



IFAU – INSTITUTE FOR
LABOUR MARKET POLICY
EVALUATION

Income support systems, labour supply incentives and employment – some cross-country evidence

Anders Forslund
Peter Fredriksson

WORKING PAPER 2009:32

The Institute for Labour Market Policy Evaluation (IFAU) is a research institute under the Swedish Ministry of Employment, situated in Uppsala. IFAU's objective is to promote, support and carry out scientific evaluations. The assignment includes: the effects of labour market policies, studies of the functioning of the labour market, the labour market effects of educational policies and the labour market effects of social insurance policies. IFAU shall also disseminate its results so that they become accessible to different interested parties in Sweden and abroad.

IFAU also provides funding for research projects within its areas of interest. The deadline for applications is October 1 each year. Since the researchers at IFAU are mainly economists, researchers from other disciplines are encouraged to apply for funding.

IFAU is run by a Director-General. The institute has a scientific council, consisting of a chairman, the Director-General and five other members. Among other things, the scientific council proposes a decision for the allocation of research grants. A reference group including representatives for employer organizations and trade unions, as well as the ministries and authorities concerned is also connected to the institute.

Postal address: P.O. Box 513, 751 20 Uppsala

Visiting address: Kyrkogårdsgatan 6, Uppsala

Phone: +46 18 471 70 70

Fax: +46 18 471 70 71

ifau@ifau.uu.se

www.ifau.se

Papers published in the Working Paper Series should, according to the IFAU policy, have been discussed at seminars held at IFAU and at least one other academic forum, and have been read by one external and one internal referee. They need not, however, have undergone the standard scrutiny for publication in a scientific journal. The purpose of the Working Paper Series is to provide a factual basis for public policy and the public policy discussion.

ISSN 1651-1166

Income support systems, labour supply incentives and employment – some cross-country evidence ^{*}

by

Anders Forslund^{*} and Peter Fredriksson[^]

December 18, 2009

Abstract

This paper summarizes a set of expert reports commissioned by the IFAU. The expert reports cover Estonia, Germany, Italy, the Netherlands, Sweden, and the United Kingdom. These countries represent range of welfare states, both in terms of scope and design. And in each country there are interesting experiences from which other countries may learn. The overall objective is to identify policy tools that help generate sustained increases in employment in the long run. Therefore, we focus on policies that improve the incentives for labour force participation and reduce the barriers to participation.

Keywords: Labour force participation; employment; income support; long-run sustainability.

JEL-codes: J21; J08

^{*} We thank Mike Brewer, Agar Brugiavini, Marco Caliendo, Pieter Gautier, Bas van der Klaauw, Oskar Nordström Skans, and Andres Vörk for helpful comments. We also thank the participants at a seminar at the ministries of Employment and Health and Social Affairs for comments.

^{*} IFAU – Institute for Labour Market Policy Evaluation, e-mail: peter.fredriksson@ifau.uu.se

[^] IFAU – Institute for Labour Market Policy Evaluation, e-mail: anders.forslund@ifau.uu.se

Table of contents

| | | |
|-----|---------------------------------------------------------------------------|----|
| 1 | Introduction | 3 |
| 2 | Some descriptive facts across countries | 5 |
| 2.1 | The future demographic development..... | 5 |
| 2.2 | Employment rates by age | 6 |
| 2.3 | Disability and early retirement..... | 9 |
| 3 | The evidence from individual countries..... | 10 |
| 3.1 | Retirement rules have a bite and retirement incentives matter | 11 |
| 3.2 | Checks and balances increase employment..... | 13 |
| 3.3 | Properly targeted (and designed) active labour market policies help | 14 |
| 3.4 | Incentives matter primarily at the extensive margin | 15 |
| 3.5 | The need for a comprehensive view on incentives..... | 16 |
| 3.6 | Understanding the variation in female employment rates..... | 17 |
| 4 | Concluding remarks | 19 |
| | References | 22 |

1 Introduction

Europe is currently in the midst of recession, arguably the most severe recession since the Great Depression. The recession will increase joblessness in general and long-term unemployment in particular. These developments will put pressure on European welfare states, as revenues are falling and expenditures are mounting during the crisis.

Some of the increase in joblessness will most likely translate into increases in non-participation in the near future.¹ An important challenge is to prevent a permanent reduction in labour force participation, since such a development may threaten social cohesion and the sustainability of the welfare states.

The demographic trends represent a further challenge to the welfare states. Long-run reductions in fertility along with substantial increases in life-expectancy imply that a declining share of individuals in the working-age has to raise the necessary revenues to support the growing share of economically inactive individuals. Therefore, an important long-run concern is to identify policy tools that either increase labour force participation or improve the growth performance of the economy.

Ideally, any reforms should not drastically reduce the insurance or income support provided by the welfare state. Nevertheless, there is always a trade-off between insurance and incentives – the crucial design issue to strike the right balance between the two.

This paper summarizes expert reports on six countries – Estonia, Germany, Italy, the Netherlands, Sweden, and the UK.² These countries represent a wide range of income support systems, both in terms of scope and design. And in each country there are interesting experiences from which other countries can potentially learn. The reports are focused on the long run, i.e., they do not deal with crisis management. In the long run, labour supply is the key determinant of employment.³ Thus we focus on policy mea-

¹ Some countries are experiencing increases in non-participation already at this relatively early stage of the downturn. Of the countries covered in this report, the non-participation rate increased in Italy, Sweden, and the UK between the second quarter of 2008 and the second quarter of 2009 (European Labour Force Surveys, Eurostat).

² See Brewer (2009) on the UK, Brugiavini (2009) on Italy, Caliendo (2009) on Germany, Forslund (2009) on Sweden, Gautier and van der Klaauw (2009) on the Netherlands, and Vörk (2009) on Estonia.

³ To substantiate this claim, note that male employment rates have not decreased nearly as much as female employment rates have increased during the past decades. Moreover, across countries, there is basically no correlation between the increase in female employment and the change in male employment; see Gruber et al. (2009).

asures that reduce the barriers to labour force participation and improve the incentives to participation.

Potentially, there is a vast range of policy measures to consider. We restrict attention to the aspects of the income support and tax systems that governments have some control over. For individual choices on labour force participation, it is the income gain of getting employed relative to remaining in non-employment which is relevant. Therefore, it is not possible to treat the income support systems in isolation when discussing labour supply incentives – a treatment of the tax structure is also required. Moreover, we will include a discussion of active labour market policies. One reason for doing this is that active labour market policies interact with the design of unemployment compensation in many countries. Another reason for including active labour market policies in the discussion is that they may help individuals to improve their skills and thus reduce the barriers to participation.

Having said this, let us mention a few areas that we will not include in this summary. Minimum wage policy is one example. Minimum wages can certainly affect labour supply; but in the countries where they are bargained they are not a government policy tool. Another example concerns labour market regulations, although they may indirectly affect labour supply behaviour.⁴ Moreover, we will not consider the regular education system, although in some countries there is a thin line between, e.g., adult education and labour market retraining.

The remainder of this summary is outlined as follows. In the next section we present some cross-country descriptive evidence, which, in part, is useful for identifying what are the relevant margins for increasing employment. Section 3 summarizes the evidence from individual countries. There is not a great amount of detail included in this summary; instead we focus on the broad policy implications.

⁴ The reports on Italy (Brugiavini 2009) and the Netherlands (Gautier and van der Klaauw 2009) include some treatment of labour market regulations, however.

2 Some descriptive facts across countries

The scope of the welfare state varies across the six countries. The country standing out is Estonia where social protection expenditure amounted to 12.5 percent of GDP in 2007; in the remaining five countries social protection expenditures amounted to 26.7–29.7 percent of GDP.⁵ The countries also have different legacies. Again, Estonia is the case in point, since it has struggled with all the challenges facing a post-communist country after gaining independence in 1991. Moreover, the fundamental design of the welfare states varies across the countries. Palme et al. (2009) refer to the UK as an example of a country having a “basic security” model, while Sweden is classified as having an “encompassing model”.⁶

2.1 The future demographic development

No matter the scope and design of the welfare states, the demographic development in the not so distant future represents a challenge for all EU countries. Table 1 reports the projected ratio of the population aged 65 and more to the population between 15 to 64 – the old-age dependency ratio. We report this ratio at two time points – in 2010 and 2025. Notice that there is not much projection involved, since the number of 15–64 year olds in 2025 is more or less determined by the fertility rates up to 2010.⁷

Table 1 The ratio of the population aged 65+ to the population aged 15–64, percent

| Country | 2010 | 2025 |
|----------------|------|------|
| Estonia | 25.0 | 31.9 |
| Germany | 31.2 | 39.5 |
| Italy | 31.0 | 38.0 |
| Netherlands | 22.8 | 35.0 |
| Sweden | 27.8 | 35.5 |
| United Kingdom | 24.7 | 30.4 |
| EU 27 | 25.9 | 34.2 |

Source: Eurostat

The basic message in Table 1 is that the number of people supported by the working-age population will increase fairly substantially in the not so distant future. The projec-

⁵ Broadly, Eurostat define social protection expenditure as public expenditure related to: Sickness/health care, disability, old age, survivors, family/children, unemployment, housing and social exclusion not elsewhere classified

⁶ Palme et al (2009) define “basic security” as a model providing relatively modest benefits which are typically flat-rate; the “encompassing” model is defined as a universal model where earnings-related benefits are provided for the economically active population and flat-rate benefits for the inactive populations.

⁷ Some projection is still involved since one has to make assumptions on life expectancy and net migration.

tions even further ahead look particularly dismal for the countries which have very low fertility rates at present (e.g. Italy and Germany).

Thus, the demographic trends are unfavourable for the sustainability of the welfare state. For a given set of tax rates, the European countries can either resort to reducing welfare state generosity, or find policy measures that are conducive to either increasing employment for the population in the working-age, extending the length of the working-life, or increasing the productivity of those in employment. The focus here is on policies that have the potential of yielding beneficial employment effects.

2.2 Employment rates by age

Where is the potential for increasing employment? In an attempt to answer this question, Figures 1 and 2 plot employment rates by gender and age. Figure 1a) and Figure 1b) pertain to men while Figure 2a) and Figure 2b) pertain to women. There is limited variation across the countries in the employment rates of prime-aged men. There are important differences in the tails of the age distribution, however. For instance, it is clear that men in Italy retire early. While the employment rates among 50–54 year old men in Italy is on par with the male employment rate among 50–54 year olds in Sweden, it is 23 percentage points lower among 55–59 year olds, and 35 percentage points lower among men aged 60–64. Also in the Netherlands – which is otherwise a high employment country – men retire fairly early. This suggests that retirement ages and retirement incentives are important policy levers to consider.

There also important differences at the other end of the age spectrum, even among countries with similar prime-aged employment rates. For instance, young men enter the labour market later in Sweden than in the Netherlands. In general, such differences may be due to differing enrolment rates in higher education. But this is clearly not the explanation in the Dutch-Swedish comparison. The share of tertiary educated among individuals aged 25–29 is very similar across the two countries (39 percent in 2008), the implication being that Swedish men start tertiary education at a higher age and spend longer time in tertiary education.⁸

⁸ The median age at university entry in 2007 was 22.4 in Sweden which should be compared to 19.7 in the Netherlands; see OECD (2009).

Figure 1a) Male employment rates by age in 2008, percent

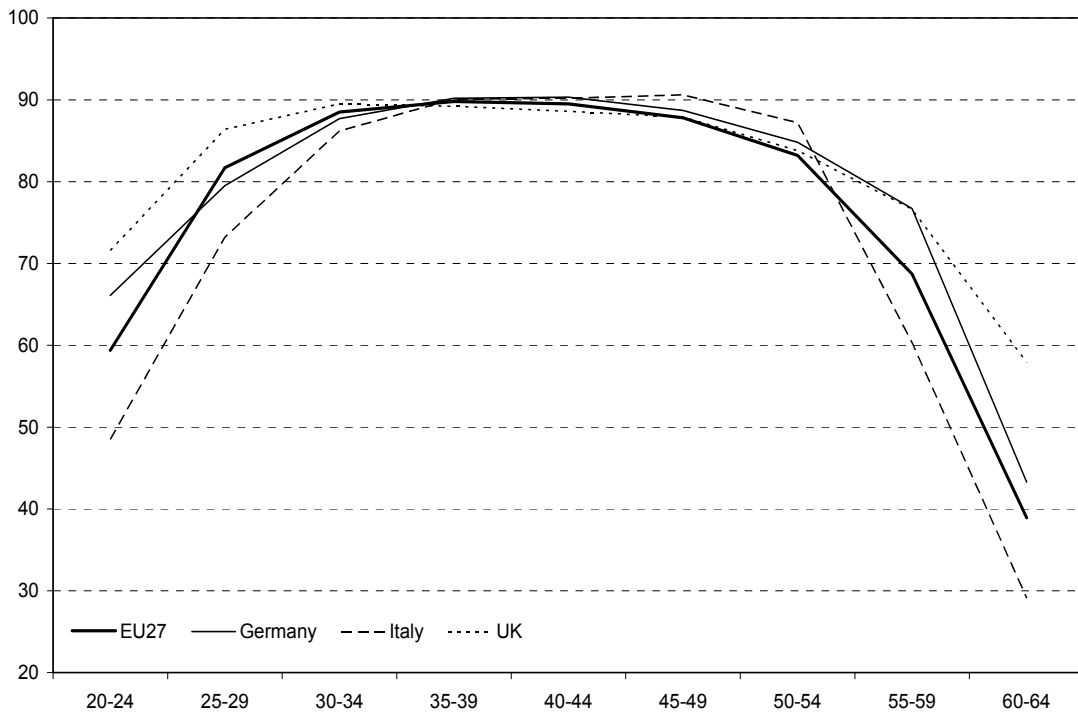
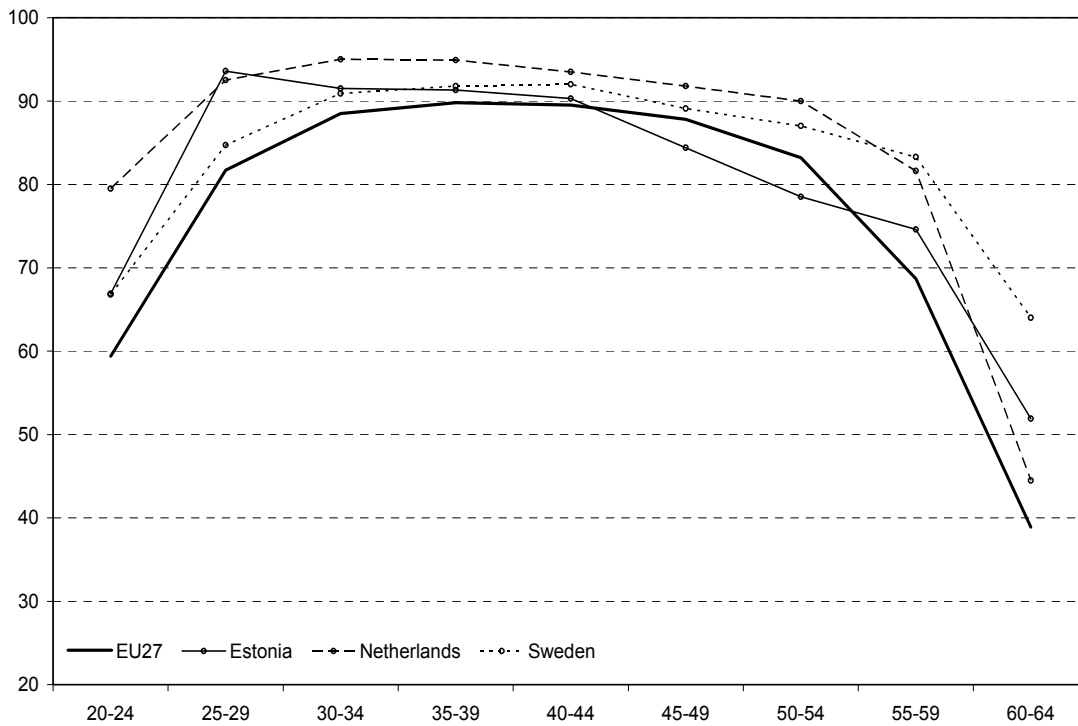


Figure 1b) Male employment rates by age in 2008, percent



Source: European Labour Force Surveys, Eurostat

Figure 2a) Female employment rates by age in 2008, percent

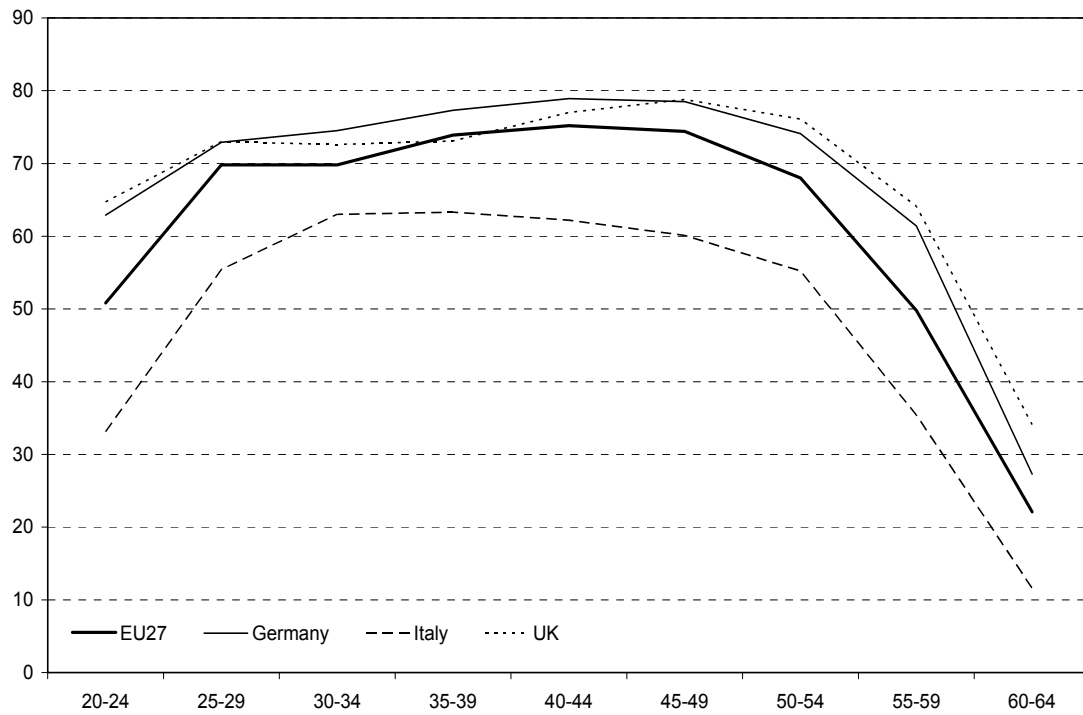
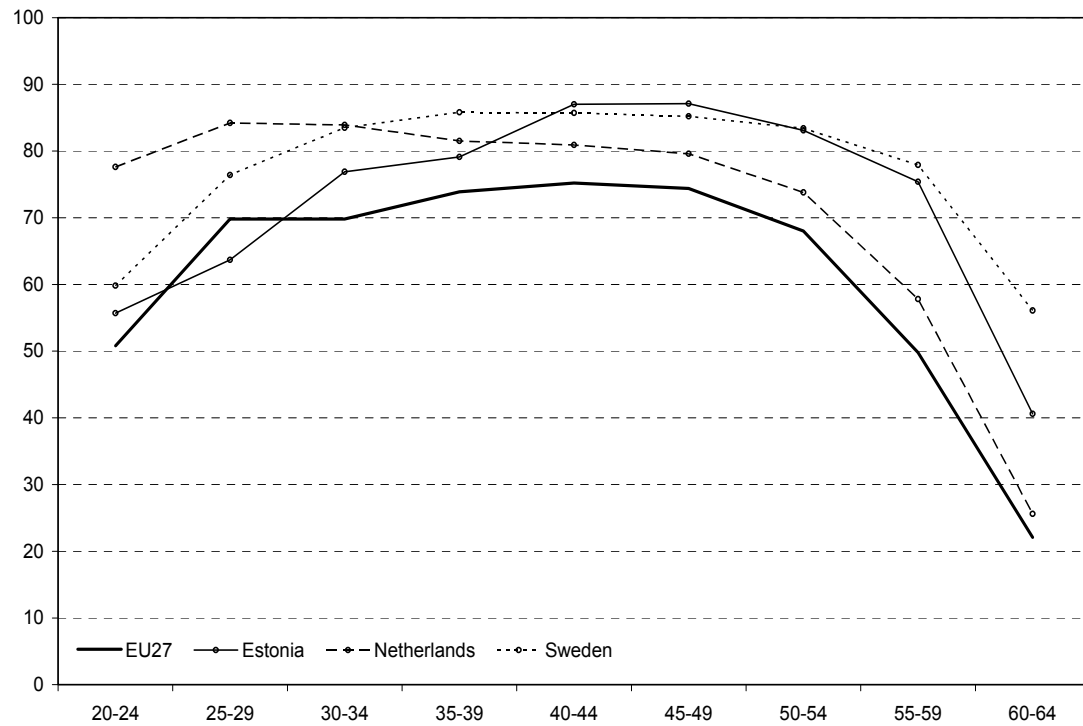


Figure 2b) Female employment rates by age in 2008, percent



Source: European Labour Force Surveys, Eurostat

On a similar note it is interesting to compare Germany and Italy. The share of tertiary educated among individuals aged 25–29 is very similar across the two countries (20–21 percent in 2008). Yet youth employment rates are much lower in Italy than in Germany, suggesting that it takes longer time to acquire a given set of qualifications in Italy. To some extent the variation in youth employment rates also reflect differences in youth unemployment. But the differences in youth unemployment are arguably not driven by differences in the design of income support and, hence, we leave this issue aside.

Figure 2a) and Figure 2b) present the employment rates by age for women. Here the salient fact is the differences in mean employment rates across countries. Estonia and Sweden are the countries with the highest female employment rate, while in Italy the female employment rate is well below the EU average.

Policy differences may account to some extent for the variation across countries. Sweden has a system with extensive child-care provisions and a parental leave benefit which is tied to previous earnings of the individual. These systems may stimulate employment in general and provide an incentive to enter the labour market prior to giving birth.

Comparing retirement ages by gender, it is clear that women on average retire earlier than men. This pattern is strongest in countries (such as Estonia, Italy, and the UK) where the retirement ages are lower for women than for men. Again, this indicates that retirement rules are important for understanding the variation in employment among the elderly across countries.

2.3 Disability and early retirement

Some European countries struggle with high disability rates. Table 2 illustrates this fact by presenting the share of the working-age population stating that disability/illness is the main reason for inactivity.⁹ Along with these disability rates, the table also reports the share of the working-age population which is retired.

⁹ We prefer to focus on what people say rather than what benefit they are covered by. The main reason for doing so is that the disability benefit (or equivalent) systems vary a lot across countries. Nevertheless, the construction of the systems does have an impact on what people reply. For instance, it is hard to reconcile the variation in stated disability or illness with any objective health variation across countries.

Four countries – Estonia, the Netherlands, Sweden, and the United Kingdom – have disability rates that are above the EU average. To some extent this reflects the fact that the retirement ages are relatively high in these countries. But it is also clear that some design features are of substantial importance. Disability insurance has been generous and screening of disability claims has probably been lax in several of the countries with high disability rates. To some degree the disability rates also reflect how countries have responded to previous crises where some job losers have been re-categorised onto early retirement or disability schemes.

Table 2 The share of the working-age population who state that disability/illness or retirement is the main reason for inactivity in 2008, percent

| Country | Disability or Illness | | Retirement | |
|----------------|-----------------------|-------|------------|-------|
| | Men | Women | Men | Women |
| Estonia | 6.9 | 5.1 | 7.3 | 7.7 |
| Germany | 2.8 | 2.5 | 2.6 | 5.0 |
| Italy | 2.9 | 2.9 | 8.0 | 4.9 |
| Netherlands | 5.1 | 7.7 | 3.8 | 3.0 |
| Sweden | 7.1 | 10.1 | 2.5 | 2.2 |
| United Kingdom | 7.7 | 6.1 | 6.7 | 3.1 |
| EU 27 | 4.9 | 4.7 | 7.3 | 6.9 |

Source: European Labour Force Surveys, Eurostat.

The evidence suggests that disability and early retirement are terminal states, i.e., once individuals have come onto these schemes it is very unlikely that they will return to the labour market.

3 The evidence from individual countries

Some of the countries covered by the expert reports have embarked on extensive reform agendas. The purpose of this section is to summarize what we think other countries may learn from these experiences.

The discussion in this section is cast against the background of the descriptive facts presented in the previous section. Thus we begin (in section 3.1) by discussing issues related to the old-age pension system since it is likely that the design of the pension system affects the employment rates of the elderly. The variation in disability rates across countries points to policy instruments such as screening of eligibility and

monitoring of behaviour in maintaining labour supply incentives. Section 3.2 is therefore devoted to such policy instruments.

Among other things, active labour market policies can function as a device for screening the willingness to work among the unemployed. Section 3.3 thus discusses the evidence on active labour market policies in general and their efficacy in maintaining the (effective) supply of labour.

The incentives for labour force participation depend on the combined effect of the income support and tax systems for those at the margin of labour force participation (the combined effect of the tax and benefit system on work incentives is often summarized by the marginal effective tax rate on work). Section 3.4 and 3.5 both relate to the interaction between the tax and benefit system. In section 3.4, we discuss the evidence on whether in-work tax credits stimulate employment by counteracting high effective marginal tax rates. Section 3.5 discusses the case for a comprehensive view on the labour supply incentives generated by the tax and benefit system as a whole.

Section 3.6, finally, returns to one of the salient facts which previous section documented. In this section we thus ask to what extent the variation in female employment across countries is due to policy differences.

3.1 Retirement rules have a bite and retirement incentives matter

Some countries have implemented pension reforms relatively recently. One obvious policy lever is the legal retirement age. A case in point is Estonia where the retirement age is being raised gradually from 55 for women and 60 for men in 1992 to a target age of 63 for both genders. Men reached the target in 2001; women will reach the target age by 2016. The increases in the legal retirement age are reflected in the employment rates of the elderly (see Võrk 2009). Take women for instance. In 2002, the legal retirement age for women was 58.5 and in 2008 it was 60.5. Between these two time points the employment rate among women aged 55–59 increased by 12.5 percentage points more than among women aged 45–49.

A side-effect of the increase in the retirement age in Estonia is that the share of the relevant age groups (i.e. age groups affected by the changes in the retirement age) on disability has increased. This indicates that some individuals found other ways to exit

the labour market when the old-age option was not open anymore. Nevertheless, on net, the employment rate increased in the affected age groups.

Some other countries have recently raised the retirement age or are in the process of raising the legal retirement age. For instance, the retirement age was recently raised from 65 to 66 in Germany. In the UK, the retirement age for women will be increased to that of men (65 years-of-age) in 2010. These changes should contribute to raising the employment rates of the elderly.

Another policy parameter, which is similar in nature, is the eligibility age for claiming pensions.¹⁰ With a low eligibility age, and a less than actuarial adjustment to the pensions, there are strong incentives to retire earlier than normal. Raising the eligibility age thus has the effect of increasing the employment rate of the old. Some evidence on this issue comes from the adjustments following the pension reforms in Italy during the 1990s (see Brugiavini 2009). The combined effect of raising the minimum age as well as the seniority requirement appears to be a reversal of the declining trend in the employment rate of the old.

Another crucial design feature is the strength of the link between contributions and future claims on the social security system. In the literature this is often referred to as the degree of actuarial fairness of the system. Sweden and Italy have recently reformed the pensions systems to increase the degree of actuarial fairness of the system. The pension in the new Swedish system, for instance, is based on life-time income while the old-system replaced a fraction of average individual earnings during the 15 best years. Working an additional year may thus have a bigger effect on future pensions in the new system than in the old system.

We have not seen any formal evaluation of the Swedish pension reform. Nevertheless, the average retirement age among men started to increase shortly after the reform was announced, after having decreased precipitously for (at least) 25 years. In 1995 (one year after the reform was announced) the average retirement age among men stood at 62 years-of-age. By 2006 it had increased to 63.4 years-of-age (see Fiscal Policy Council 2009). There are other aspects of the reform – on top of the increase in

the degree of actuarial fairness of the system – which is likely to contribute to this development: One important factor is that employment protection rules applies up to age 67 rather than age 65, which was the previous practice.

In sum both institutions per se and the incentives generated by these institutions matter. Countries that have low (explicit or implicit) tax rates on continued work tend to have higher employment rates of the elderly.¹¹

3.2 Checks and balances increase employment

The weight of the evidence suggests that introducing checks and balances into the income support systems has beneficial employment effects. By “checks and balances” we mean income support systems featuring screening of disability claims, monitoring of behaviour, or a finite duration of benefit receipt. If there are checks and balances built into the system, countries can provide the same amount of insurance at lower cost, since labour supply incentives are maintained.

There are several examples to illustrate the above point. The most famous example probably pertains to the Dutch disability insurance. The number of disability recipients in the Netherlands is still high but it used to be much higher. Several factors contributed to the high disability rate. One factor was the generosity of the system; another was the lack of stringent screening of disability claimants; further, the system was used for other purposes than intended.

There are several reforms that helped reduce the stock of disability recipients in the Netherlands. One of these reforms is the introduction of the gatekeeper protocol. The gatekeeper protocol included stricter screening of disability applications. The evidence shows that stricter screening reduces the number of disability insurance applications (see Gautier and van der Klaauw 2009).

The Netherlands also strengthened checks and balances by introducing a system of monitoring and sanctions in unemployment insurance in 1987. The system was further toughened in 1996. The evidence from the Netherlands suggests that individuals who

¹⁰ There are other versions of the minimum eligibility age. For example, in Italy, prior to the 1995 pension reform, individuals could retire after 20 years of contribution.

¹¹ Obviously, the earnings disregard in the pension system is another relevant policy parameter.

are given a sanction return to work faster than they would have otherwise; see Gautier and van der Klaauw (2009).

The above evidence refers to the direct effect of a sanction, i.e., the effect on those who are given a sanction. But arguably the indirect effect of a monitoring and sanctions system is at least as important. The indirect effect refers to the fact that individuals search harder, and accept jobs to a greater extent, since there is a threat of being sanctioned. An ideal monitoring and sanctions system imposes a credible threat but nobody is ever sanctioned. Providing evidence on this indirect effect is hard; evidence from Switzerland, however, indicates that the indirect effect can be quantitatively very important since it affects the behaviour of all unemployed workers (Lalive et al. 2005).

It is sometimes hard to verify the unemployment insurance claimants' willingness to work. One way of screening the unemployed is by assigning them to activation programs. These activation programs can take different forms, but job search programs are a common variety. By now there is experimental evidence from several countries that these programs have a positive effect on the outflow from unemployment to a job (e.g., Dolton and O'Neill 1996). Interestingly, most of the effect occurs prior to the start of the activation program. This suggests the activation program functions as a screening device since individuals increase their efforts to find a job in order to avoid the program.

3.3 Properly targeted (and designed) active labour market policies help

The evidence cited above suggests that active labour market policies can screen the willingness to work among the unemployed.

But more generally, active labour market programs are investments in time and money for the potential increase in future employment prospects. Almost by construction, search activity among those participating in the program is lower than among otherwise similar unemployed individuals who do not participate in the program. This reasoning suggests that program participation commands an alternative cost: the reduction in search activity while partaking in the program. This reasoning implies that active labour market programs should not be targeted at groups where the probability of finding employment is relatively high, youths in general is a case in point.

However, programs targeted at the disadvantaged (including disadvantaged youths) are presumably helpful. One example of such a program is an employment subsidy

program in Sweden which was targeted at individuals who had been unemployed for at least a year. The rate of subsidization was relatively high – 50 percent of labour cost – and the subsidy lasted for six months. The evidence shows that there was a locking-in effect during the first six months where the outflow to regular (i.e. non-subsidized) jobs was lower than in the comparison group. But when the subsidy had expired, the outflow to jobs increased more than necessary to compensate for the initial locking-in effect. On net, the employment subsidy shortened unemployment duration by 8 percent.

The experience from this employment subsidy program stands in contrast to the evaluation evidence of active labour market programs in Sweden during the 1990s (Calmfors et al. 2004). Most evaluations of programs during the 1990s come to the conclusion that the particular program did not improve the employment prospects of the participating individuals. Following severe economic crises, the 1990s in Sweden was a period when the scale of labour market policies became unprecedented. This implied that they were broadly targeted. Moreover, at that time, the active labour market programs could be used to extend the entitlement to unemployment insurance. These two factors contributed to poor program performance during the 1990s. There have been changes on both accounts since: entitlements to unemployment insurance cannot be renewed via program participation and performance targets have been introduced to ensure better targeting.

In sum, the evidence suggests that appropriately targeted active labour market policies can help increasing employment by maintaining the effective labour supply of the disadvantaged. But poorly targeted policies run the risk of yielding the opposite result.

3.4 Incentives matter primarily at the extensive margin

Labour supply incentives are determined by the combination of taxes and benefits. When discussing these incentives, it is useful to make a distinction between the extensive and the intensive margins. The extensive margin refers to whether individuals are employed or not; the intensive margin refers to the number of hours worked given that the individual is employed.

By now, there is evidence from several countries that individuals at the margin of being employed are most responsive to changes in, for instance, tax incentives (e.g.,

Heckman 1993). But hours worked, conditional on being employed, do not respond much to reductions in marginal income tax rates.

If the objective is to increase labour supply, means tested income support systems are problematic since they usually yield marginal effective tax rates which are very high – rates in the order of a 100 percent are not uncommon. Also, old-age pensions systems having a high implicit tax on continued work reduce employment of the elderly. Finally, income tax systems which are based on family income may be problematic, in particular if the tax system is progressive.

To increase the incentives for low-skill individuals to work, several countries have introduced in-work tax credits. Such tax credits are particularly common in countries which rely on means testing. Thus, the UK has a relatively long history of tax credits. But recently, some other countries have also followed suit. For instance, the Netherlands (in 2001) and Sweden (in 2007) have also introduced in-work tax credits.

Given that the UK has the longest history of tax credits in Europe, it is unsurprising that most of what we know about their effects come from the UK experience. The evaluations of the Working Families Tax Credit (WFTC) show that employment of lone mothers increased in response to the reform. However, the employment rates of low-income couples did not change much. The reason for the latter result is that, while the credit improved labour supply incentives for the prime earner in a low-income household, the incentives for the second earner actually deteriorated; see Brewer (2009). This points to a general lesson which we will return to in the next section – there is need for a comprehensive view on the incentives generated by the income-support and tax systems in order to determine whether policies will be effective.

Nevertheless, the UK evidence suggests to us that initiatives like employment tax credits will increase employment, if they do provide additional incentives to participate on the labour market. Exactly how much the EU countries should expect from such reforms is difficult to tell, since the size of the effects depends on the design of the income support systems and income tax systems.

3.5 The need for a comprehensive view on incentives

The very careful evaluations of the reform of tax credits in the UK provide an illustration of what is a general point. At first glance, one might think that the WFTC

provides very strong incentives to work (16 hours per week). But such a conclusion may be premature since the receipt of the tax credit interacts with other taxes and benefits. In fact, careful analysis shows that the credit did not yield much improvement in incentives for individuals who are eligible for housing benefits; see Brewer (2009).

We believe that this UK illustration provides an example which applies more generally. For instance, suppose a country cuts the duration of unemployment insurance (UI) in an attempt to reduce unemployment. If early retirement for labour market reasons is still an option, we should expect that some of the intended effects of the cut in UI duration will be undone. Or to provide yet another example, suppose a country reduces the maximum level of the UI benefit. If individuals who are subjected to the cut can get a higher benefit by, e.g., reporting sick we should expect that some of the individuals actually resort to that option (see Hall and Hartman 2009).

Thus, a general lesson from the experience of several countries is that it is vital to judge what the entirety of the income support and tax systems does to the incentives to participate on the labour market.

3.6 Understanding the variation in female employment rates

As shown in section 2, there is considerable variation in female employment rates across countries. It is interesting to ask what institutional features account for these differences. Some evidence along these lines is provided in the cross-country study by Jaumotte (2003). She concludes that female employment rates are higher in countries where the individual (rather than the family) is the fundamental income tax entity and where there is availability of highly subsidized child-care. Further, parental leave benefits tied to the previous earnings of the mother also stimulate female labour force participation (provided that the duration of the benefit is not too long).^{12,13}

These conclusions are to some extent backed up by the evidence from the individual countries included in this summary. Regarding taxes there is not so much evidence available. The evidence we have seen comes from two reforms in 1966 and 1971 which

¹² Jaumotte (2003) concludes that the marginal effect of additional parental leave on female participation appears to become negative after 20 weeks. That too long leave periods is harmful to employment makes sense; however, the exact time point (20 weeks) should probably be taken with a due grain of salt.

moved income taxation in Sweden from joint to individual taxation. An evaluation of the 1971 reform shows that it spurred female employment rates by reducing the participation tax rate of women (Selin, 2008).

There are some design issues involved concerning the connection between parental leave policies and female labour supply. These design issues involve inter alia: whether the job is protected while on parental leave; whether the benefit is means tested or tied to individual earnings; and the length of the benefit claim. Whereas job protection as such should increase the probability of return to the labour market, increases in the length of the job protected leave delays the return to the labour market; similarly, increases in the length of parental benefit duration, delays the return to the labour market (see Lalive et al., 2009)

Germany very recently introduced a substantial reform of parental leave policy. The reform implied a move from a means tested family benefit, which was paid for up to two years, to a parental leave benefit which replaced two-thirds of the previous earnings of the mother for a year. It is still too early to evaluate this reform. Still, when asked about their intentions, a significantly higher fraction of mothers who gave birth within the new system responded that they would return to the labour market within a year (see Bergemann and Riphahn 2009); some descriptive evidence reported in Caliendo (2009) is consistent with this conjecture.

Intuitively, the availability of affordable (and high-quality) child-care should stimulate female labour supply. This intuition does not necessarily carry over to highly subsidized *publicly* provided child-care, since publicly provided care may simply replace other informal arrangements leaving labour supply unaffected.

We are not aware of any evaluation relating to the labour supply effects of *introducing* child-care subsidies in the countries included in this summary. Sweden has a long history of publicly provided childcare. Yet there is no evaluation of the introduction publicly provided child-care using a credible empirical strategy.¹⁴ The

¹³ To the list provided by Jaumotte (2003), one might add that in countries where elderly care is provided by the public or the market, (paid) female employment is higher than elsewhere.

¹⁴ A recent paper Lundin et al. (2008) finds that a reduction the price of child-care had no effect on female labour supply. In interpreting this result one should remember that the maternal employment rate was 70 percent and the

evidence from other countries is mixed. For instance, Baker et al. (2008) find that a reform in Quebec, which introduced generous child-care subsidies, increased maternal employment significantly more in Quebec than in the rest of Canada. On the other hand, Havnes and Mogstad (2009) find no effects of a substantial expansion of publicly provided child-care in Norway during the 1970s. The authors interpreted this as the result of publicly provided care crowding out other child-care arrangements.

4 Concluding remarks

We have emphasized five broad conclusions. First, countries which have relatively high formal retirement ages and low (implicit or explicit) taxes on continued work have higher employment rates among the elderly. Designing the old-age pension system such that it provides incentives for continued employment has a dual return: it reduces expenditures related to retirement and generates tax revenues.

Second, the evidence suggests that introducing checks and balances increase employment since labour supply incentives are maintained. Of course, the income support systems should provide adequate insurance against unexpected events such as the risk of losing the job or the risk of ill-health. But if generosity increases without intensified screening of disability claims, or intensified monitoring of behaviour, the evidence suggests that employment is reduced. The same amount of insurance can be achieved at lower cost if countries employ checks and balances.

Third, active labour market policies help to the extent that they are properly designed and properly targeted. Design and targeting are delicate issues. But the evidence suggests that broad measures given to individuals early on in the unemployment spell are not successful. It is also crucial that participating individuals still have the incentive to search for a regular job. The survey evidence reported in Kluve (2006) suggests that two broad categories of labour market programs help improve individual employment prospects: programs providing job search assistance and wage subsidy programs. Wage

child-care utilization rate was 80 percent prior to the reform. The scope for additional increases in maternal employment may have been limited.

subsidy programs are typically targeted at the long-term unemployed – a fact that supports the general view that programs should be targeted at the disadvantaged.

Fourth, incentives matter primarily at the extensive employment margin. The marginal effects facing individuals at the margin of labour force participation – e.g., second earners in the household, low-educated individuals, and potential retirees – are thus key. In-work tax credits have been employed in some countries to counteract excessive marginal effects generated by means testing and low earnings disregards. The evidence suggests that such credits lead to increases in employment, provided that the credits actually improved the incentives.

Fifth, female employment rates tend to be higher in countries where: (a) child-care is universally available and subsidized, (b) taxation is based on individual income, and (c) parental benefits are tied to previous earnings. Intuitively, the availability of (affordable) child-care implies that the family does not restrict the labour supply of the second earner (usually the mother). Moreover, in countries, where taxation is individually based, the second earner typically faces a lower marginal tax rate than if there is joint taxation. Parental benefits tied to previous contributions provide a greater incentive to enter the labour market prior to giving birth than means tested systems.

We have been silent on the reasons for the substantial variation in youth employment rates. Most of this variation presumably comes from differences in the propensity to pursue higher education; and the pursuit of higher education as such is of course not a problem. But youth unemployment rates also vary a lot. The reason for not discussing this at greater length is that we do not think that the design of the income support system is a main issue here. Differences in employment protection, the design of educational institutions, and minimum wages are likely to be much more important for youth unemployment.

Another omission, perhaps, is that we have devoted less attention to the restrictions preventing individuals from participating on the labour market. Nevertheless, the evidence on the efficacy of active labour market policy speaks to the restrictions imposed by the lack of relevant skills. As for the restrictions imposed by ill-health, it is more difficult to determine what works and what does not. The evidence from the pathways-to-work program piloted in the UK shows that the combined effect of

providing better incentives, rehabilitation, and retraining increased the flow out of disability (Brewer 2009). But it is not clear what component of the program that mainly contributed to the overall effect. Moreover, measures providing incentives for preventing ill-health is perhaps a more powerful policy tool. The experience from the Netherlands is interesting in this regard. Because of experience rating, employers in the Netherlands have a financial incentive to prevent people being classified as having limited work-capacity. Such incentive measures may well be more effective than rehabilitation since once individuals have been classified as having limited work-capacity it is very unlikely that they will return to work; Gauthier and van der Klaauw (2009).

Throughout we have focused on the long run, rather than on policy options in the current crises. In the long run, labour supply is the main determinant of employment; there is no evidence supporting the view that the number of jobs is given. This does not mean that demand-side measures are irrelevant. They are relevant to the extent that they prevent individuals from being discouraged and leaving the labour force in a downturn; here, active labour market policies can make a difference.

An unattractive policy option in the current crisis would be to provide incentives for early retirement, or to open up for other routes to leave the labour market. While such measures might provide some relief for, e.g., youths in the current crises, the evidence suggests that they will be irrelevant for the groups that they were meant to help in the longer-run (e.g., Gruber et al. 2009). There will thus be a permanent reduction in labour supply and an additional financial burden will be placed on the welfare states. Providing incentives for early retirement is particularly costly in the light of the current demographic trends.

References

- Baker M., J. Gruber, and K. Milligan (2008), Universal childcare, maternal labor supply and family well-being, *Journal of Political Economy*, 116, 709–745.
- Bergemann, A. and R. Riphahn (2009), Female labor supply and parental leave benefits – the causal effect of paying higher transfers for a shorter period of time, Working Paper 2009:5, IFAU.
- Brewer, M. (2009), How do income-support systems in the UK affect labour force participation?, Working Paper 2009:27, IFAU.
- Brugiavini, A. (2009), Welfare reforms and labour supply in Italy, Working Paper 2009:29, IFAU.
- Caliendo, M. (2009), Income Support Systems, Labor Market Policies and Labor Supply: The German Experience Working Paper 2009:26, IFAU.
- Calmfors, L., A. Forslund, and M. Hemström (2004), The effects of active labor market policies in Sweden: What is the evidence?, in J. Agell, M. Keen, and J. Weichenrieder (eds.), *Labor Market Institutions and Public Regulation*, MIT Press
- Dolton, P. and D. O’Neill (1996), Unemployment and the restart effect: some experimental evidence, *Economic Journal*, 106, 387–400.
- Forslund, A. (2009), Labour supply incentives, income support systems and taxes in Sweden, Working Paper 2009:30, IFAU.
- Gautier, P. and B. van der Klaauw (2009), Institutions and labor market outcomes in the Netherlands, Working Paper 2009:28, IFAU.
- Gruber, J., K. Milligan, and D. Wise (2009), Social security programs and retirement around the world: The relationship to youth employment, introduction and summary, NBER Working Paper no. 14647.
- Hall, C. and L. Hartman (2009), Moral hazard among the sick and unemployed: evidence from a Swedish social insurance reform, forthcoming *Empirical Economics*.
- Havnes, T. and M. Mogstad (2009), Money for nothing? Universal child care and maternal employment, Discussion Paper No. 4504, IZA.
- Heckman, J. (1993). What has been learned about labor supply in the past twenty years?, *American Economic Review Papers and Proceedings*, 83, 116–121
- Jaumotte, F. (2003), Female labour force participation: past trends and main determinants in OECD countries, Working Paper 376, OECD Economics Department.
- Kluge, J. (2006), The effectiveness of European active labor market policy, IZA Discussion Paper 2018.
- Lalive, R., A. Schlosser, and J. Zweimüller (2009), How do employment protection and parental leave benefits affect mothers’ post-birth careers?, mimeo, University of Lausanne.

- Lalive, R., J. van Ours, and J. Zweimüller (2005), The effect of benefit sanctions on the duration of unemployment, *Journal of the European Economic Association*, 3(6), 1-32.
- Lundin, D., E. Mörk and B. Öckert (2008), How far can reduced child care prices push female labour supply?, *Labour Economics*, 15, 647–659
- OECD (2009), *Education at a Glance*, Organization for Economic Cooperation and Development, Paris.
- Palme, J., K. Nelson, O. Sjöberg, and R. Minas (2009), European social models, protection and inclusion, Research report 2009/1, Institute for Futures Studies.
- Selin, H. (2008) The rise in female employment and the role of tax incentives. An empirical analysis of the Swedish individual tax reform of 1971, in H. Selin (2008), *Four Empirical Essays on Responses to Income Taxation*, Economic Studies 110, Department of Economics, Uppsala University.
- The Swedish Fiscal Policy Council (2009), *Swedish Fiscal Policy*, Report of the Swedish Fiscal Policy Council 2009.
- Vörk, A. (2009), Labour Supply Incentives and Income Support Systems in Estonia, Working Paper 2009:31.

Publication series published by the Institute for Labour Market Policy Evaluation (IFAU) – latest issues

Rapporter/Reports

- 2009:1** Hartman Laura, Per Johansson, Staffan Khan and Erica Lindahl, ”Uppföljning och utvärdering av Sjukvårdsmiljarden”
- 2009:2** Chirico Gabriella and Martin Nilsson ”Samverkan för att minska sjukskrivningar – en studie av åtgärder inom Sjukvårdsmiljarden”
- 2009:3** Rantakeisu Ulla ”Klass, kön och platsanvisning. Om ungdomars och arbetsförmedlars möte på arbetsförmedlingen”
- 2009:4** Dahlberg Matz, Karin Edmark, Jörgen Hansen and Eva Mörk ”Fattigdom i folkhemmet – från socialbidrag till självförsörjning”
- 2009:5** Pettersson-Lidbom Per and Peter Skogman Thoursie ”Kan täta födelseintervaller mellan syskon försämra deras chanser till utbildning?”
- 2009:6** Grönqvist Hans ”Effekter av att subventionera p-piller för tonåringar på barnafödande, utbildning och arbetsmarknad”
- 2009:7** Hall Caroline ”Förlängningen av yrkesutbildningarna på gymnasiet: effekter på utbildningsavhopp, utbildningsnivå och inkomster”
- 2009:8** Gartell Marie ”Har arbetslöshet i samband med examen från högskolan långsiktiga effekter?”
- 2009:9** Kennerberg Louise ”Hur försörjer sig nyanlända invandrare som inte deltar i sfi?”
- 2009:10** Lindvall Lars ”Bostadsområde, ekonomiska incitament och gymnasieval”
- 2009:11** Vikström Johan ”Hur påverkade arbetsgivaransvaret i sjukförsäkringen lönebildningen?”
- 2009:12** Liu Qian and Oskar Nordström Skans ”Föräldraledighetens effekter på barnens skolresultat
- 2009:13** Engström Per, Hans Goine, Per Johansson and Edward Palmer ”Påverkas sjukskrivning och sjukfrånvaro av information om förstärkt granskning av läkarnas sjukskrivning?”
- 2009:14** Goine Hans, Elsy Söderberg, Per Engström and Edward Palmer ”Effekter av information om förstärkt granskning av medicinska underlag”
- 2009:15** Hägglund Pathric ”Effekter av intensifierade förmedlingsinsatser vid Arbetsförmedlingen – erfarenheter från randomiserade experiment”
- 2009:16** van den Berg Gerard J. and Johan Vikström ”Hur påverkas de arbetslösa av sanktioner i arbetslöshetsförsäkringen?”
- 2009:17** Gartell Marie ”Val av högskola och inkomster – hur stabil är rangordningen? En metodstudie”
- 2009:18** Edin Per-Anders, Peter Fredriksson, Hans Grönqvist and Olof Åslund ”Bostadssegregationens effekter på flyktingbarns skolresultat”

- 2009:19** Blomskog Stig and Johan Bring "Hur bör en arbetsvärderingsmodell specificeras? – en analys baserad på mångdimensionell beslutsteori"
- 2009:20** Böhlmark Anders, Oskar Nordström Skans and Olof Åslund "Invandringsålderns betydelse för social och ekonomisk integration"
- 2009:21** Sibbmark Kristina "Arbetsmarknadspolitisk översikt 2008"
- 2009:22** Eliason Marcus "Inkomster efter en jobbförlust: betydelsen av familjen och trygghets-systemet"
- 2009:23** Bennmarker Helge, Erik Grönqvist and Björn Öckert "Betalt efter resultat: utvärdering av försöksverksamhet med privata arbetsförmedlingar"
- 2009:24** Hensvik Lena, Oskar Nordström Skans and Olof Åslund "Sådan chef, sådan anställd? – Rekryteringsmönster hos invandrade och infödda chefer"

Working papers

- 2009:1** Crépon Bruno, Marc Ferracci, Grégory Jolivet and Gerard J. van den Berg "Active labor market policy effects in a dynamic setting"
- 2009:2** Hesselius Patrik, Per Johansson and Peter Nilsson "Sick of your colleagues' absence?"
- 2009:3** Engström Per, Patrik Hesselius and Bertil Holmlund "Vacancy referrals, job search and the duration of unemployment: a randomized experiment"
- 2009:4** Horny Guillaume, Rute Mendes and Gerard J. van den Berg "Job durations with worker and firm specific effects: MCMC estimation with longitudinal employer-employee data"
- 2009:5** Bergemann Annette and Regina T. Riphahn "Female labor supply and parental leave benefits – the causal effect of paying higher transfers for a shorter period of time"
- 2009:6** Pekkarinen Tuomas, Roope Uusitalo and Sari Kerr "School tracking and development of cognitive skills"
- 2009:7** Pettersson-Lidbom Per and Peter Skogman Thoursie "Does child spacing affect children's outcomes? Evidence from a Swedish reform"
- 2009:8** Grönqvist Hans "Putting teenagers on the pill: the consequences of subsidized contraception"
- 2009:9** Hall Caroline "Does making upper secondary school more comprehensive affect dropout rates, educational attainment and earnings? Evidence from a Swedish pilot scheme"
- 2009:10** Gartell Marie "Unemployment and subsequent earnings for Swedish college graduates: a study of scarring effects"
- 2009:11** Lindvall Lars "Neighbourhoods, economic incentives and post compulsory education choices"
- 2009:12** de Luna Xavier and Mathias Lundin "Sensitivity analysis of the unconfoundedness assumption in observational studies"
- 2009:13** Vikström Johan "The effect of employer incentives in social insurance on individual wages"

- 2009:14** Liu Qian and Oskar Nordström Skans "The duration of paid parental leave and children's scholastic performance"
- 2009:15** Vikström Johan "Cluster sample inference using sensitivity analysis: the case with few groups"
- 2009:16** Hägglund Pathric "Experimental evidence from intensified placement efforts among unemployed in Sweden"
- 2009:17** Andersson Christian and Per Johansson "Social stratification and out-of-school learning"
- 2009:18** van den Berg Gerard J. and Johan Vikström "Monitoring job offer decisions, punishments, exit to work, and job quality"
- 2009:19** Gartell Marie "Stability of college rankings – a study of relative earnings estimates applying different methods and models on Swedish data"
- 2009:20** Åslund Olof, Per-Anders Edin, Peter Fredriksson and Hans Grönqvist "Peers, neighborhoods and immigrant student achievement – evidence from a placement policy"
- 2009:21** Åslund Olof, Anders Böhlmark and Oskar Nordström Skans "Age at migration and social integration"
- 2009:22** Arni Patrick, Rafael Lalive and Jan C. van Ours "How effective are unemployment benefit sanctions? Looking beyond unemployment exit"
- 2009:23** Bennmarker Helge, Erik Grönqvist and Björn Öckert "Effects of outsourcing employment services: evidence from a randomized experiment"
- 2009:24** Åslund Olof, Lena Hensvik and Oskar Nordström Skans "Seeking similarity: how immigrants and natives manage at the labor market"
- 2009:25** Karlsson Maria, Eva Cantoni and Xavier de Luna "Local polynomial regression with truncated or censored response"
- 2009:26** Caliendo Marco "Income support systems, labor market policies and labor supply: the German experience"
- 2009:27** Brewer Mike "How do income-support systems in the UK affect labour force participation?"
- 2009:28** Gautier Pieter A. and Bas van der Klaauw "Institutions and labor market outcomes in the Netherlands"
- 2009:29** Brugiavini Agar "Welfare reforms and labour supply in Italy"
- 2009:30** Forslund Anders "Labour supply incentives, income support systems and taxes in Sweden"
- 2009:31** Võrk Andres "Labour supply incentives and income support systems in Estonia"
- 2009:32** Forslund Anders and Peter Fredriksson "Income support systems, labour supply incentives and employment – some cross-country evidence"

Dissertation series

- 2009:1** Lindahl Erica "Empirical studies of public policies within the primary school and the sickness insurance"
- 2009:2** Grönqvist Hans "Essays in labor and demographic economics"