particularly sensitive to tax changes; i.e. changes in the marginal tax rates did not generate significant changes in performance at these income levels. At the same time, the results showed that those with an annual taxable income of HUF 2 million and above were highly sensitive to tax changes; thus changes in the marginal tax rates gave rise to adjustments at the intensive margin. In the top 20 per cent of income distribution the study established an elasticity of over 0.3 which, in line with international literature, may exert a significant effect on the level of incomes. *Benczúr et al.* (2012a) re-estimated these results and found somewhat lower elasticity levels in different income groups; nevertheless, higher-income taxpayers responded more intensely to changes in the marginal tax rate as well.

Adjustment at the extensive margin

Upon entering the formal labour market, besides the decision on the use of their free time, potential employees consider their choices in terms of the available labour income and potential access to income outside of the labour market. Meanwhile, it should not be overlooked that labour market entry is also influenced by fixed costs of work. Owing to the welfare systems, a considerable part of the income available from outside of the labour market (e.g. transfers) could be lost for those entering the labour market. As a net result of these effects, the factor that will ultimately determine the decision on labour market participation is the "gains-to-work", which equals the difference between the net wage and the transfers lost upon entering employment.

Meghir and *Phillips* (2010) provide an overview of empirical studies in the international literature relating labour supply to tax changes. Upon examining responses to tax changes at the extensive margin, empirical studies mainly include estimates of labour market participation (rather than employment). Based on the estimates the authors conclude that the labour market participation of women – typically secondary earners in households – is particularly sensitive to taxes. (The previous section showed that in Hungary participation problems primarily affect women in the childbearing age group). The participation responsiveness of men is less pronounced overall; however, certain demographic characteristics produce major differences: the participation of low education men, for example, is more responsive to incentives. A frequent shortcoming of the above studies is the fact that they do not, or only partially consider, the fixed costs of labour market entry, and consequently undershoot the elasticity of the participation decision.

The study of Benczúr at al. (2012b) resolves this deficiency by using a comprehensive microsimulation of the transfer system in order to provide a more accurate model to estimate the elasticity of labour force participation in certain groups of the society. Based on different demographic characteristics, major differences can be observed: the elasticity of the full prime-age sample to net wage is low (0.127), while the corresponding value is 0.294 among those with elementary school education or less and 0.392 among those above 50 years of age, which demonstrates that tax incentives could be particularly efficient instruments in disadvantaged groups at the periphery of the labour market. In addition, women of childbearing age exhibit higher elasticities (0.231) in their participation decisions to gains-to-work.

Income accessible from various transfers has a greater impact on the elasticity of taxpayers around retirement age, those returning from maternity leave or the long-term unemployed, which could act as a negative incentive at the extensive margin of the labour market. Although the tax changes examined in the study coincided with a significant transformation of the transfer system (unemployment benefits, pre-retirement benefits), we excluded their effects from our study as it can be clearly established from the results presented that taxes alone have an impact on the gains-to-work.

In summary, we can conclude that the participation decisions of the groups concerned are particularly sensitive to tax changes; therefore, the tax incentives available for these target groups can be efficient instruments in the efforts to increase participation and employment.

Targeting considerations

We can establish that tax incentives can serve as efficient economic policy tools to improve the existing low participation rates in Hungary, and can be especially efficient in high-elasticity groups at the extensive margin of the labour market. Based on this, below we examine the range of possible tax policy instruments in Hungary and the arguments and issues to consider as regards the tax incentives aimed at low-participation groups. We concentrate on two issues: on the one hand, the choice between general (solely income-dependent) incentives and targeted incentives and, on the other hand, whether the incentive should be made available on the employee side or on the employer side.

A frequently cited argument for the general employer's tax credit available up until the end of 2011 is the fact that it improved gains-to-work through increasing the net wages of low-income taxpayers, thereby boosting the participation rate. In view of the incentive's significant

budgetary implications, however, it should be examined whether it was indeed the most efficient tool to achieve the intended goal or not.

Benedek et al. (2012) relied on a microsimulation model to assess the macroeconomic impacts of three measures with the same static fiscal effect in terms of expenditure. The three measures are the following: the introduction of a tax-free income bracket (financed partly from increasing the general tax rate); a tax credit phased out at an income level significantly lower than the actual tax credit eliminated in 2012; and the benefits proposed by the Job Protection Action Plan. Of the three measures, the introduction of the tax-free income bracket proves to be the least efficient: since the positive extensive labour supply effect of the tax cut for low-income taxpayers is completely offset by the negative effect on the intensive side, the overall impact of the measure on effective labour supply is negative. We may conclude that setting up the parameters for an income-based, across-the-board incentive should ensure that the incentive is really aimed at employees with the lowest income only. The tax credit under review would increase employment to a higher degree than employer's incentives; however, it would generate a considerably larger fiscal shortfall in a state of equilibrium. The per-unit costs of stimulating effective labour supply are therefore somewhat lower in respect of the targeted tax incentives; i.e. based on the cost-benefit principle, the targeted approach can be considered slightly more efficient. The lower fiscal impact is presumably caused by the fact that targeted incentives are offered on the employer side, while the tax credit is reflected in employee income. This is because in the long run, in a state of equilibrium, a tax reduction for employers implies a more moderate tax reduction. Indeed, over the long term, as a result of wage bargaining, a reduction of employer's burdens implies, *ceteris paribus,* an increase in equilibrium gross wage levels, thereby boosting tax revenues, while the reduction of employee's burdens would translate into the reduction of the equilibrium gross wage level and thus would yield lower tax revenues.

In view of the concealment of income described by Elek et al. (2009), a general tax relief could become wasteful in the case of employees with low official earnings, since it would largely benefit employees who are not or less in need of the incentive *(see Chart 6).* Moreover, the tax credit encouraged further wage concealment by placing the minimum wage in the tax-exempt category, while the gradual phase-out at higher wage levels increased the marginal tax rates on extra incomes. As we have seen earlier, this does not influence the labour force participation decision in and of itself; however, it acts as a counter-incentive (once a career starter gains sufficient experience) in terms of increased employee productivity and the reporting of the extra income, which could be particularly problematic in Hungary where unreported wages are rampant already. By contrast, the targeted incentive does not encourage wage concealment as this incentive was not phased out in any income bracket; therefore, it does not lead to higher marginal tax rates.

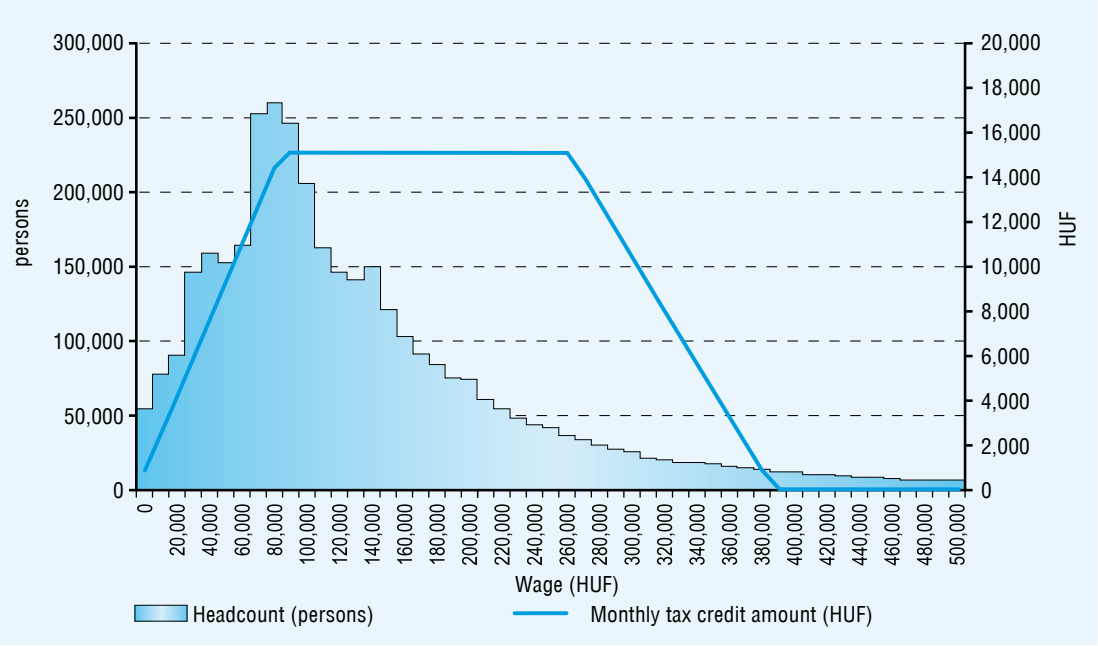
Employer's and employee's incentives

If the wages respond elastically, the labour market effects of employer's and employee's incentives – both equally reducing the tax wedge – will not show a difference over the long term. In case of wage rigidities, however, the mitigation of the burdens on the employer or the employee side improves employment to a different extent.

The introduction of employer's tax incentives may be preferable as these incentives are more suitable for boosting labour demand;

Chart 6

AVERAGE MONTHLY LABOUR INCOMES AND TAX CREDIT AMOUNTS IN 2010



Source: National Tax and Customs Administration, own calculation

therefore, they could generate a more rapid employment growth. With downward wage rigidity and incentives offered on the employee side, employers do not experience any decline in employer costs, while the net salary of employees increases. By contrast, with unchanged net wage levels, incentives provided on the employer side could result in effective cost reduction. Cost cuts, therefore, could boost corporate-level labour demand.

In case of incentives made available to certain target groups, inflexible corporate salary scales and a uniform minimum wage regulation could represent a further rigidity factor in respect of the adjustment at the extensive margin. In case of such wage rigidities, it must be considered whether the group concerned experiences a supply problem only, or there is a long-term demand problem in the background as well. If we assume that the given target group is experiencing supply problems only, then incentives to employees could be more effective. On the other hand, if we find that the rigidities lead to labour demand problems as well – by preventing employers from employing the employees, they find less preferable for whatever reason, with lower labour costs —, the incentives should be aimed at employer's burdens (for instance, demand problems stemming from the rigidity of salary scales often arise in case of employees approaching retirement age and mothers with children).

Based on the summary of the arguments presented above, it is evident that targeted incentives provided to certain distinct groups could be efficient tools to increase labour market participation, and they are preferable to be offered on the employer side. At the same time, as the next section indicates, the various incentives could be rather different from a social perspective.

SOCIAL TARGETING

Social redistribution is not the primary purpose of the targeted incentives introduced in the context of the Job Protection Action Plan. At the same time, since the incentives are typically applied for low-income employees, they lead to a certain degree of income redistribution in any case. As we have seen earlier, the across-the-board tax credit system does not necessarily limit the assistance to the labour market groups needing it the most. Below we will examine the social aspects of targeted employer's incentives and the tax credit eliminated in 2012. Our analysis is based on the Household Budget Survey compiled annually by the Hungarian Central Statistical Office.

Methodology

We examined the distribution effects of the tax credit of 2010 and the incentives introduced in the context of the Job Protection Action Plan on the database of the Household Budget Survey for 2010, which contained the latest data available during the elaboration of the Action Plan.

One of the reasons for choosing the Household Budget Survey was the fact that it is worthwhile to examine the tax incentives for labour market entry on micro data, as individual levels offer a good starting point to analyse the groups and households benefiting from the incentives. The Ministry for National Economy maintains micro level administrative databases (e.g. personal income tax returns, employer's contribution returns); however, they are not suitable for household-level analysis. Due to its structure, the representative sample of the Household Budget Survey – which captures the main social characteristics –, includes detailed information on households, in particular, the different incomes of the individuals living in the households. At the same time, however, the Household Budget Survey shows a certain degree of deficiency in terms of income conditions, as – due to the inaccessibility of the groups concerned – employees in the lowest and highest income segments are underrepresented in the sample.

Our analysis was intended to identify which deciles beneficiaries belonged to on the basis of household income. We defined the deciles according to the equivalent income of households, giving home to the specific individuals, per unit of consumption. The reason behind the application of per capita equivalent income is the fact that, in determining the income level of individual households, besides the number of people living in the household the composition of the household is extremely important as well, as it allows for the comparability of the income conditions of individual households. In line with the OECD methodology (OECD, 2013b) we applied for the purposes of our study, in establishing the equivalent income we assigned a weight of 1 to the primary person living in the household, while a weight of 0.5 and 0.3 was attached to all additional adults and children living in the same household, respectively.

In order to analyse the incentives by means of the Household Budget Survey database, we needed to make the respective incomes of each individual comparable. The questionnaire pertaining to the personal data of individuals living in the households indicate the annual income of each individual. However, for an accurate comparison of the incomes, we had to adjust the annual data by the number of active months. For the analysis of the benefits introduced in the context of the Job Protection Action Plan, we needed to rely on certain assumptions in case of data pertaining to the long-term unemployed and those returning from maternity leave. In case of the long-term unemployed, employers may ap-

ply for the incentive for those employees who were registered as unemployed for six months or more during the nine months preceding employment. Upon determining and analysing the group of beneficiaries, we started out from the economic activity data of the Household Budget Survey, which included two types of data: firstly, the current economic activity of the subjects in the personal questionnaires and secondly, the economic activity data pertaining to each month of the year.

For the purposes of our analysis, in examining the group of possible stakeholders, we had no opportunity to identify the group of those eligible for the incentives of the Job Protection Action Plan accurately; therefore, we simply defined a group with similar characteristics for this purpose. The application of current economic activity was deemed unsuitable for the definition of the group of beneficiaries. This is because the data pertaining to current activity could exclude from the group of potential beneficiaries those who have found employment during the year following a long-term period of unemployment, and are thus considered active. As we attempted to establish the status of long-term unemployment, we faced another problem: since it is not possible to link data pertaining to several years from the Household Budget Survey, there is a risk that a significant part of potential beneficiaries is ignored (such as seasonal workers finding employment in the summer). In order to overcome the problems, monthly economic activity data were used as a starting point, and anyone who was unemployed for at least 6 months during the year and received income from work was considered as a potential beneficiary.

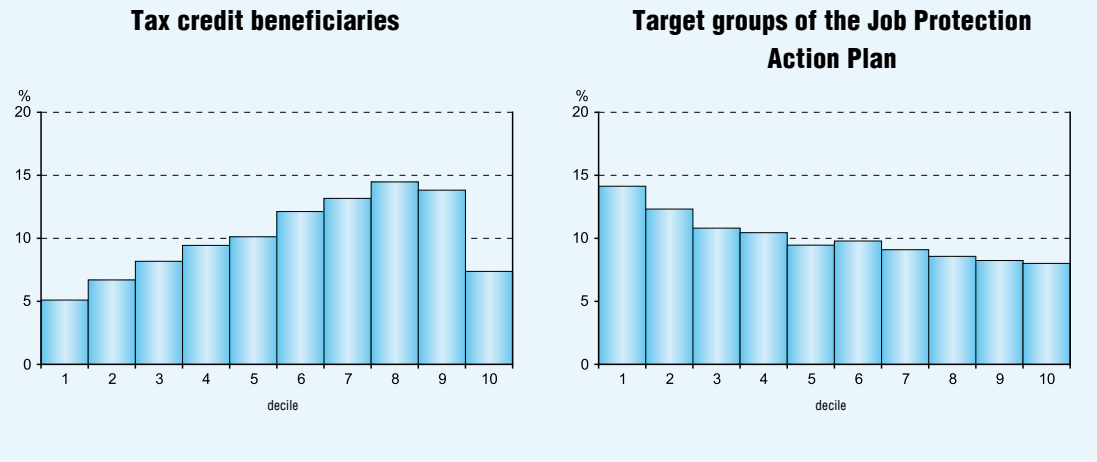
The incentive may be claimed by employers for employees returning to work following the disbursement of maternity benefits until the end of the 45th month of the last disbursement, but for no longer than 3 years. Another difficulty was posed by the Survey's lack of specific data on the number of generations living in the same household and the specific relationship between family members in households composed of one or more generations. With that in mind, the group of those employed after the disbursement of maternity benefits was defined based on the assumption that no more than one woman may claim the incentive per household, the status of whom is wife, partner or a single mother raising a child or children, and at least one person under 5 years of age lives in the family. We included those subjects in the group of employees eligible for tax credit who were able to claim the total amount of the tax credit available in 2010; i.e. with an annual income of HUF 2,510,000 or less (the statutory threshold was HUF 3,188,000, applicable to super-grossed income).

Results

The results of the simulation are shown by *Chart 7*. The Chart indicates that the majority of those who were able to claim the tax credit in full were employees with an income higher than the median, i.e. were members of higher-income, albeit not the richest, households. This specificity can be mainly attributed to the fact that these families typically have a higher ratio of family members in employment. Another important factor to consider is that, while the tax credit affected a wide range of employees, initially it was phased out in the age bracket above the average wage only. It is of particular importance that the chart peaks at the 8th decile; in other words, the equivalent household income of the majority of those claiming the tax credit significantly exceeds the median level. This demonstrates that the tax credit assisted not only those with higher personal income, but also benefited a

Chart 7

INCOME DISTRIBUTION OF THE BENEFICIARIES OF TAX INCENTIVES BASED ON EQUIVALENT HOUSEHOLD INCOME



Source: Household Budget Survey, own calculation

large part of the families with a higher equivalent household income.

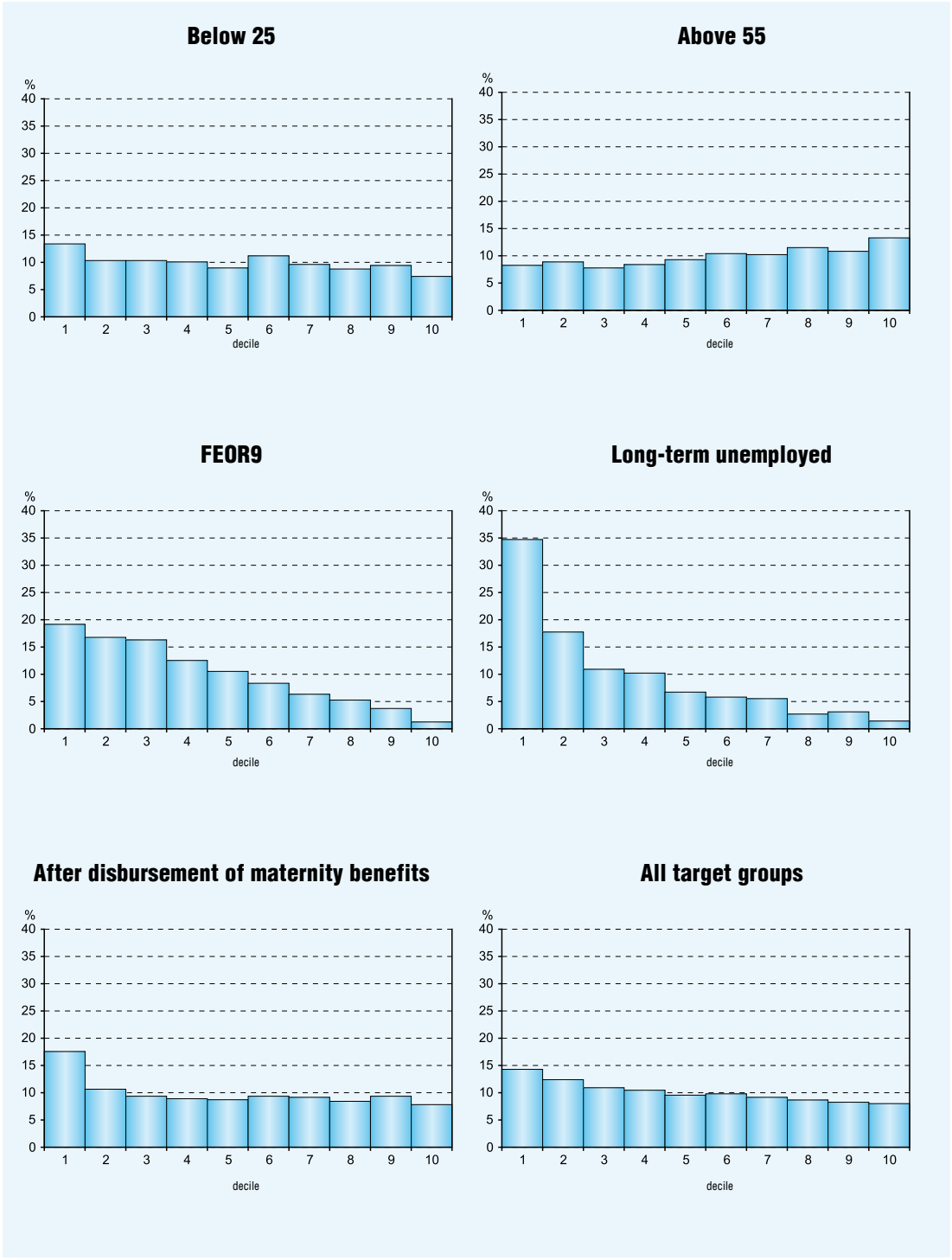
By contrast, despite the fact that they were primarily intended to boost employment efficiently and were not aimed at social distribution specifically, the incentives proposed by the Job Protection Action Plan typically reduced the tax burdens of those living in low-income households. When we looked at individual target groups we found that those living in the poorest households were also over-represented among young employees, unskilled workers, and those employed after a long-term period of unemployment or the disbursement of maternity benefits. Although among the employees above 55 years of age the ratio of those living in higher-income households is slightly higher, even this group featured a more even income distribution *(see Chart 8)*.

SUMMARY

The labour force participation rate in Hungary and in most other Central European economies lags behind the European Union average. The deficit is largely caused by the lower participation rate of certain distinct groups in the labour force. According to the empirical literature, the participation of these groups can be stimulated successfully by incentives provided through the taxation system. In the context of the specificities of the Hungarian labour market, in this study we presented the main aspects to consider in respect of the provision of employer's and employee's incentives, as well as targeted incentives and general incentives aimed at boosting employment. We examined the differences between the beneficiaries of the general tax credit (phased out from 2012) and the recipients of targeted incentives based on equivalent household income. We found that the general employment tax credit primarily benefited households with an income higher than the median household income. By contrast, the results demonstrated that a higher ratio of targeted incentives assisted those living in specifically low-income households.

Chart 8

INCOME DISTRIBUTION OF THE TARGET GROUPS OF THE JOB PROTECTION ACTION PLAN BASED ON EQUIVALENT HOUSEHOLD INCOME



Source: Household Budget Survey, own calculation

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