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MAKING THE LUXEMBOURG LABOUR MARKET WORK BETTER

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By Jeremy Lawson

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ABSTRACT/RÉSUMÉ

Making the Luxembourg labour market work better

Rapid economic growth over the past two decades has substantially increased employment in Luxembourg, which has largely been met by in–flows of cross–border workers and, to a lesser extent, immigration. Unemployment has remained low compared to other European countries. These significant social changes have been absorbed without substantially widening income disparities, facilitated by the generous welfare system made affordable by the strong economy. However, this favourable overall picture masks weaknesses in the design of labour market institutions and social transfers that reduce incentives to work for resident workers. Despite the strong economy, this has resulted in lower employment rates for certain groups of residents, notably those who are second–earners, younger or older, or from poorer socioeconomic backgrounds. Furthermore, the incentives provided by existing labour market institutions could make adjustment to changed economic prospects more difficult. The functioning and adaptability of the labour market could be improved without undermining social cohesion through a range of related measures. This could include aligning minimum wage adjustments more closely with economic conditions, which could be achieved through a Minimum Wage Council, and softening employment protection legislation. To raise incentives of residents, social benefits should be decoupled from average wages, and social transfers could be reoriented towards in–work social benefits.

This Working Paper relates to the *2010 Economic Survey of Luxembourg*.

(www.oecd.org/eco/surveys/Luxembourg)

JEL Classification: J0; J2; J3; J5; J6.
Key words: Luxembourg; labour market institutions; wage setting; labour supply.

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Améliorer le fonctionnement du marché du travail de Luxembourg

La croissance rapide économique que le Luxembourg a connue au cours des deux décennies écoulées s'est traduite par une expansion considérable de l'emploi, attirant principalement des travailleurs frontaliers et, dans une moindre mesure, de la main-d'œuvre immigrée. Le chômage est resté faible en comparaison des autres pays européens. Ces importantes évolutions sociales ont été absorbées sans accentuation notable des disparités de revenu, grâce à un système généreux de protection sociale que le Luxembourg a pu s'offrir du fait de la vigueur de son économie. Cette belle image d'ensemble masque toutefois des faiblesses dans la conception des institutions du marché du travail et des transferts sociaux qui émoussent les incitations à travailler pour les résidents. Malgré le dynamisme de l'économie, il en est résulté des taux d'emploi moins élevés pour certains groupes de résidents, notamment ceux qui font fonction de second apporteur de revenu, les jeunes ou les seniors, ou ceux qui sont issus de milieux socioéconomiques moins favorisés. Par ailleurs, les incitations offertes par les institutions du marché du travail existantes pourraient rendre plus difficile l'ajustement à l'évolution des perspectives économiques. Il serait possible d'améliorer le fonctionnement et l'adaptabilité du marché du travail sans saper la cohésion sociale par une série de mesures associées. Il s'agirait notamment de fixer les ajustements de salaire minimum plus étroitement en fonction de la situation économique, ce qui pourrait se faire par un Conseil sur le salaire minimum, et par un assouplissement de la législation relative à la protection de l'emploi. Afin d'accroître les incitations des résidents, les prestations sociales devraient être découplées des salaires moyens et les transferts sociaux pourraient être réorientés vers un système de prestations subordonnées à l'existence d'une activité.

Ce document de travail porte sur l'Étude économique du Luxembourg (www.oecd.org/eco/etudes/luxembourg).
Classification JEL : J0 ; J2 ; J3 ; J5 ; J6.

Mots clés : Luxembourg ; institutions d marché du travail ; fixation des salaires ; offre de travail.

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Making the Luxembourg labour market work better

By Jeremy Lawson[1]

1. Luxembourg's labour market is unusual compared with other OECD countries. As a small state sharing a border with Belgium, France and Germany, it functions as part of a larger labour market, in which the dynamism of the local economy has encouraged almost half of its workforce to commute from outside of the country each day. These cross–border employment flows play a much greater role in adjustment to shocks than in other OECD countries (Pierrard, 2008). At the same time, Luxembourg's labour market institutions and system of social transfers also differ in important ways from the countries and regions that surround it. Cross–border and migrant workers are more likely to accept jobs for a lower salary given their qualifications than resident workers, making it difficult for low–skilled resident workers to find employment. The generous benefits available for residents also reduce their incentives to supply labour (OECD, 2006).

2. Another special feature of the Luxembourg labour market is the very high share of output and employment devoted to financial and related services. This presents a number of challenges. Although the growth of this sector has raised overall labour demand, high salaries push up prices and therefore costs in other sectors, which may have contributed to the deterioration of competitiveness. The special skill requirements of financial services firms, together with their pace of expansion, has also meant that much of the increased demand for labour has been soaked up by cross–border workers and migrants. Meanwhile, the need to maintain social cohesion in the face of rapid change has encouraged Luxembourg's system of social transfers to focus on providing generous social benefits to help reduce poverty and inequality, sometimes to the detriment of work incentives. Although Luxembourg's success in achieving strong growth while avoiding a rise in inequality is admirable, the likelihood of slower growth in the wake of the financial crisis means that more attention is needed to improving work incentives amongst residents. In addition, the education system has to find the right balance between equipping students with the skills for employment in growth sectors, and providing the language skills needed to maintain the social cohesion.

3. As in other countries, the Luxembourg labour market has been hit by the crisis. Unemployment has increased from 4.2% at the end of 2007 to close to 6%, its highest recorded level, and resident employment has stagnated. Moreover, these numbers understate the weakness in labour demand, as they do not include jobs subsidised through the partial unemployment scheme and the so–called "mesures pour l'emploi" ("employment measures"). Their inclusion would raise the unemployment rate to around 8%.

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1. The author is a senior economist with the country studies branch in the Economics Department of the OECD. The paper is based largely on work originally prepared for the Economic Survey of Luxembourg published in May 2010 under the authority of the Economics and Development Review Committee (EDRC). The author would like to thank Andrew Dean, Robert Ford, Piritta Sorsa and Sebastian Barnes of the Economics Department of the OECD for useful comments on earlier drafts. Ane Kathrine Christensen, Agnès Cavaciuti and Isabelle Duong provided statistical assistance and Didi Claassen for editorial assistance. The author retains full responsibility for any errors or omissions.

The immediate impact of the crisis on the labour market is analysed in more detail in Chapter 1. This chapter focuses on structural and institutional factors inhibiting the flexibility of the labour market and reducing the labour supply of Luxembourg residents. These factors are important both for the exit from the crisis and in the longer term.

4. The first section outlines in more detail some key stylised facts about the Luxembourg labour market, including institutions that affect labour market outcomes – the system of wage determination, employment protection legislation, the system of social insurance and transfers, employment services for the unemployed and the education system. The second section analyses how the design of these institutions affects firms' demand for labour, the incentives of different types of residents to supply labour and the capacity of the labour market to adjust to shocks. The chapter concludes by identifying measures to improve the functioning of the labour market, focusing on those reforms that can improve efficiency without significantly compromising the country's emphasis on maintaining social cohesion. The reforms outlined should help to minimise the permanent impact of the crisis on the labour market.

A snapshot of the Luxembourg labour market

5. Luxembourg is a small country with a population of just under half a million people. It is positioned at the centre of a wider economic region and a labour market that encompasses the Wallonia region of Belgium, the Saar and the Rhineland–Palatinate regions in Germany and Lorraine in France. The close proximity of several towns across the border from employment centres in Luxembourg has encouraged large cross–border flows of workers (Box 1), which were also influenced by lower land prices and less strict residential planning laws in the surrounding regions. The rapid increase in cross–border workers has placed significant pressure on the transport infrastructure, necessitating closer co–ordination of planning with regions in neighbouring countries. The importance of cross–border workers also presents challenges for the design of labour market institutions and social insurance policies. In particular, cross–border workers' reservation wages are below those in Luxembourg due to lower wages in neighbouring countries, lower minimum wages and less generous social transfers than for Luxembourg residents. These differences lead to stronger incentives to work for cross–border workers than for the resident population (OECD, 2006). In total, the number of unemployed in the bordering regions is just over half as large as the total number of employed persons in Luxembourg, implying strong competition for jobs in Luxembourg.

Box 1. Cross–border workers, immigration and the interpretation of labour market statistics

Calculating and interpreting labour market statistics in Luxembourg is complicated by the fact that around 42% of the people employed within the country commute from the surrounding regions each day. Although cross–border workers are a large component of aggregate employment in Luxembourg, only resident workers are included in the Labour Force Survey measures of unemployment, labour force participation and employment rates. There are conceptual difficulties of including cross–border workers in such statistics. For example, including cross–border workers in a measure of the labour force participation rate would raise questions about the relevant working–age population for comparisons. In addition, governments tend to be more interested in the labour market performance of residents to whom they are democratically accountable, and who are more directly affected by their policy decisions.

Table 1. Labour force statistics in Luxembourg: 1991 to 2008

		1991	2008	% change
Population		387[1]	489[1]	26
Of which:	*Foreign–born*	*113[1]*	*216[1]*	*91*
Employment		195[1]	349[1]	78
Of which:	*Residents*	*164[1]*	*217[1]*	*32*
	Non–residents	*31[1]*	*131[1]*	*320*
	Public sector	*23[1]*	*33[1]*	*41*
Resident unemployment		2[1]	10[1]	330
Resident labour force		166[1]	227[1]	37
Working–age population		267[1]	332[1]	24
Unemployment rate		1.4[2]	4.4[2]	
Employment rate		61.5[3]	65.5[3]	
Participation rate		62.4[3]	68.4[3]	

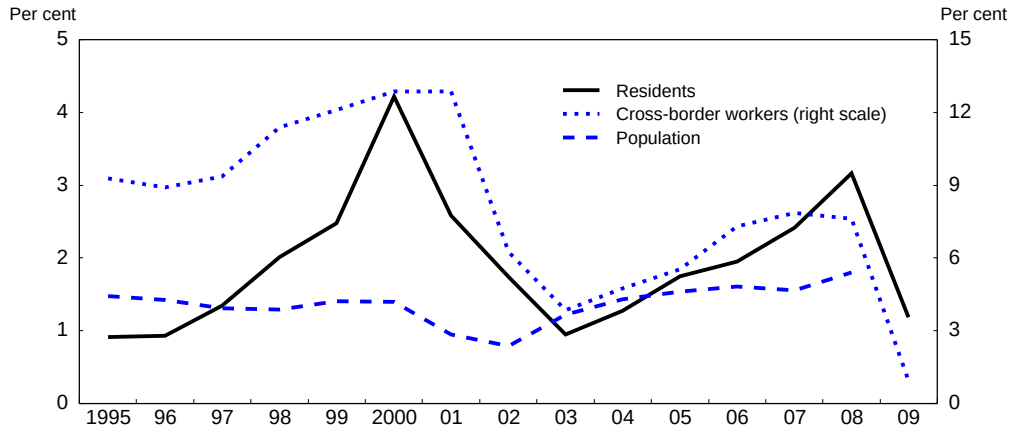
1. In thousands.
2. Resident unemployment in per cent of the resident labour force.
3. Resident employment in per cent of the resident working–age population.

Source: OECD, *Labour Force Statistics database* and STATEC.

There have been profound changes in key demographic and labour force variables in Luxembourg since 1991 (Table 1). Luxembourg's population increased by 26% mainly due to high rates of net migration, particularly from Portugal. Migrants are included as residents. Aggregate employment growth has been even more rapid thanks to the large increase of cross–border workers, which have averaged 8% per annum since the early 1990s (Figure 1). Although weaker than non–resident employment, resident employment growth has also been stronger than in most European countries over this period. Both the employment and participation rate have increased over the past two decades, primarily due to rising participation rates amongst women and older workers. However, the flip–side has been a noticeable increase in the unemployment rate and large increase in the number of unemployed.

Figure 1. Employment of residents, cross–border workers and population

Year–on–year growth rate



Source: OECD, *OECD Economic Outlook database*.

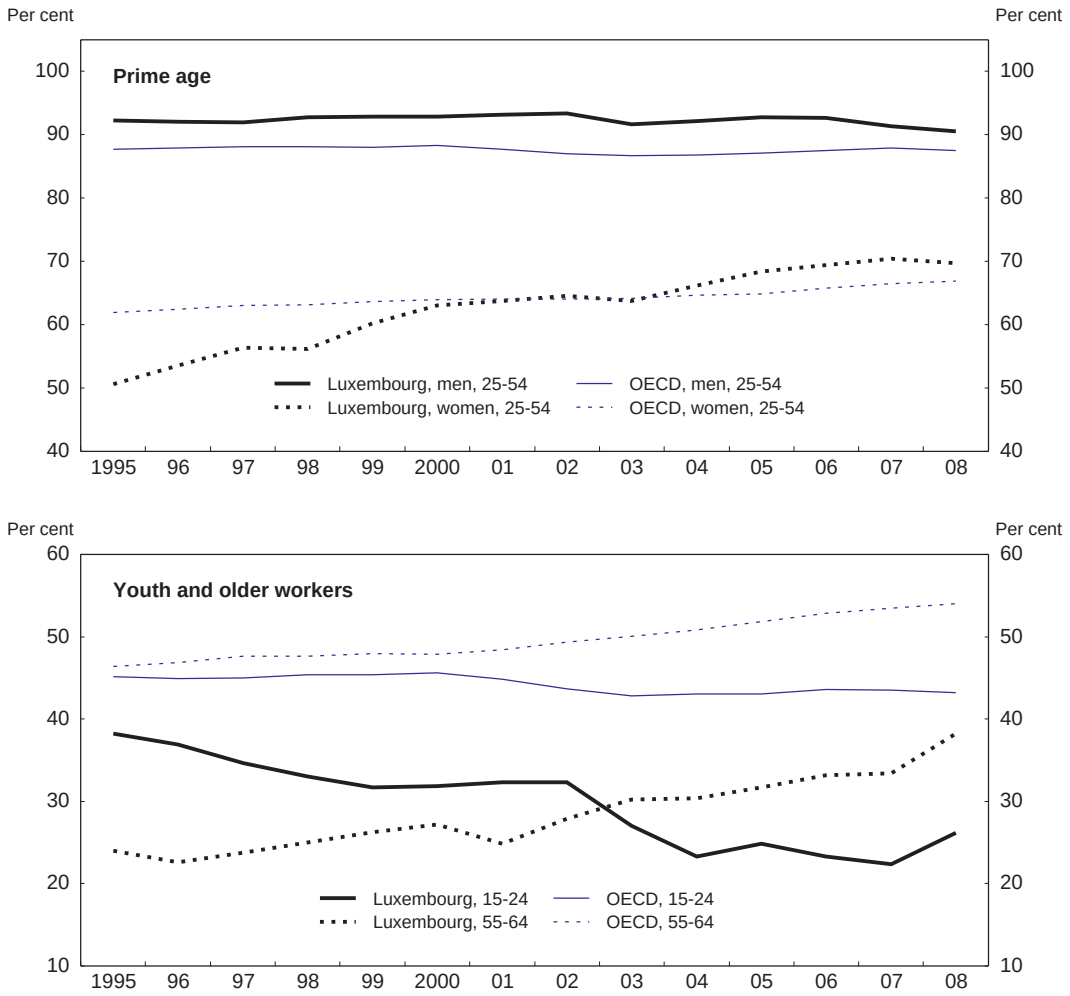
Residency has some important effects on access to welfare and other social entitlements. Although cross–border workers have full access to the Luxembourg pension scheme upon reaching retirement age, they are not entitled to the minimum guaranteed income (RMG) or other social benefits. In addition, when cross–border workers become unemployed, they are not entitled to full payments from Luxembourg's unemployment insurance scheme. Instead, Luxembourg contributes payments equivalent to three months of the unemployment benefits of the person's country of origin, calculated as if the person had been working in their country of residence. However, they do qualify for certain labour market programmes and related assistance (Grubb, 2007).

6. Immigration to Luxembourg has also been important, even if growth in cross–border workers accounts for most of the increase in total employment. Overall, around 44% of the population was born outside the country, which is the highest proportion in the OECD. Although much of the increase in gross immigration is explained by the strong demand for skilled labour in the financial sector, growth in unskilled immigration has also been rapid. Fast demographic change is of itself not a problem; the Luxembourg economy would not have been able to grow as quickly as it has without its high immigration rates. It does, however, create challenges. For example, the Luxembourg education system places a large emphasis on students acquiring fluency in the three official languages to help maintain social cohesion. However, for children from immigrant families where none or only one of the official languages is spoken at home, gaining proficiency in all three languages is difficult. Moreover, for students without fluency in all languages, a number of career paths are effectively closed off, including the public service.

7. Luxembourg's labour market performance appears strong at the aggregate level, but looking beyond the headline figures reveals a more nuanced picture. Employment growth has been much higher than the OECD average over the past decade, and the unemployment rate has been below the average. However, the unemployment rate had been trending up throughout the decade, despite strong economic and employment growth. While some of the increase may have been frictional, the rate of long–term unemployment has doubled during the course of the decade. Recent estimates suggest that the NAIRU may have also practically doubled since 1995 (Guarda, 2010). The high aggregate employment rate masks very different patterns across demographic groups (Figure 2). Consistent with other countries, employment rates are highest amongst prime–aged males (aged 25 to 54), and have been relatively stable over time. Employment rates of prime–aged women have increased sharply over the past two decades reaching the OECD average in 2000, and exceeding it by 3 percentage points in 2008. By contrast, employment rates amongst younger (aged 18 to 24) and older (55 to 64) workers are significantly below the OECD average. While the gap has been closing for older workers as incentives to retire before 60 have been reduced, the youth employment rate has increasingly lagged the OECD average. The downturn at the beginning of the

2000s saw a particularly pronounced fall in the youth employment rate and there has been little subsequent improvement, despite the strength of the overall labour market. Of particular concern is the persistence of joblessness for disadvantaged younger workers (Figure 3).

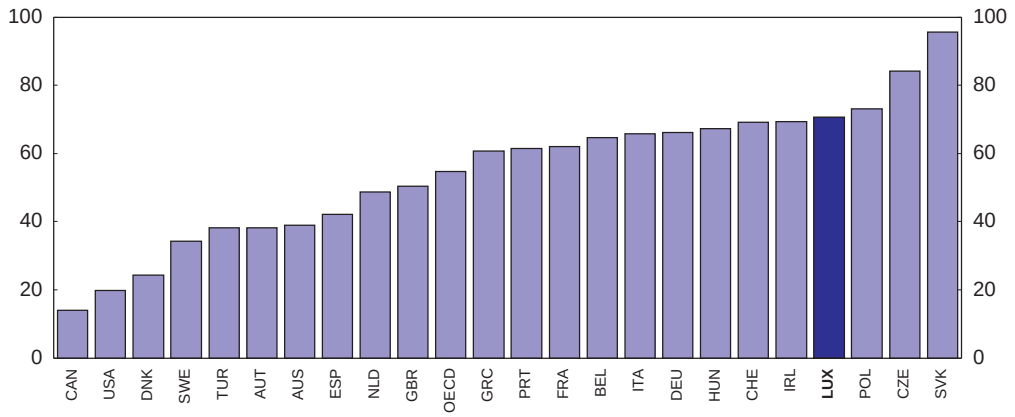
Figure 2. Employment rates of residents



Source: OECD, *Labour Force Statistics database*.

Figure 3. Percentage of jobless 25–34 year–olds who are long–term unemployed

Persons with below upper secondary qualifications, 2007



Source: OECD, *Highlights from Education at a Glance 2009*.

8. Labour market outcomes are correlated with the type of household to which a person belongs. According to household survey data, employment rates among men in Luxembourg are highest and for women the lowest amongst those that are married and have children. In comparison with bordering countries, overall employment rates for single men and women in Luxembourg are high (Table 2). However, they are noticeably lower for married women with dependent children. The same data suggest that human capital is only weakly correlated with employment outcomes for men in Luxembourg. For example, men aged 25 to 44 with a tertiary qualification have similar employment rates to those with only a primary school education. Although the education gradient is steeper amongst women, like men, it is much flatter than in the bordering countries.

Table 2. Employment rates and individual characteristics

		Men		Women	
		Luxembourg	Neighbouring countries[1]	Luxembourg	Neighbouring countries[1]
Household type					
	Single	0.70	0.52	0.44	0.33
	2 adults, no children	0.74	0.67	0.63	0.61
	Single parents	0.21	0.33	0.55	0.56
	2 adults, 2 children	0.78	0.81	0.50	0.66
Education					
	Primary	0.90	0.73	0.61	0.47
	Lower secondary	0.92	0.82	0.69	0.58
	Upper secondary	0.92	0.90	0.68	0.73
	Vocational qualification	0.98	0.88	0.67	0.74
	Tertiary	0.90	0.94	0.76	0.85

1. "Neighbouring countries" refers to the average of Belgium, the Netherlands, France and Germany.

Source: European Union Statistics on Income and Living Conditions (EU–SILC).

9. The pockets of weaker outcomes raise challenges for labour market and social policies. The young, unskilled, second–earners and older workers have low labour market attachment, and outcomes for the young, unskilled and to some extent prime–aged males have deteriorated. As discussed below, this

pattern can be explained in part by labour market institutions and social transfer policies, combined with the availability of a large pool of well–trained cross–border and migrant workers who have lower reservation wages and often better adapted skills than the resident population. Jobs requiring low or medium levels of qualification are now extensively occupied by cross–border and migrant workers, who are sometimes over–qualified for the jobs they are willing to take. However, another contributing factor to poor outcomes among some groups is likely to be the rapid growth of the financial sector and the increasing orientation of activity towards this specialisation. The financial and business services sectors (which are closely linked) are the country's largest employer, accounting for around 30% of total employment in 2008, up from 20% in 1995. Over this period, the share of the industrial sector, the country's largest employer until the 1980s, declined from 16% to just 10%. Although the share of public sector employment in the total has also declined, its share amongst Luxembourg residents has been broadly unchanged. These trends have important consequences for the employment of Luxembourg residents because foreign workers account for the majority of jobs in the financial sector. As outlined in Chapter 1, although the growth in the financial sector has significantly raised aggregate incomes and employment, it has also contributed to reducing competitiveness in other sectors of the economy, such as the industrial sector, a trend amplified by wages policies that have impeded relative price adjustments. Because Luxembourg residents are more likely to be employed in the non–financial sectors, structural change is likely to have made it more difficult for some people without the appropriate skills to find employment. This means that there is a significant challenge for the authorities either to ensure that the education system equips residents with the skills to be competitive for jobs in the economy's growing financial sector (Box 2), or facilitate more job creation in other sectors of the economy for which they are suited.

Box 2. The labour market and the education system

Well–designed education systems are critical for providing individuals with the human capital necessary to compete in the labour market, contribute to economic growth and participate fully in civil society. Achieving these goals is difficult for all countries, but Luxembourg's education system faces two unique challenges. It has to provide students with the skills that are in demand in a labour market with strongest employment growth in the financial sector and related services; and equipping students with the language skills necessary to communicate effectively and work within a country with three official languages. Meeting these twin challenges is made harder by the fact that many students are likely to be unsuited to specialised careers in financial services, and their immigrant and low socioeconomic backgrounds make it harder to achieve fluency in three languages. This box briefly reviews some of the structural features of the education system inhibiting improved educational outcomes, and through that the performance of the labour market.

Luxembourg's education system has the following key features (OECD, 2006):

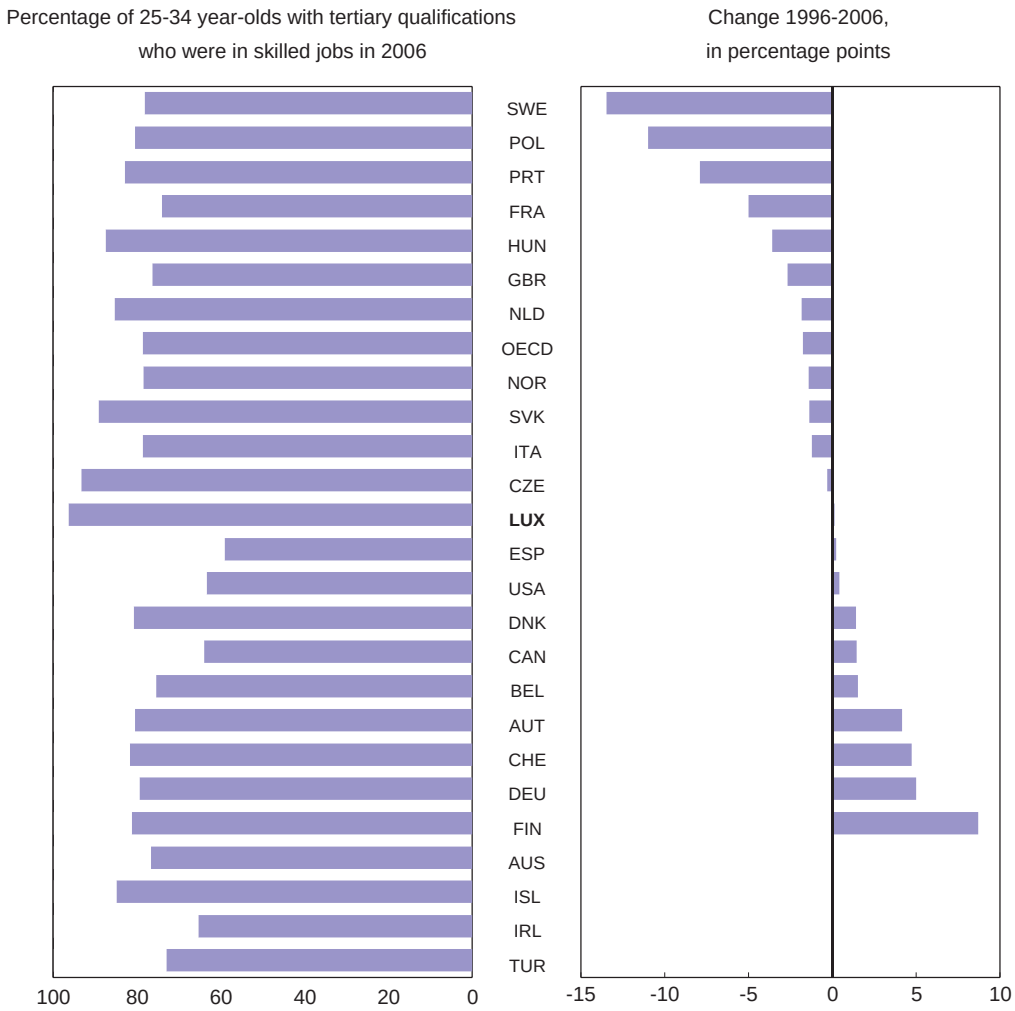
- Pre–school education begins at the age of 3, but is non–compulsory until the age of 4. It then lasts for two years.
- Primary school begins at the age of 6 and lasts for six years. Most instruction takes place in German.
- At the end of primary school, students are sorted into three tracks for lower–secondary school (again largely German–based instruction), which lasts for three years:
  - Academic general education (30% of students in 2003–04).
  - Vocational secondary education (58% of students).
  - Modular vocational education for those with education difficulties (12% of students).
- At the end of lower secondary school, students are again sorted into three tracks for middle– and upper secondary school:
  - Academic general education that lasts for four years and prepares students for university. Most instruction in this track takes place in French.
  - Technical vocational education that lasts for four or five years and prepares students for either university or tertiary vocational education.
  - Technical training courses and vocational training that last for three years and lead to either a vocational or manual skills certificate which can then lead to an advanced trade qualification.

- The minimum school leaving age has recently been raised to 16.

Education outcomes in Luxembourg are below the OECD average across a variety of indicators (OECD, 2009). Although primary school students perform well on standardised tests compared with other OECD students, performance at the secondary level is well below the OECD average. Low achievements are concentrated amongst poorer households and immigrant groups. Overall, very few top–performers come from lower socio–economic backgrounds compared with other countries. Students' language performance on PISA tests is poor by OECD standards (OECD, 2008a). Grade repetition is also common, particularly amongst children of immigrants. The secondary school drop–out is very high; only 70% of 25 to 34 year olds have finished high school, which is slightly below the OECD average and considerably lower than in neighbouring countries.

The weak performance of the education system has a number of implications for the labour market. In a high wage economy where resident workers are competing for good jobs with a large pool of highly qualified cross–border workers, lower levels of human capital amongst young residents diminish their job prospects. There is also evidence that the education system is not providing enough highly skilled graduates to meet the demand in the labour market. Although there has been no increase in the proportion of 25 to 34 year olds with tertiary qualifications in skilled jobs over the past decade, this is not because underlying demand for tertiary education has been weak (OECD, 2009). Indeed, graduate wage premia (for men) are very high in Luxembourg (Strauss and de la Maisonneuve, 2007) and 96% of tertiary graduates are already in skilled jobs (Figure 4). Instead, many private firms obtain skilled graduates from the pool of cross–border workers; despite strong underlying demand there has been no increase in tertiary enrolment rates over the past decade.

Figure 4. Young graduates and skilled jobs in OECD countries



Source: OECD, *Highlights from Education at a Glance 2009*.

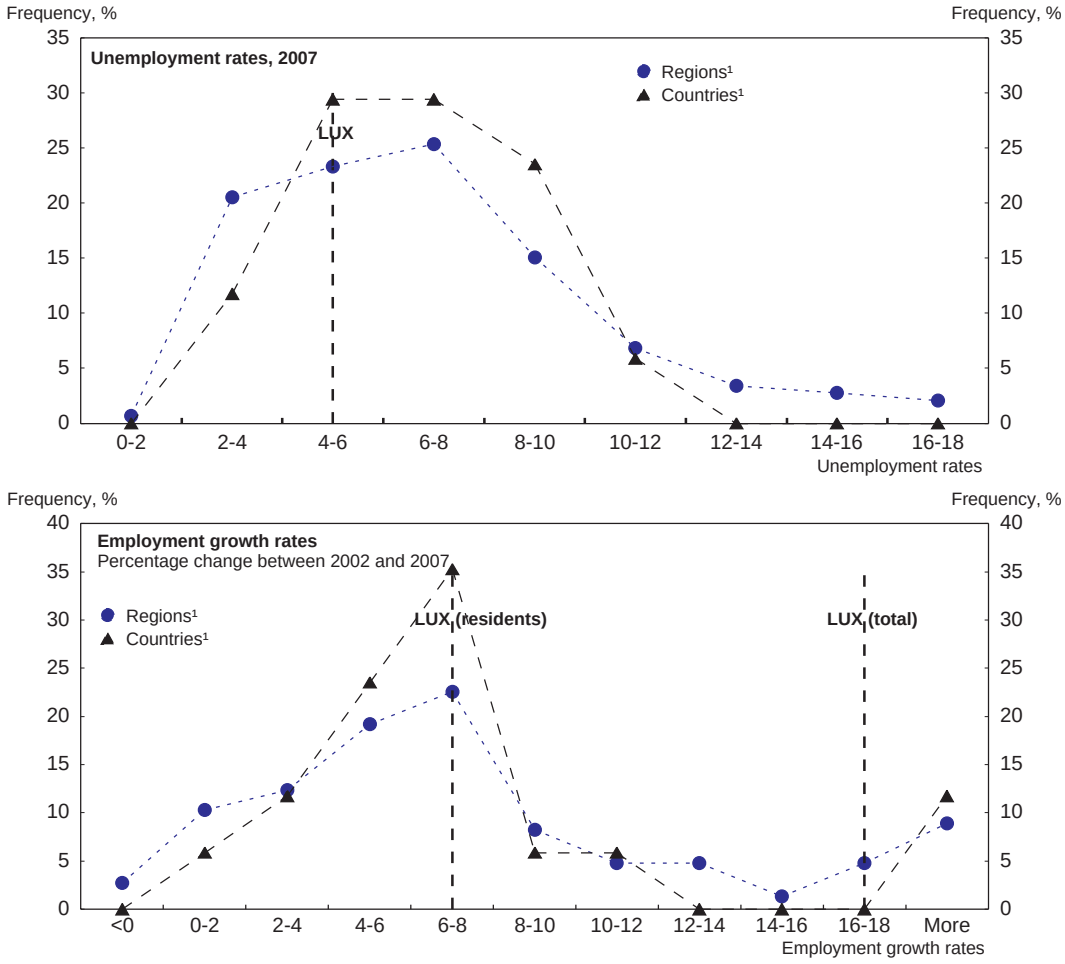
The reasons for the weak performance of the education system are complex. However, the most important problems identified in previous *Surveys* (OECD, 2006; OECD, 2008a) include:

- The difficulty of children from a low socioeconomic or immigrant backgrounds to achieve fluency in all three official languages and the limited options for students to receive most of their education in their strongest official language.
- The early commencement of educational tracking, the narrow criteria on which these tracks are determined and the lack of permeability between the different education tracks.
- A shortage of second chance arrangements for unqualified school leavers and inappropriate financial incentives provided by the welfare system to drop out of education.
- Large cultural barriers between teachers and immigrant children, a high proportion of secondary teachers that are not certified and teacher pay arrangements that reward seniority rather than performance.
- Curricula insufficiently attuned to helping students acquire skills most in demand in the labour market.
- Insufficient accountability and autonomy for schools, as well as a lack of parent involvement in school choice and tracking decisions.

Recommendations from previous *Surveys* have aimed to provide options that can help overcome structural weaknesses of the education system. They have focused on reforms that will help labour market integration of immigrants and that will ensure that there is less of a mismatch between skills demanded in the labour market and those supplied by the education system. The authorities have responded by beginning the task of reworking curricula and introducing programmes and options to reduce linguistic barriers for children of immigrants.

10. While Luxembourg's overall labour market performance is strong compared with other OECD countries, the outcomes are less impressive compared with other OECD regions. This regional perspective is arguably more relevant: national averages in most countries mask significant regional disparities with some areas that are very dynamic while others are in relative decline, so that the national average is based on a mixed picture overall. By contrast, the national average for Luxembourg refers only to one very fast–developing region. In addition, regions have many of the same characteristics as the Luxembourg economy in terms of being highly open and specialised. Luxembourg is among the countries with the lowest unemployment rates but is only around the 30th percentile compared with other regions (Figure 5). Total employment has grown much faster than in almost any other region, but the increase in the employment of resident workers is relatively close to the norm. These performances are better than the average but have been achieved against the background of growth that is exceptionally strong for a European region.

Figure 5. Regional and national labour market performance in Europe



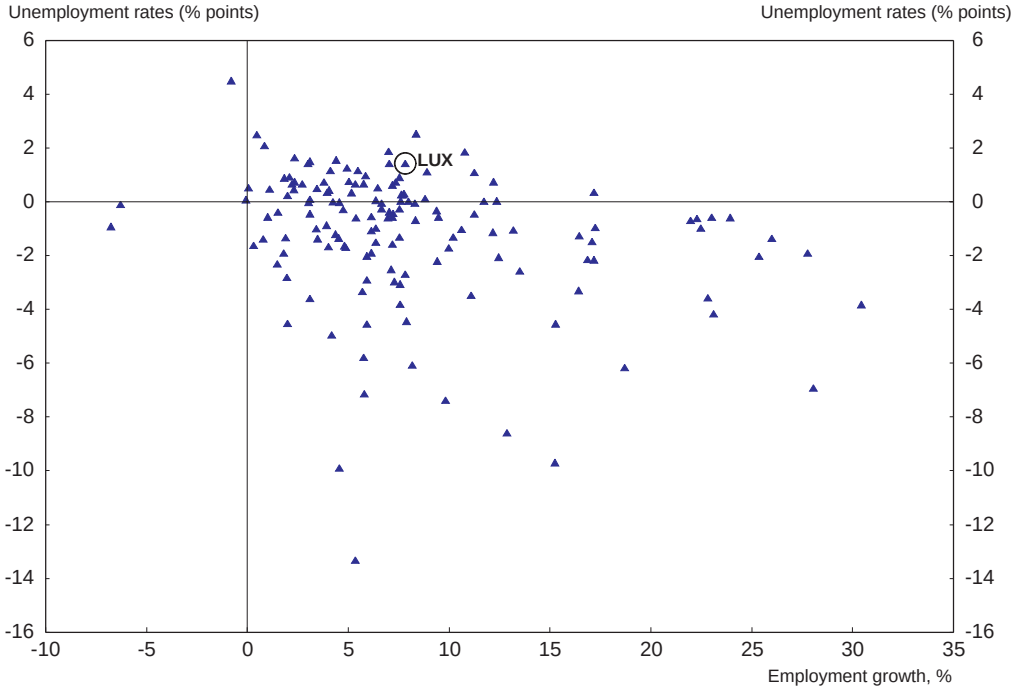
1. European countries and regions cover the euro area 13 as well as the Czech Republic, Norway, Sweden and the United Kingdom.

Source: OECD, *Regional Statistics database* and *OECD Economic Outlook* database.

11. Despite rapid overall employment growth, the rise in the overall unemployment rate also points to structural problems in the labour markets. Typically, economies with rapidly expanding employment would be expected to experience larger falls in the unemployment rate than those with weaker growth. This relationship holds true across European countries and rising unemployment in Luxembourg is somewhat of an outlier in this respect. However, the correlation is lower at a regional level (Figure 6). This suggests that regions can adjust to shocks in different ways with net migration playing a more important role in adjusting to changes in demand for regions than it does for countries. Even so, many regions that experienced employment growth rates similar to those in Luxembourg saw their unemployment rates fall or stay the same rather than increase.

Figure 6. Regional unemployment rates and employment growth

Change between 2002 and 2007

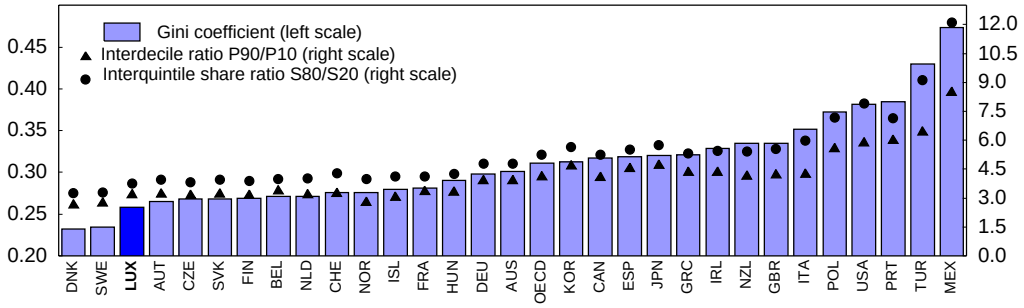


Source: OECD, *Regional Statistics database*.

12. Labour market performance has to be balanced against success in maintaining income equality and social cohesion in a strong growth environment. Most institutions that influence labour demand and labour supply in Luxembourg have broader social goals (Langers *et al.*, 2009). Although poverty rates (measured in relative terms) have increased over the period, the change has been small and income inequality remains in the lower half of OECD countries (Figure 7). Institutional factors are likely to have contributed to this outcome. First, wage growth toward the bottom of the earnings distribution has broadly kept pace with earnings growth in the middle and top of the distribution. This is in part due to minimum wages, which apply to around 15% of workers, their indexing to average wages, and indexing of all wages to inflation. Second, for those who are not in paid employment, social transfers are generous. The net replacement ratio for a person in receipt of unemployment insurance who earned average wages is between 80% and 90% depending on the circumstances, while a minimum guaranteed income scheme (RMG) supports inactive individuals in poorer households with an income just below the full–time minimum wage. The pension system is also one of the most generous in the OECD.

Figure 7. Income inequality in OECD countries

Mid–2000s



1. Countries are ranked, from left to right, in increasing order in the Gini coefficient. Data refer to the mid–2000s for all countries except for Japan and Switzerland, where they refer to 2000. The income concept used is that of disposable household income in cash, adjusted for household size with an elasticity of 0.5.

Source: OECD (2008), *Growing Unequal? Income distribution and poverty in OECD countries*.

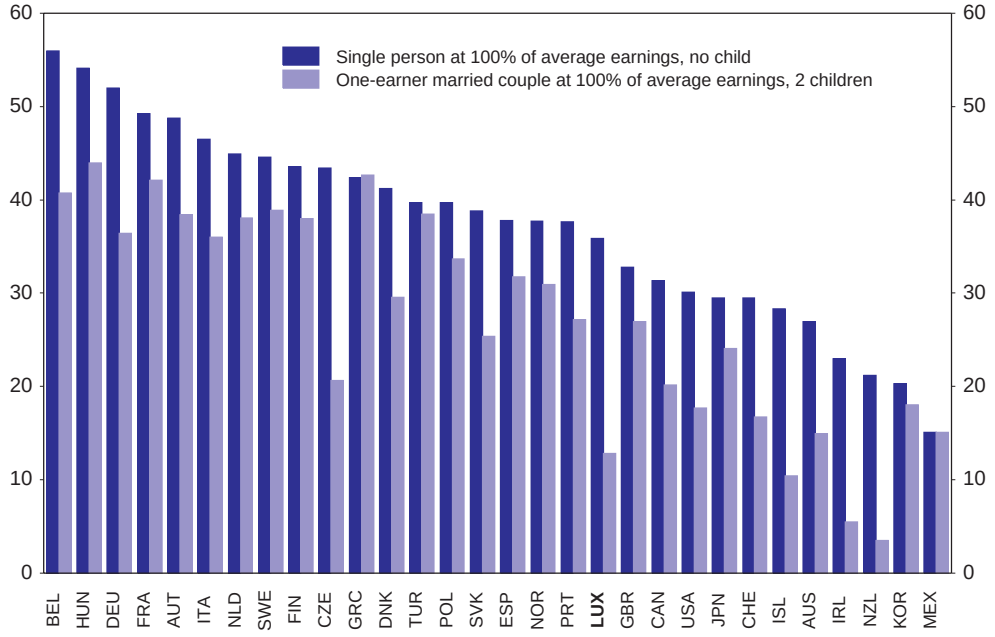
13. Generous social benefits, either in terms of the unemployment insurance, minimum guaranteed salary or pensions, influence reservation wages especially of lower income workers and families. The system of taxes and social benefits also affects the labour market through its impact on labour costs and incentives to work for different groups (Box 3). The net tax wedge tends to vary widely between single or family workers due to generous social benefits. Although at 33%, the average net tax wedge for single workers (the ratio of labour taxes to total labour costs) was only just below the OECD average in 2008, the net tax wedge for couples with children was just 12%, amongst the lowest in the OECD. The lower tax burden for families is mainly due to generous family benefits, which, as in most European countries, are not means tested, and therefore do not affect marginal effective tax rates. However, the availability of two different types of government–financed leave for parents implies that long periods of labour market inactivity may be encouraged for some individuals, particularly women who have more than one child. This may weaken their attachment to the labour market or hinder their employability, leading to a lasting impact on employment. Further empirical analyses of the impact of these leave programmes on labour supply would be useful.

Box 3. Labour taxes, social transfers and employment programmes

Labour taxes. Luxembourg operates a progressive income tax system and taxes labour less than most other European countries (OECD, 2008c). There are 16 different marginal income tax rates ranging from 8% to 38%, with the top rate kicking in at a taxable income of around EUR 40 000. Although at 33%, the average net tax wedge for single workers (the ratio of labour taxes to total labour costs) was only just below the OECD average in 2008, the net tax wedge for couples with children was just 12%, amongst the lowest in the OECD (Figure 8). The difference is explained by the generous social benefits available to families in Luxembourg. Overall, employer and employee social security contributions make a larger contribution to the tax wedge than income taxes. Although the family is the tax unit in Luxembourg, there is a tax allowance for second earners to reduce marginal effective tax rates for second earners.

Figure 8. The composition of the net tax wedge

As a percentage of labour costs, 2008[1]



1. Employees' and employers' social security contributions and personal income tax less transfer payments as a percentage of gross labour costs (average rate in %).

Source: OECD, *Tax database*.

Social transfers. There are five types of programmes:

Families are entitled to a number of generous non means–tested allowances:

- A one–off childbirth allowance worth EUR 1 740.
- A child allowance that can continue up to the age of 27 if children remain in full–time education for the whole period. The state pays EUR 180 per month for one child with higher payments per child for larger families.
- Government–financed parental leave is available prior to each child's fifth birthday providing parents have worked for their employer without a break for at least a year. Leave can be taken for either six months full–time or twelve months part–time. Those taking full–time leave are entitled to a net EUR 1 716 per month.
- A special allowance is available until each child turns two for parents who reduce their working hours to below 20 per week. This allowance cannot be received at the same time as parental leave.

Contributory, time–limited **unemployment insurance** usually expires after 12 months, although workers over the age of 50 can qualify for insurance for up to 24 months. During this period of eligibility, the scheme is one of the most generous in the OECD: the replacement rate is up to 90% of the previous gross wage, and the ceiling on benefits is 2.5 times the minimum wage (falling to twice the minimum after six months). Young people are able to obtain unemployment benefits without a prior work history if they wait between 26 and 39 weeks after registering as unemployed, though recent reforms have attached greater conditionality to this access. In addition to unemployment insurance, there is also a system of short–time work or partial unemployment benefits. Under this scheme, the insurance fund pays 80% of an individual's salary at eligible firms wanting to temporarily reduce their labour use without permanently dismissing workers (see Chapter 1).[1]

Those in receipt of unemployment insurance are required to register as unemployed with the employment agency (ADEM), which is responsible for trying to place unemployed people into vacant jobs and providing training and other labour market programmes to make it easier for the unemployed to find employment. Case workers are also tasked with monitoring the search activity of unemployed people and can temporarily suspend benefit payments for those that refuse a suitable job offer or a training place. In 2008, there were 3 246 people in labour market programmes (*mesures pour l'emploi*) of which:[2]

- 968 people were in special programmes to provide training with non–profit associations aimed at reintegration in the labour market for unemployed without insurance.
- 575 were in programmes to re–integrate the unemployed into the labour market through training towards recognised practical qualifications.
- 462 were in the temporary work scheme run in conjunction with the RMG.
- 365 were on youth employment contracts, a 12–month programme for youths to provide practical on–the–job training with private employers.
- 339 were in professional retraining programmes for those unemployed aged over 30 that require theoretical and practical training as part of a work placement.
- 450 persons were in a variety of small schemes.

Disability benefits (*travailleurs à capacité de travail réduite* (CTR). Under laws that came into effect in 2002, there are four stages of assessing work capacity (OECD, 2006):

- A compulsory medical examination by the medical service of the Social Security for those taking a long period of sickness leave.
- A second medical examination to determine whether a person is capable of working once they apply for a disability pension.
- An assessment by the Occupational Medicine Department to determine if the person is capable of returning to their previous job. If not, a redeployment procedure is launched that favours redeployment within the same firm. If this is not possible, ADEM is tasked with finding the person suitable work with another employer.[3]
- Receipt of a waiting allowance equal to the disability pension if the person does not find employment within the period in which they are eligible for unemployment benefits.

In the disability benefits, payments match the replacement rates of unemployment insurance and the RMG (though disability benefits are not means–tested), the regime of activity testing and re–integration into the workforce differs. Although the medical criteria for determining incapacity were not changed with the 2002 reform, applicants now have to demonstrate not only an inability to return to their previous job, but also an inability to be redeployed to other types of jobs in other firms and industries. Employers and employees also receive financial incentives to increase redeployment rates. This process of assessing work capacity significantly reduced flows into the disability pension scheme and this has led to a reduction in the stock of recipients of around 13% since the peak in 1998. However, progress has stalled more recently with little change in the number of invalidity benefit recipients over the past five years and around 5% of the working–age population in receipt of these benefits.

The minimum guaranteed income scheme (*revenu minimum garanti*, RMG) provides a financial safety net for low income families. The RMG is largely accessed by unemployed people (and their families) not or no longer eligible for unemployment insurance, as well as those that are not actively looking for work for other reasons but are not eligible for disability benefits or the pension scheme. In 2009, around 16 000 people were in households receiving the RMG with over 8 000 claimants (equivalent to more than 3.5% of the resident labour force), predominantly of working age. Individuals under the age of 25 are not entitled to RMG unless they have dependents. One–third of new claims in 2008 came from those whose unemployment benefits had come to an end (*Inspection Générale de la Sécurité Sociale*, 2009). Lone parents account for a large share of households on the RMG. Like the minimum wage, the level of the RMG is indexed to average wages. Although the transition to the RMG from unemployment insurance involves a lower income for most eligible households, means testing implies that the amount of this reduction varies according to household circumstances.

In general, replacement rates are highest for low income households and those with children (OECD, 2007). For example, while the replacement rate is around 75% for a single person without children who initially held a minimum wage job, it is closer to 90% for a married person who earned the same but has two children and a spouse without a job. By contrast, the replacement rate is 55% for a person with an average wage job with two children and a spouse earning ⅔ of the average wage.

Individuals covered by the RMG who are assessed as being able to work are required to sign an integration contract with a case manager. This requires participants to actively search for employment and participate in labour market programmes. There are three main types of labour market programmes available to those with integration contracts: preparation for work; temporary public work; and subsidised work with an employer. Participants in these programmes receive an income supplement. The wage subsidies offered are very high: for a minimum wage worker, the subsidy is nearly 100% and can last for up to 3 years.

Pensions. Luxembourg's pension system is generous by OECD standards. The pension replacement rate reaches more than 100% of net income for low and average income workers. Both public and collectively bargained sectoral pension plans enable older workers to leave the workplace before the legal age of 65 and pre–pension schemes allow workers to quit the labour market aged 57 if they have accumulated 40 years of pension contributions. Early retirement is available at age 60 if workers have 40 years of employment service. However, time spent in education before the age of 27, child–rearing and periods of unemployment for younger workers are also taken into account when assessing years of service. Although the pre–pension schemes are available for a maximum of three years, participants can move immediately to the early retirement schemes if eligible.

1. At the end of 2009, just over 8 000 people were in this scheme, which is more than the total number of people in receipt of unemployment insurance.
2. *Mesures pour l'emploi* in the Luxembourg usage is not equivalent to labour market programmes as defined by OECD and Eurostat because it excludes individuals receiving employment incentives (re–employment bonuses, measures of professional integration of disabled workers, aid for employing long–term and old unemployed).
3. During this stage the person receives unemployment benefits and has the same responsibilities as a regular unemployed person.

Improving the adaptability of the labour market

14. There is no one–size–fits–all approach to designing labour market institutions (Bassanini and Duval, 2006). Empirical evidence suggests that both decentralised and corporatist institutions can be associated with good labour market outcomes as long as the determination of wages and employment conditions takes into account macroeconomic conditions, and the different circumstances of industries, firms and employees. Indeed, the co–ordination that is a central feature of corporatist systems such as Luxembourg's can make it easier for wages to respond to macroeconomic shocks and be an effective instrument for maintaining cohesion across different social classes. Nevertheless, there are features of Luxembourg's labour market institutions that may make it more difficult for the labour market to adapt to shocks, prevent wages from moving in line with changes in labour productivity in some sectors, and unnecessarily reduce labour demand for some social groups.

15. Luxembourg's labour market outcomes have been influenced by the institutional setting. Two–thirds of wages are set in a tripartite industrial–relations system. Wage bargaining and negotiations over employment conditions in the private sector largely take place between employers and unions (or employee representatives) with the government also playing a role.[2] Around 40% of the workforce is member of a union, with membership rates highest in the industrial and public sectors. Government involvement in wage setting and the determination of employment conditions through minimum wage determination, wage indexation, and employment protection legislation (Box 4) are likely to have affected the aggregate demand for labour as well as incentives to supply labour.

2. 20% of employee contracts are covered by firm-specific collective bargaining agreements, which are most common in the manufacturing sector. A further 42% of workers are covered by industry-wide collective bargaining agreements that are most common in the construction, health and financial sectors. 36% of employees are not covered at all, most commonly in the hotel and restaurant sector.

Box 4. Wage setting and employment contracts

Indexation. In normal times, wages of all employees are increased whenever the six–month moving average of the national index of consumer prices increases by 2.5% relative to its level at the previous wage indexation (the system is symmetric and would treat price level falls in the same way). This process is independent from the system of collective wage bargaining and is strictly enforced by the government. Between 2006 and 2009, there was a temporary change in the indexation mechanism to reduce the pass through of the steep increase in oil prices over that period. For example, in December 2006 wages were increased by 2.5%, which was 1.4 percentage points less than the increase in the price level since the previous indexation. The regular system was reinstated in January 2010.

Minimum wages. Changes in the minimum wage unrelated to indexation are first negotiated within the tripartite framework, and then the government makes an adjustment based on real wage developments in the economy. This effectively indexes the minimum wage to average wages. At 50%, the ratio of the minimum wage to average gross monthly earnings in the industry and services sector is amongst the highest in the OECD. The minimum wage is reduced for youth aged less than 18 (20 to 25%) and there is a 20% premium for workers with formal qualifications.

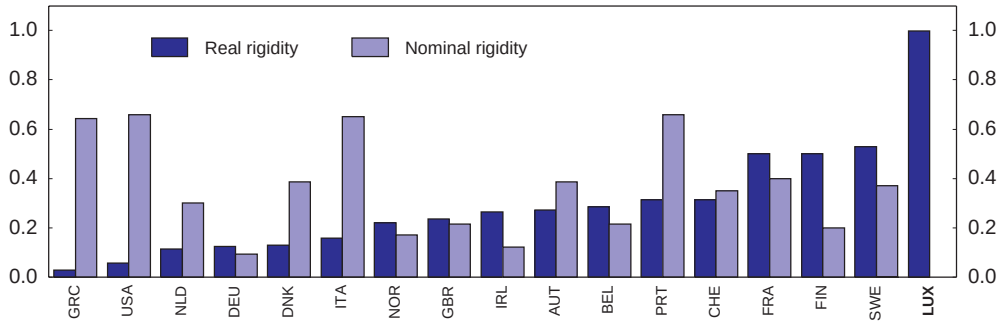
EPL. Temporary contracts are restricted to specific tasks and usually cannot be extended beyond 24 months. Trial periods under regular contracts, which depend on salaries and qualifications, are short (a maximum of six months and sometimes much shorter) and notice must be given at least 24 days before dismissal. Compensation is available to employees in cases of unfair dismissals, though employees are rarely reinstated. For procedural irregularities in dismissal, at least one month's compensation is usually granted, while for more serious irregularities compensation depends on the material impact on the employee. Arrangements for collective dismissals by firms apply from 7 dismissals within a 30–day period or 15 within a 90–day period. Collective dismissals require firms to negotiate a social plan with the relevant trade union or employee association within two weeks of the collective notice being given. Only once the social plan is concluded can individual notification of dismissal occur and only then after 75 days.

Reforming wage setting would improve real wage flexibility and competitiveness

16. Luxembourg is one of the few OECD countries to maintain a system of automatic legislated wage indexation. Although this was temporarily suspended in 2006, it came back into operation in January 2010. The system is problematic as it locks in price rises stemming from negative supply shocks (such as food and energy). This reduces competitiveness of local firms and prevents downward adjustments of real wages in firms and industries where productivity has declined, either as the result of shocks or on–going structural adjustments. Wage indexation can therefore raise inflation, reduce the demand for labour, and may have accentuated the relative decline of the industrial sector. Competitiveness indicators point to a serious erosion of relative unit labour costs in Luxembourg over the past decade (Chapter 1).

17. Recent empirical analysis of monthly administrative wages data between 2001 and 2006 provides evidence that wage indexation in Luxembourg could contribute to higher downward real wage rigidity relative to other industrial countries (Figure 9). The overall frequency of wage changes is driven by institutional wage changes that are not at the discretion of the firm (wage indexation, minimum wage changes and bargained premia that depend on age and marital status). After correction of measurement error, there were very few nominal wage reductions during the sample period and there was a heavy bunching in the distribution of annual wages around 2.5%, the rate of the regular indexation adjustment (Lünnemann and Wintr, 2009). The fast pace of growth and benign world economic conditions over this period reduce the likelihood that these constraints from indexation were binding, although energy–related increases in consumer prices would have tended to tighten this constraint. In the current period where growth is slower, the cost of these rigidities may become more apparent.

Figure 9. Wage rigidity across countries[1]



1. Mixed Method of Moments estimates of the prevalence of downward real and nominal wage rigidity, averaged across all dataset–years for each country. By construction, the measures range from 0 (where no one is subject to the rigidity) to 1 (where all workers are potentially affected).

Source: Dickens, W. *et al*. (2007), "The Interaction of Labour Markets and Inflation: Analysis of Micro Data from the International Wage Flexibility Project" and Lünnemann, P. and L. Wintr (2010) "Downward Wage Rigidities and Automatic Wage Indexation: Evidence from Monthly Micro Wage Data", Banque Centrale du Luxembourg, *Working Paper* (forthcoming) for Luxembourg results.

18. To improve adjustment to shocks and competitiveness, the current system of automatic legislated wage indexation to the headline consumer price index should ultimately be ended to allow for negative terms–of–trade shocks as well as the required adjustment in relative wages across firms and industries. Many European countries have moved away from such systems of automatic legislated indexation. Only two larger OECD countries have indexation. However, the Belgian scheme is not tied to the headline consumer price index, while the system in Spain is more limited in scope. Co–ordination of overall wage growth would remain desirable if automatic indexation were ended, and could take place within central bargaining to ensure that wages evolve in line with productivity, competitiveness and labour demand. As a first step, the temporary adjustment process put in place from 2006 to 2009 should be reinstated. By indexing wages to core consumer prices (excluding food and energy), the effect of temporary shocks to energy prices and other idiosyncratic price movement would not be automatically passed through to costs and the price level.

The setting of the minimum wage needs to take into account the impact on employment

19. Most OECD countries have a minimum wage floor to protect the incomes of low–skill workers (Funk and Lesch, 2006). Basic microeconomic theory suggests that minimum wages reduce employment below the level that would apply without the price floor as long as the demand curve for labour is downward sloping (Neumark and Wascher, 2006). The magnitude of the employment effect depends on how responsive both labour demand and supply are to changes in wages, and whether firms have any monopsony power that allows them to depress wages below their market clearing levels.

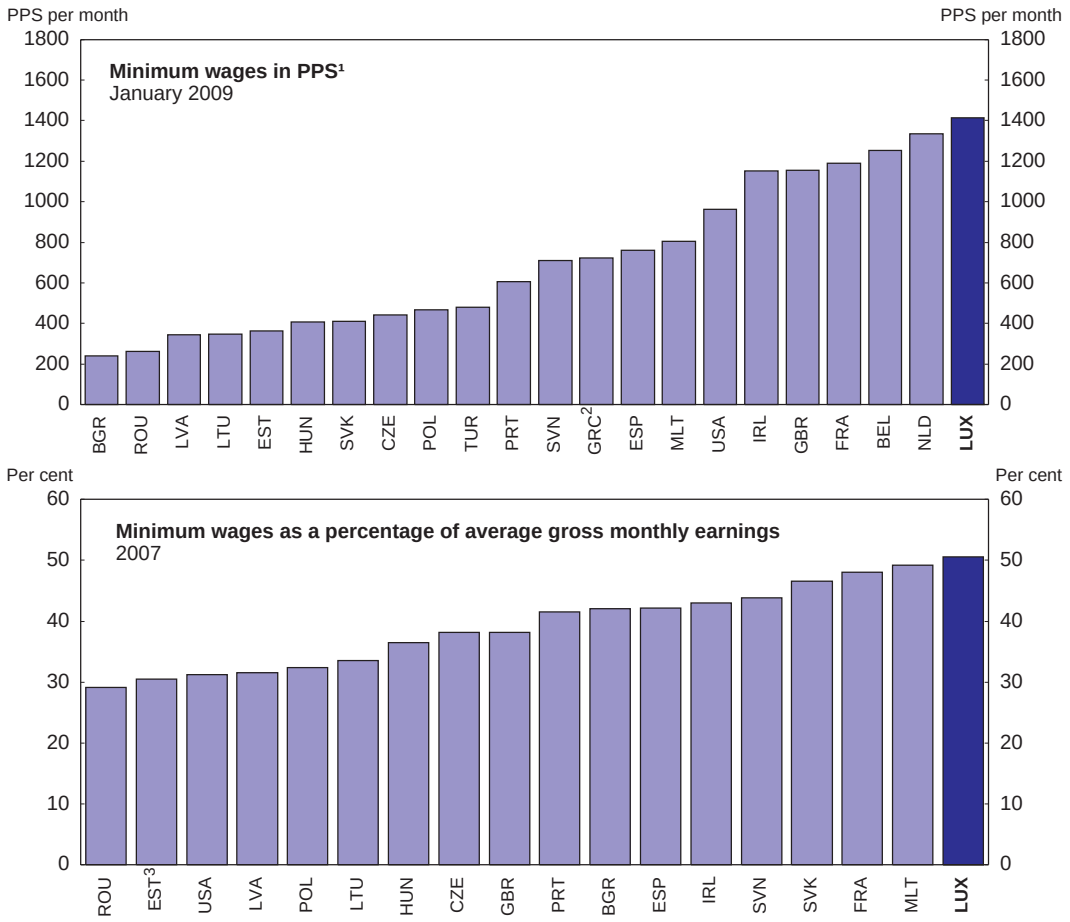
20. The size of the impact of minimum wages on labour demand has been much debated in the empirical literature (Bassanini and Duval, 2006; Card and Krueger, 1995; Dolado *et al.*, 1996; Neumark and Wascher, 2006). Labour demand and supply elasticities vary across different types of workers and depend on the design of tax and benefit systems. For example, labour demand tends to be more price elastic for the young and unskilled, while labour supply tends to be more price elastic for women and second earners (Saez, Slemrod and Giertz, 2009). Overall, evidence from OECD countries (Immervoll, 2007) suggests that minimum wages can have important costs but these can be minimised when the minimum wages are:

- Are low enough to encourage employers to hire lower skilled workers and do not serve mainly to protect "insiders" with jobs.

- Take account of variations in the impact on different types of worker and macroeconomic circumstances.
- Take account of their interaction with the tax–benefit system.

21. When this international experience is applied to Luxembourg, it seems likely that the minimum wage is unduly constraining labour demand and reducing the labour market's adaptability to aggregate and industry specific shocks. Not only is the level of the minimum wage high both in absolute terms and as a share of average wages relative to other OECD countries, but the large share of private sector workers receiving the minimum wage suggests it is widely binding. In January 2009, the absolute level of the minimum wage (adjusted for differences in the price level across countries) was the highest in the OECD and at least 10% higher than the minimum wage in neighbouring countries (Figure 10). In 2007, around 18% of female full–time employees received the minimum wage, mostly in the services sector. The 20% premium for workers with vocational qualifications also suggests that the minimum wage is being used as an incomes policy rather than as a means to protect vulnerable workers from abuse. Moreover, the indexation of the minimum wage to average wages means that reductions in employment levels are likely to be the main adjustment mechanism to shocks.

Figure 10. Minimum wages in selected countries



1. Estimated values based on 2008 PPS (Purchasing Power Standards) data.
2. July 2008.
3. 2006.

Source: Eurostat.

22. To help raise labour demand and improve the efficiency and adaptability of the labour market, changes to the minimum wage should focus on the macroeconomic circumstances and the likely impact of minimum wage changes on employment rates of low–skilled and inexperienced workers. A good solution to help ensure that economic considerations are central would be to establish an independent Minimum Wage Council, along the lines of OECD countries such as Australia and the United Kingdom. These bodies set minimum wages taking into account the factors that influence demand as well as changes in the cost of living (Box 5). The decisions of such a Council are best delegated to experts. However, the role of the current tripartite groups could be incorporated into the new system in the form of submissions to annual minimum wage revisions. Broad social support for the new Council could be enhanced by ensuring that members come from a variety of social and employment backgrounds. Reaching the social consensus necessary to establish such a Council could take some time. During the interim period, the minimum wage could be allowed to fall relative to average wages by indexing it to core inflation rather than average wages, and the minimum wage premium for workers holding trade qualifications phased out.

Box 5. Minimum wage determination in Australia and the United Kingdom

In 2010, 21 OECD countries had a statutory minimum wage, while another 6 others maintained wage floors through collective bargaining agreements with wide industrial coverage. In most countries, statutory minimum wages are set by the government, usually in consultation with social partners (employee and employer representatives). The criteria used to set minimum wages vary across countries, but are most commonly adjusted in line with changes in consumer prices or wage developments in the broader economy. Few countries explicitly take macroeconomic criteria or the impact of minimum wages on the employment prospects of low–wage workers into account. The level of statutory minimum wages (relative to average wages) also varies significantly across OECD countries, with some countries using wage minima as a genuine wage floor, and others using them as a quasi–incomes policy.

In the past decade Australia and the United Kingdom have both taken steps to delegate minimum wage determination to independent, specialist bodies, and take macroeconomic criteria and employment effects more explicitly into account.

The United Kingdom's Low Pay Commission (LPC) was set up in 1997 to define a National Minimum Wage and make a recommendation about the level at which it should be introduced. The Commission is made up of 9 commissioners from union, employer or labour economics backgrounds. In making decisions, it relies on its own statistical and economic analyses as well as written and oral evidence from key stakeholders. Although the LPC focuses on earnings and employment developments when setting the minimum wage, it also takes into account consumer prices, firms' non–labour costs and profitability, as well as changes in productivity amongst the low–paid. The government has accepted all of the Commission's recommended minimum wage changes since its inception.

In Australia until 2006, minimum wages, together with minimum employment conditions for people working outside the scope of collective bargaining agreements, were set by the Australian Industrial Relations Commission (AIRC), a legal tribunal that also certified collective bargaining agreements and resolved industrial disputes.

Between 2006 and 2009, responsibility for minimum wage decisions was transferred to the independent Fair Pay Commission (FPC), which, when setting minimum wages was required to more explicitly take into account the impact of changes to the minimum wage on the employment prospects of the unemployed and those in low–paid jobs, and broader competitiveness criteria. Previously, the AIRC had focused on providing a safety net for the low–paid. Like the LPC in the United Kingdom, the FPC was staffed by economic experts, as well as people from a union or employer background, and made decisions based on its own research, as well as submissions from stakeholders.

From 2010, responsibility for setting the minimum wage will be transferred to a new body – Fair Work Australia (FWA). Although FWA is also independent from the government, its President has a legal, rather than an economic background. The Minimum Wage Panel that has been set up within FWA will also be required to take macroeconomic criteria into account, but will have a greater emphasis on social inclusion and wage inequality than the FPC.

23. However, changes to the system of setting minimum wages also require reforming the design of social transfers. The minimum guaranteed revenue (RMG) and unemployment insurance interact to produce high net replacement rates compared with other OECD countries (Figures 11 and 12). Without social assistance, the average unemployment net replacement rate across four family types and two income levels over five years is 25%, well below the OECD average. But, the average net replacement rate is 70% higher once the RMG and other complementary allowances for children are taken into account. In addition, the RMG acts as a gateway to a wide range of other in–kind benefits and allowances. The RMG substantially boosts the income of low–wage households to an extent that is sizeable compared to most other OECD countries, particularly for one–earner couples. This is because the first 30% of a household's labour market earnings are not clawed back through withdrawn benefits or higher taxes. However, because benefits are withdrawn one–for–one with earnings once the 30% threshold is exceeded, effective marginal tax rates are very high for part–time workers increasing their hours. Furthermore, there is requirement to reimburse payments received under the RMG under certain conditions. This can further reduce the incentive to return to paid employment given that this can trigger the repayment of benefits received.

Figure 11. Out–of–work tax–benefit position

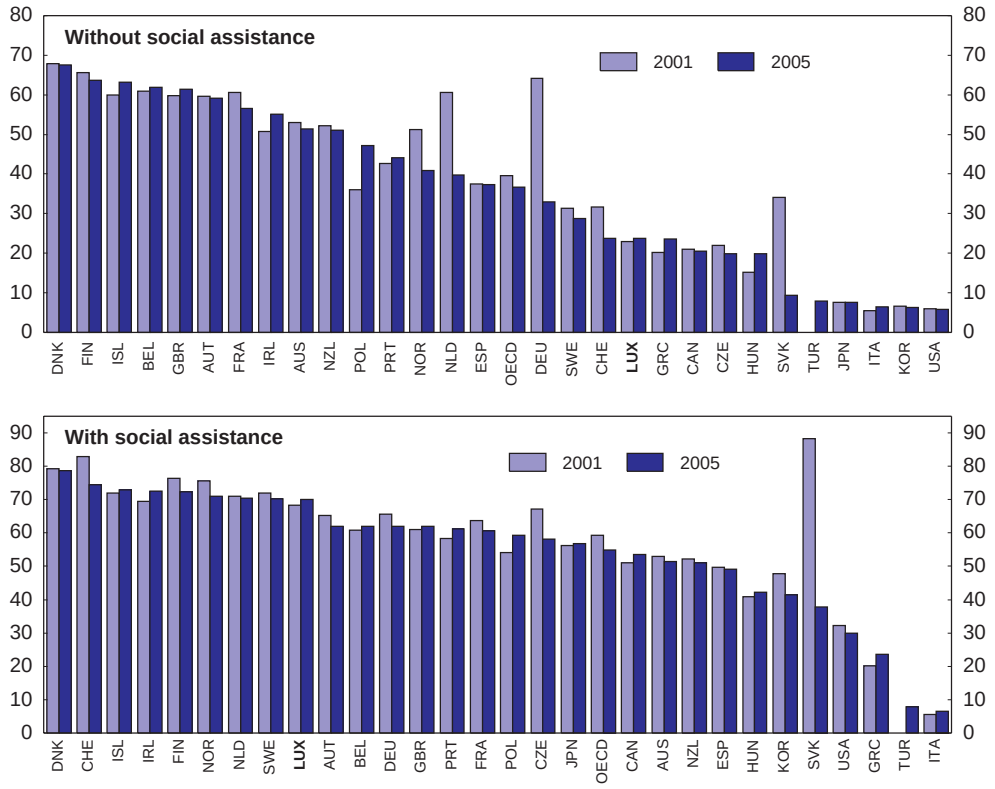
With previous earnings at 67% of average wage (AW), 2007

1. First spouse, unemployment benefits (previous earnings=67% of AW); second spouse inactive.
2. First spouse, unemployment benefits (previous earnings=67% of AW); second spouse's earnings=67% of AW.

Source: OECD, *Tax–Benefit models*.

Figure 12. Average of net replacement rates over a period of 60 months[1]

In per cent



1. Unweighted averages over 60 months of unemployment, for earnings levels of 67% and 100% of AW (APW in the case of Ireland, Korea and Turkey) and four family types (single persons, lone parents, one–earner couples with and without children). Any income taxes payable on unemployment benefits are determined in relation to annualised benefit values (*i.e.* monthly values multiplied by 12) even if the maximum benefit duration is shorter than 12 months. For married couples the percentage of AW relates to one spouse only; the second spouse is assumed to be inactive with no earnings. Children are aged four and six and neither childcare benefits nor childcare costs are considered. OECD average excludes Turkey.

Source: OECD, *Benefits and Wages 2007: OECD Indicators*.

24. Generous benefits are likely to mean that employment levels among Luxembourg residents are constrained by transfer–induced barriers to the supply of labour, in addition to the impact of the minimum wage on labour demand for younger resident workers. The present configuration of the tax–benefit system in Luxembourg raises the reservation wages of residents, especially of more mature workers, to a high level relative to the minimum wage. At the same time, there is a large pool of potential cross–border workers in neighbouring regions for whom working for the Luxembourg minimum wage is highly attractive relative to the social benefits available in their countries. Any reforms to minimum wages that increase firms' hiring incentives could thus raise total employment without having much impact on resident employment unless there are simultaneous reforms to increase their incentives to work.

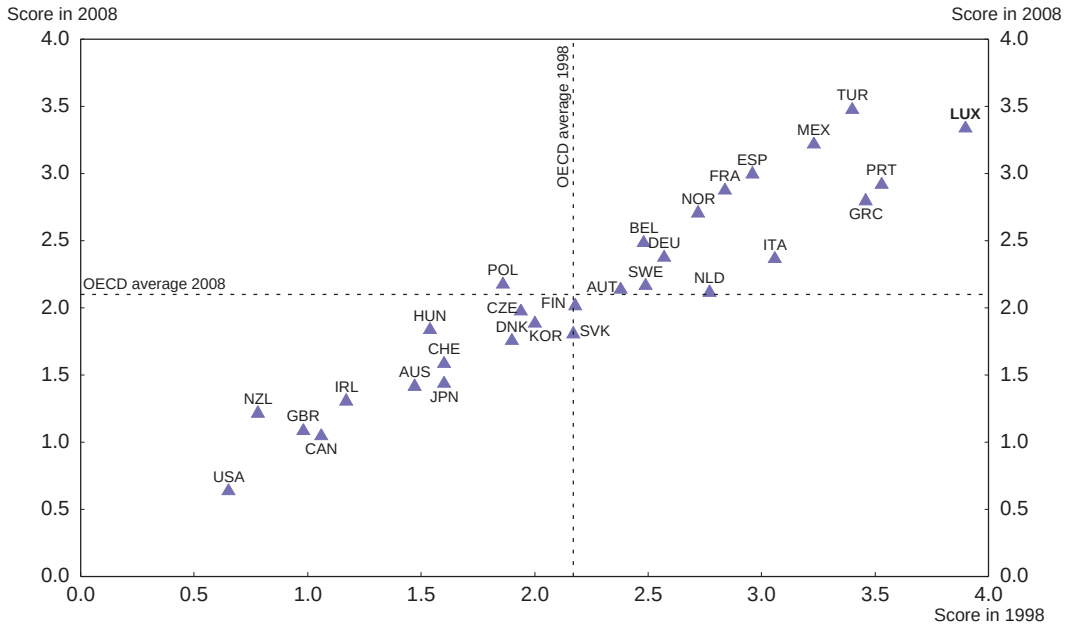
More flexible employment protection would boost productivity and create jobs for young people

25. The employment protection legislation (EPL) system in Luxembourg is the strictest in the OECD (Figure 13). Of particular concern are the heavy restrictions on temporary contracts. Although it is important to avoid dualism in the labour market, temporary contracts can be well–adapted to the circumstances of some employers and workers. Restrictive regulation of these contracts limits their use and only just under 7% of workers were on temporary contracts in 2008, mostly in the education and hotels and

restaurant sectors. Although the overall strictness of rules governing regular contracts are only slightly above the OECD average, collective dismissals for those on regular contracts are particularly tightly regulated (OECD, 2006). There have not been major reforms in this area over the past two decades.

Figure 13. Strictness of employment protection[1, 2]

Scale index of 0–6 from least strict to strictest regulation



1. Luxembourg data are from 2003 and 2008.
2. The OECD indicators of employment protection are synthetic indicators of the strictness of regulation on dismissals and the use of temporary contracts. For more information and full methodology, see www.oecd.org/employment/protection.

Source: OECD, *Labour, Employment protection database*.

26. Cross–country empirical evidence suggests that overall labour utilisation rates are not robustly correlated with the tightness of employment protection legislation (EPL). This is because there are offsetting effects of tight EPL on reducing employers' hiring incentives and limiting employers' ability to shed labour (Bassanini and Duval, 2006). However, there is evidence that strict EPL increases the average duration of unemployment spells along with employment rates of older workers at the expense of younger workers, and inhibits the reallocation of labour across sectors and firms, thereby reducing labour productivity. Although EPL may protect workers for a time after a large shock, the negative consequences of tight EPL may tend to show up most strongly in the recovery phase of shocks when labour may need to be reallocated between sectors and tight EPL inhibits firms' hiring incentives.

27. To reduce the negative impacts of tight EPL, the 2006 *Survey* recommended several reforms. These included removing undue restrictions on temporary contracts by allowing a longer total duration of fixed–term contracts and more renewals;[3] lifting thresholds for collective dismissals; reducing additional

3. There is a literature arguing that social costs, such as increased use of unemployment insurance, to firing workers justify policies such as layoff taxes that encourage firms to internalise these social costs by reducing the rate at which they lay off workers. These social costs can be particularly high in countries like Luxembourg with generous unemployment insurance. Instead of addressing this externality with layoff taxes, some countries instead seek to reduce these social costs through tighter EPL and in particular restrictions on the use of temporary contracts that can be associated with more regular unemployment spells once contracts come to an end. In practice policymakers need to consider the trade-off between the

notice periods and severance payments following the negotiation of social plans; and extending trial periods for regular contracts to ensure that protection for younger workers with low seniority does not unduly reduce employers' incentives to hire younger workers. Implementing these reforms now would encourage recovery in the labour market. Luxembourg's youth employment rate is amongst the lowest in the OECD. If Luxembourg reduced its EPL score to the OECD average, the youth employment rate in normal times could be boosted by up to two percentage points (Bassanini and Duval, 2006), especially if accompanied by reforms to boost labour supply. The positive effects on youth employment could be even larger in the aftermath of the current recession (OECD, 2008a).

Policy reforms to raise labour supply

28. Reforming wage indexation, minimum wages and employment protection legislation would boost aggregate employment rates by ensuring that legislated wage and employment conditions do not unduly reduce firms' demand for labour and price marginal workers out of the labour market. To ensure that these reforms also translate into higher employment rates amongst resident workers and labour supply is raised more generally, reforms to Luxembourg's tax and benefit system are necessary. Social spending on income support has also increased substantially in recent years. In terms of share in net national income, Luxembourg is second after Denmark in the OECD (Grubb, 2007).

Low–wage and inactivity traps can be alleviated by in–work–benefits

29. Labour supply decisions can be analysed through a framework that assumes that individuals choose to work the number of hours that satisfies their own preferences for consumption and leisure subject to a budget constraint (Immervoll *et al.*, 2005).[4] Work incentives are influenced by marginal effective tax rates (METR), which relate to how much can be gained by working more, and participation tax rates (PTR), which relate to how much can be gained from working at all. Although marginal tax rates in Luxembourg are relatively low, the combination of generous benefit replacement rates and the rapid withdrawal of many of those benefits raise METRs and PTRs for some low–income earners. Overall, METRs for average hourly wage employees seeking to increase their hours are close to the OECD average. However, METRs for one–earner married couples (both with and without children) moving from ⅓ to ⅔ of full–time hours are the highest in the OECD. These high rates imply that some households within this income range would be financially better off not increasing their hours worked (OECD, 2007). These weak incentives are largely the result of the rapid claw back of the RMG as earnings increase.

30. Participation tax rates for the unemployed are also often very high. PTRs for the short–term unemployed in Luxembourg are high for all household types, and the financial benefit of taking a full–time job, or accepting a lower paying job, in the first year of unemployment is particularly low compared to the

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benefits of greater labour market flexibility and the social impact of lay-offs. Luxembourg's heavy restrictions on temporary contracts appear to go too far in reducing labour market flexibility.

4. Because the slope of the budget constraint corresponds to the net increase in disposable income from undertaking an additional hour of work, it is affected by marginal tax rates and the rate at which social benefits are withdrawn as individuals in employment increase their hours worked (the intensive margin) or as unemployed or inactive individuals transition to employment (the extensive margin). The implied marginal tax along the intensive margin is often referred to as the Marginal Effective Tax Rate (METR) and the implied marginal tax rate along the extensive margin is often referred to as the Participation Tax Rate (PTR). To take into account evidence from microeconometric studies that labour supply elasticities at the extensive margin are greater than labour supply elasticities at the intensive margin, individual preferences in this model incorporate a fixed cost of working (Immervoll *et al.*, 2005; Gruber and Saez 2002). The model predicts that labour supply will be negative related to METR and PTRs and there is an extensive empirical literature that attempts to estimate how labour supply elasticities vary across countries and individuals with different characteristics.

OECD average (Table 3). Although the reduced benefits under the RMG mean that the incentives for the long–term unemployed to take average wage jobs are higher than for the short–term unemployed in most cases, PTRs remain high for individuals transitioning from the RMG to minimum wage or other low–paying jobs. The rapid withdrawal of benefits as labour market earnings increase also affects the primary objective of the welfare system to ease poverty (OECD, 2007): for lone parents as well as one–earner couples, gross earnings in the labour market have to reach 70% of the average wage before they move above a poverty threshold of 60% of the median income (Figure 14).[5]

Table 3. Participation tax rates (PTR) for short–term unemployed moving into low–wage jobs[1]

2005, different working hours, in percentage

	Less than ⅔ of full–time						Full–time or more					
	No children			Two children			No children			Two children		
	Single person	One-earner married couple	Two-earner married couple	Lone parent	One-earner married couple	Two-earner married couple	Single person	One-earner married couple	Two-earner married couple	Lone parent	One-earner married couple	Two-earner married couple
Australia	58	50	25	56	73	50	49	44	27	56	66	45
Austria	82	83	87	87	89	91	70	70	73	73	74	76
Belgium	85	75	76	77	73	76	76	67	69	70	66	69
Canada	90	90	90	86	88	97	72	73	71	79	80	79
Czech Republic	78	82	81	77	66	85	62	66	64	72	62	69
Denmark	75	75	75	80	80	78	78	76	75	81	81	77
Finland	64	75	64	77	80	64	68	76	68	80	82	72
France	74	70	74	70	69	72	77	74	76	73	72	76
Germany	88	84	102	93	93	108	77	73	86	80	79	90
Greece	57	60	45	67	70	51	51	53	43	55	57	44
Hungary	62	65	62	65	65	65	61	62	61	64	64	62
Iceland	73	59	74	79	64	79	63	53	63	68	58	69
Ireland	41	56	40	9	54	44	42	54	42	32	58	45
Italy	89	91	89	90	89	92	72	75	72	77	77	75
Japan	67	65	68	64	63	72	52	51	53	49	49	55
Korea	45	45	45	46	45	45	35	35	35	35	34	34
Luxembourg	90	88	85	91	86	85	90	87	86	93	89	89
Netherlands	72	70	70	71	72	69	76	75	75	76	76	75
New Zealand	62	44	35	66	48	50	51	47	31	69	55	42
Norway	74	74	74	84	76	76	74	74	74	81	76	76
Poland	82	83	65	99	72	71	66	67	55	85	68	59
Portugal	113	111	116	108	108	115	86	81	87	83	79	87
Slovak Republic	56	51	61	48	43	61	47	39	50	42	34	51
Spain	72	71	72	81	80	85	70	69	70	79	79	81
Sweden	74	74	74	82	77	74	74	74	74	80	76	74
Switzerland	77	79	75	88	83	82	78	79	77	87	89	84
Turkey	69	69	69	69	69	69	57	57	57	57	57	57
United Kingdom	68	68	38	73	71	43	57	57	37	68	68	39
United States	76	74	76	54	50	75	71	69	71	62	58	72

1. The short–term unemployed person is assumed to have earned an average wage before becoming unemployed.

Source: OECD, *Benefits and Wages 2007: OECD Indicators*.

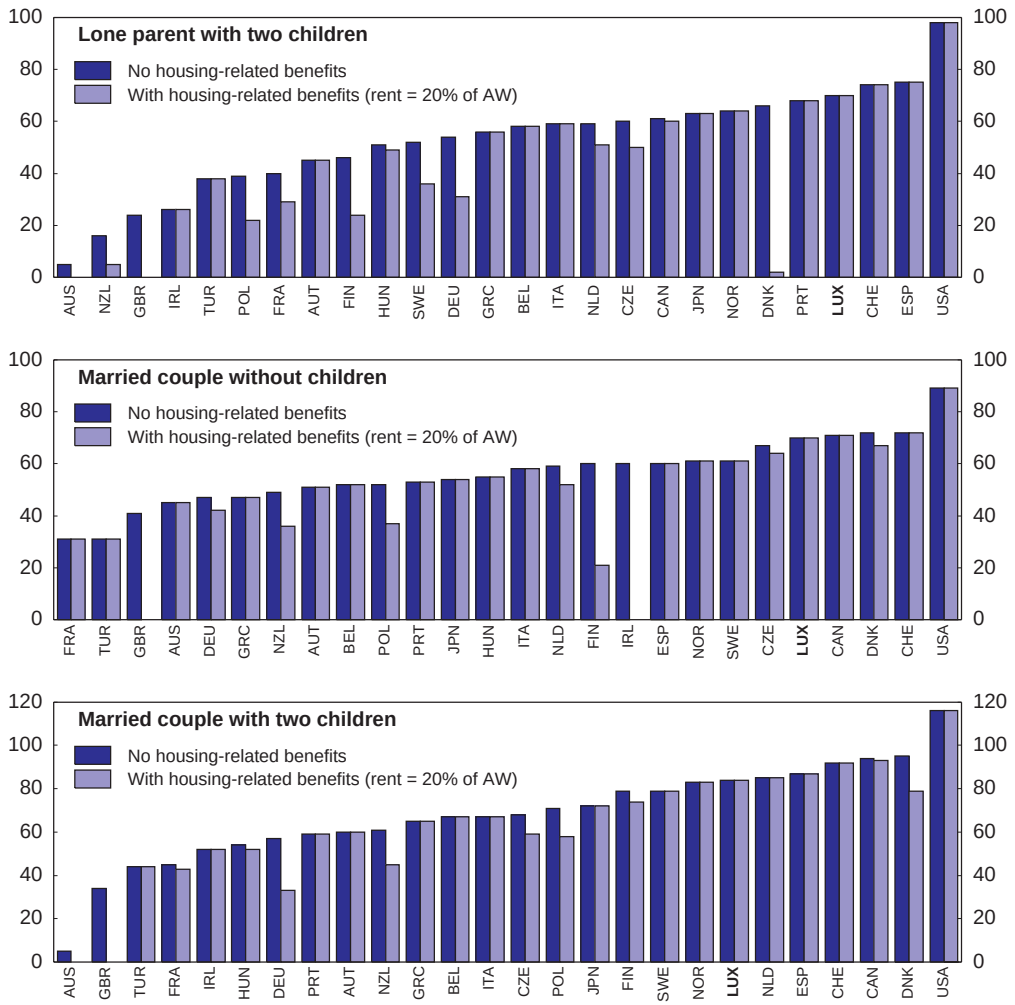
5. Moreover, the generosity of the benefit system provides little incentive for low-skilled unemployed Luxembourg residents to relocate to other countries in search of better employment prospects. This helps to raise reservation wages for Luxembourg workers relative to potential cross-border workers in surrounding regions.

31. The costs of these potential low–wage and inactivity traps in Luxembourg are hard to measure precisely. There is a dearth of empirical studies attempting to identify how the design of the tax–benefit system affects labour supply in Luxembourg and the issue is complicated by the large flows of cross–border workers from neighbouring countries with different wage setting and tax–benefit systems. Nevertheless, the costs are likely to be high (Pierrard, 2008). Empirical studies of cross–country differences in employment rates suggest that high unemployment benefit replacement rates tend to significantly reduce employment rates (Bassanini and Duval, 2006), while microeconometric evidence for other countries suggests that labour supply is very sensitive to high participation tax rates (Blau and Kahn, 2007; Blundell and Macurdy, 1999; Chetty, 2009; Eissa and Hoynes, 2006; Gruber and Saez, 2002; Immervoll *et al.*, 2005; Saez *et al*. 2009).

32. Cross–country econometric analysis suggests that, if Luxembourg were to reduce its average unemployment benefit net replacement rate (measured over five years) to the average of OECD countries, the unemployment rate could fall by up to 1 percentage point (Bassanini and Duval, 2006). Although strong economic growth over the past decade has somewhat masked these weaknesses in the design of the tax–benefit system, the simultaneous rise in long–term unemployment amongst less skilled and inexperienced resident workers is a sign that the labour market is not functioning as well as it should. Analysis of labour market flows within Luxembourg is also consistent with weak labour supply incentives; amongst the individuals that became unemployed between 2001 and 2006, 48% were still unemployed 12 months later (Brosius and Zanardelli, 2009). The fact that neighbouring countries have recently undertaken labour–supply enhancing reforms, while policies in Luxembourg have remained unchanged, is likely to have further reduced residents' relative incentives to work.

Figure 14. Gross earnings required to reach a poverty threshold of 60% of median income[1]

Percentage of average worker wage (AW), 2005



1. Results are shown in relation to the 60% of median income poverty threshold computed for a year around 2000 and uprated to 2005 with the consumer price index and relate to persons earning hourly wages equal to the weekly AW divided by 40. In countries where tax–benefit rules depend on working hours (*e.g.* in the case of IW benefits), net incomes may differ for different hourly wage rates. In the married–couple case, it is assumed that there is only one earner.

Source: OECD, *Benefits and Wages 2007: OECD Indicators*.

33. A number of reform options could raise incentives to supply labour in Luxembourg. Unemployment benefit replacement rates could be reduced, or phased down with the length of the unemployment spell,[6] and eligibility tightened for young people without work histories (OECD, 2006). Increases in social benefits could be decoupled from average wages and instead indexed to core inflation. A more comprehensive approach to increasing work incentives that would complement these reforms would be through a system of in–work benefits (IWBs). Around half of OECD countries have introduced such a system over the past two decades (Immervoll and Pearson, 2009). Although the design of IWBs

6. The ceiling for unemployment insurance payments is currently phased down from 250% of the social minimum for the first six months to 200% for the remaining 12 months and then 150% in cases where it is further extended. However, payments are not systematically reduced for claimants not concerned by these ceilings.

varies across countries, they generally work by offering a tax credit that is triggered when low–income individuals or families reach a particular threshold of hours worked in a week or month. Their key objectives are to raise employment rates of target groups by increasing the financial rewards for remaining in or taking up low–paid work, while at the same time increasing incomes of disadvantaged workers and their families. Their advantages over high minimum wage floors are that they can support the incomes of the low–skilled without simultaneously reducing firms' demand for low–skilled workers. They can also be more narrowly targeted at the working poor. The advantage of IWBs over standard out–of–work benefits is that they improve labour supply of target groups by reducing the high participation tax rates that often apply to disadvantaged groups transitioning from welfare to work. The principal disadvantages of this type of scheme include reducing the relative living standards of people who cannot find employment and higher effective marginal tax rates further up the income distribution as in–work benefits are phased out.

34. Accumulated empirical evidence from those countries that have introduced in–work benefits (Immervoll and Pearson, 2009; Blundell and Hoynes, 2004; Eissa and Hoynes, 2006) suggests that, although the positive employment effects amongst low–skilled and other disadvantaged groups have been widespread, IWBs have been most effective in achieving their twin equity and efficiency goals when:

- They are generous enough to significantly alter the benefits of working *vis–à–vis* not working. For example, the *Prime pour l'emploi* (PPE) introduced in France appears to have had only a small impact on employment rates of low–skilled workers in part because the in–work benefits are low.

- It is relatively simple for targeted individuals and households to assess their eligibility, and then apply for and receive the benefits they are entitled to.

- They distinguish between low wages and low working hours to ensure that benefits are targeted at the low–skilled.

- They target all low–skilled individuals facing large work disincentives, and not just families with children.

- They do not in parallel create disincentives to work for second–earners.

35. Given these complex issues, the precise design of a system of in–work benefits for Luxembourg would have to be carefully evaluated. The introduction of such a system would also have to be accompanied by complementary reforms to minimum wages to ensure that the reform both raised work incentives and boosted disposable incomes for targeted individuals and families. IWBs would have to be customised to the distribution of working hours in Luxembourg (Immervoll and Pearson, 2009).[7] Although the benefits of well designed in–work benefits could be substantial (Box 6), it must be remembered that policies to make work pay do not "solve" the problem of low employment and low wages of those with low skills. In the case of low–skilled labour, the most direct way of addressing limited earnings potential and employability is to improve skills and human capital of this group (Immervoll and Pearson, 2009).

7. The government should also consider their impact in the current context of weak economic growth and labour demand and higher rates of involuntary unemployment. Although IWBs that address labour supply are unlikely to raise employment levels in a weak labour market, they are likely to be a more efficient way of cushioning income losses than increases in the minimum wage (Immervoll and Pearson, 2009).

Box 6. The simulated impact of introducing in–work benefits in Luxembourg

Evidence from an OECD micro–simulation study implies that the introduction of a simple in–work benefit financed by higher taxes on higher income workers could enhance welfare in Luxembourg (Immervoll *et al.*, 2005), depending on the social welfare function. Redistribution with in–work benefits tends to be less costly than by means of out–of–work benefits. Table 3.4 compares the simulated impact of two policies that redistribute income from high–income to low–income households under different assumptions about the participation elasticity (η) and the hours of work elasticity (ε). The "demogrant" policy (pure lump–sum transfer based on demographic characteristics) redistributes income from high-wage earners to both low–wage earners and the unemployed. The "working poor" policy redistributes incomes from high–wage earners to low–wage earners, while keeping the incomes of the unemployed constant. Efficiency denotes the marginal efficiency cost of the extra tax used to finance the higher welfare costs – a negative number is an efficiency cost. The trade–off denotes the ratio of the welfare reduction of losers to the welfare increase of gainers from the reform.

The simulations suggest that under most plausible scenarios the "working poor" policy involves a smaller loss in efficiency and a smaller trade–off than the "demogrant" policy in Luxembourg, though the relative effects on efficiency and the trade–off depend on both the participation and the hours of work elasticity (Table 4). For example, if the participation elasticity was zero (which is highly unlikely), there would be no relative efficiency dividend in Luxembourg under the working poor policy. Similarly, the trade–off between the welfare reduction of losers and the welfare increase of gainers increases as the hours of work elasticity increases.

Table 4. The simulated welfare effects of a "working poor" policy in European countries

	Benchmark scenario				Large hours responses				Working poor policy		
	η= 0.2 (on average) and ε = 0.1				η= 0.2 (on average) and ε = 0.2						
	Demogrant policy		Working poor policy		Demogrant policy		Working poor policy		Share of gainers across family income deciles		
	Efficiency	Trade-Off	Efficiency	Trade-Off	Efficiency	Trade-Off	Efficiency	Trade-Off	Average deciles 1-3	Average deciles 4-6	Average deciles 7-10
Luxembourg	-0.26	1.98	-0.06	1.29	-0.38	2.82	-0.22	2.71	0.90	0.67	0.32
Scandinavian countries	-0.67	13.26	0.42	3.10	-0.83	20.89	No Gainers		0.82	0.55	0.47
Other European countries	-0.36	2.88	-0.02	1.28	-0.50	5.38	-0.27	7.35	0.79	0.64	0.36

Source: Immervoll, H. *et al.* (2007), "Welfare Reform in European Countries: A Microsimulation Exercise".

Overall, the aggregate relative benefits of a "working poor" policy in Luxembourg are lower than in many other European countries where average participation tax rates are considerably higher. Nevertheless, because of the high marginal tax rates that apply to some part–time workers, as well as the high participation tax rates for the short–term unemployed and those long–term unemployed looking for low–wage or part–time employment, in–work benefits could be particularly beneficial in raising labour supply of these groups. In addition, the gainers from a well–designed "working poor" policy are likely to be heavily concentrated in the bottom half of the income distribution.

Work incentives for second–earners and lone parents could be improved

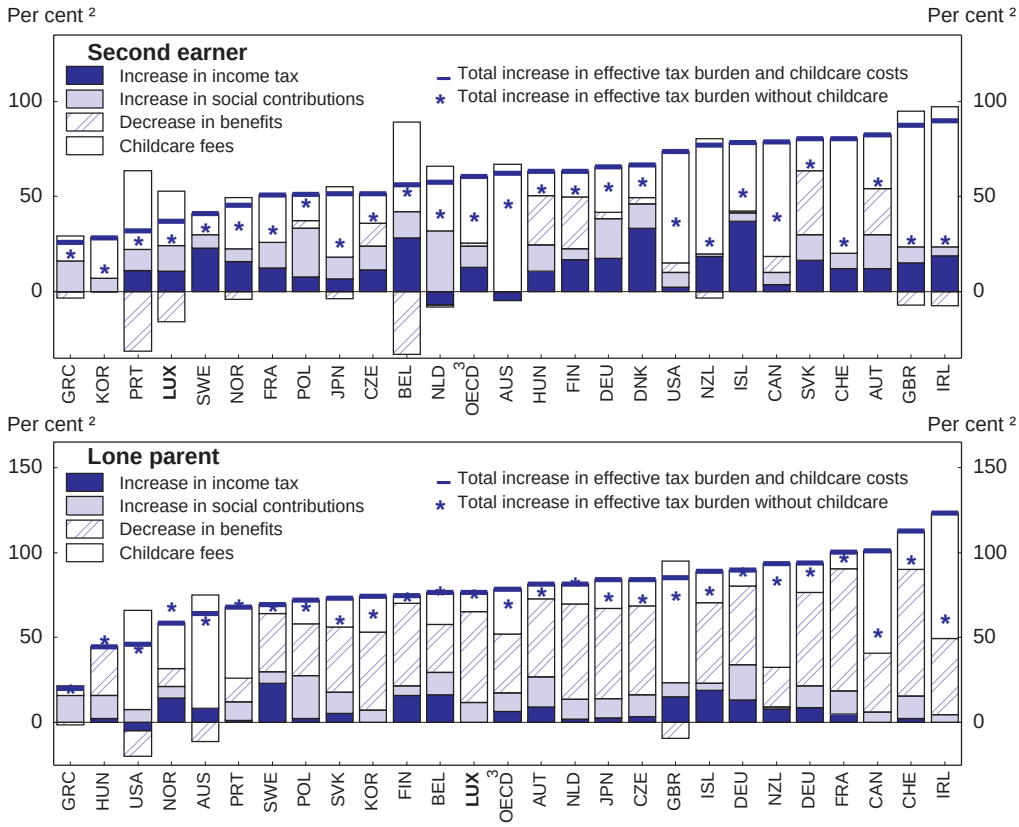
36. Empirical research suggests that the labour supply of second earners (usually women) with children and sole parents is more sensitive to economic incentives than for other types of workers. Out–of–pocket childcare costs can also be an important barrier to raising their labour force participation rates (Blau and Kahn, 2007; Immervoll *et al.*, 2008; OECD, 2007). Participation and marginal tax rates on second earners and sole parents should therefore be kept low and child care costs should not soak up too much of the additional income derived from working.

37. Overall, Luxembourg appears to do a reasonable job of preserving work incentives for many second earners compared to other OECD countries (Immervoll *et al.*, 2008). Although joint taxation of

couples usually raises effective tax rates for second earners, there is a generous tax deduction if they work. This helps to keep participation tax rates for second earners lower than for primary earners, or second earners in other countries. In addition, generous rebates keep out–of–pocket childcare expenses low for most families, despite the fact that fees charged by childcare centres rank amongst the highest in the OECD (32% of the average wage). This implies that second–earners keep most of their additional earnings, even when taking a low–wage job (OECD, 2007). For example, second–earners in Luxembourg with two children under the age of five taking up a full–time job retain 63% of their additional earnings once income taxes and social contributions, reductions in benefits and childcare fees are taken into account (Figure 15). This is high compared to other countries, where out–of–pocket childcare fees can soak up more than half of additional earnings.

Figure 15. Moving into low–wage jobs: what is left after childcare

Childcare fees and change of taxes and benefits relative to earnings[1]



1. Transitions from labour–market inactivity to a full–time low–wage job (67% of AW). Same family situations as in Chapter 3 (Table 3.5) of the source publication except that children are aged two and three. Assumes full–time centre based care while in work and no childcare costs while out of work. Benefits available only on a temporary basis immediately following the transition into work are not taken into account. See sub–section c for information on childcare fees and Annex A of the source publication for further details on the model calculations.
2. Per cent of gross earnings in new job.
3. OECD average excludes Italy, Mexico, Spain and Turkey.

Source: OECD, *Benefits and Wages 2007: OECD Indicators*.

38. Nevertheless, some second earners and lone parents still face barriers to increasing their labour supply and, despite increases in recent years, employment rates of second–earners are low compared with other OECD countries. Distortions include:

- Participation tax rates for low–income second earners are close to 100% when spouses are in the bottom decile of the earnings distribution.
- Marginal tax rates for second earners are higher than marginal tax rates on primary earners when primary earners are in the top half of the earning distribution, which could reduce second earners' incentive to increase hours (Table 5).
- Lone parents moving into low–wage jobs keep just 23% of their additional earnings once child–care costs and changes in taxes and benefits are taken into account.

Table 5. Marginal tax rates for second earners

Countries	Primary earners	Secondary earners	PE tax/ SE tax
Austria	0.52	0.44	1.19
Belgium	0.65	-0.60	1.08
Denmark	0.58	0.54	1.07
Finland	0.54	0.47	1.16
France	0.53	0.53	0.99
Germany	0.54	0.59	0.92
Greece	0.37	0.28	1.32
Ireland	0.43	0.43	1.01
Italy	0.52	0.48	1.07
Luxembourg	0.41	0.44	0.95
Netherlands	0.52	0.47	1.12
Portugal	0.44	0.42	1.03
Spain	0.37	0.32	1.17
Sweden	0.59	0.54	1.09
United Kingdom	0.37	0.31	1.21

Source: Immervoll, H. *et al.* (2008), "An Evaluation of the Tax–Transfer Treatment of Married Couples in European Countries", *EUROMOD Working Paper*, No. EM 7/08.

39. Reforms could focus on raising the incentives of lone parents to take up employment and reducing participation tax rates on second earners with very low–income spouses. This could best be done within a system of in–work benefits as outlined above. With regard to childcare, the system of rebates does a good job of keeping out–of–pocket expenses low. However, the labour force participation rates of second earners and lone parents relative to primary earners are amongst the lowest in the OECD, as are childcare enrolment rates for children under the age of four (OECD, 2007). The high fees charged by childcare centres are suggestive of significant supply constraints, while the generous parental and educational leave entitlements outlined earlier may also be contributing to the reduced labour supply of second earners. More research is warranted to understand the relative importance of these different factors.

Incentives for older workers to remain in employment are weak

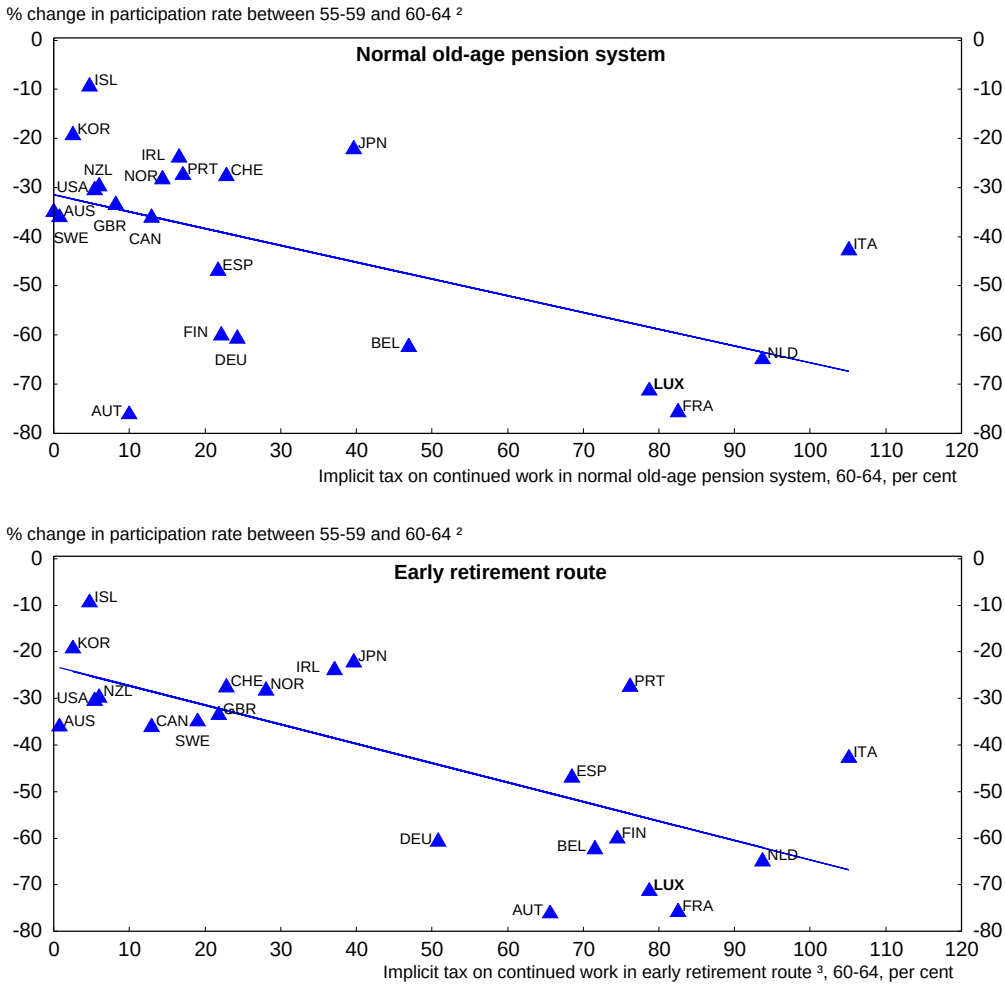
40. Generous pension replacement rates and access to pre–pension and early retirement schemes help to explain the very low employment rates of older workers in Luxembourg compared to other OECD countries (Duval, 2003). Although increasing post–secondary education rates mean that fewer workers are qualifying for early retirement schemes over time, there is still little incentive to work beyond the age of 60.[8] There is a statistically significant negative correlation across OECD countries between

8. Implicit taxes on continued work are calculated as the net cost of remaining in work for an additional year (foregone pension benefits and additional contributions minus the increase in future pension benefits) as a

implicit taxes and changes in labour force participation amongst older workers (Figure 16). Luxembourg fits this pattern well. Implicit tax rates on continued work for workers over the age of 60 are amongst the highest in the OECD, as is the decline in labour force participation between the ages of 55–59 and 60–64.

Figure 16. Old male participation rate and implicit tax rates on continued work

Single worker APW earnings, 1999[1]



1. Because the data underpinning this figure are from 1999, some countries' implicit tax rates have changed considerably. Consequently, this figure is no longer representative for Switzerland, Finland, the Netherlands and France.
2. Calculated as the difference between the 60–64 and 55–59 participation rates divided by the 55–59 participation rate, in per cent.
3. The early retirement route is modelled as the unemployment benefits / assistance pathway into retirement with the exception of Ireland, where the modelling refers to the pre–retirement allowance, and Luxembourg, where disability benefits were considered, given their widespread incidence among pensioners. In those countries where it was considered that no early retirement scheme could be widely used to withdraw from the labour market before the minimum pensionable age (Australia, Canada, Iceland, Italy, Japan, Korea, New Zealand, Norway, Sweden, Switzerland and United States) the retirement scheme considered in the chart is simply the regular old–age pension system.

Source: Duval, R. (2003), "The Retirement Effects of Old–Age Pension and Early Retirement Schemes in OECD Countries", *OECD Economics Department Working Papers*, No. 370, OECD, Paris; and OECD (2010), *Labour Force Statistics database*.

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ratio of annual average earnings. They are a broader measure of pension generosity than the replacement rate (Duval, 2003).

41. The 2006 *Survey* had many recommendations for increasing older worker participation rates and these still serve to boost employment. These included phasing out pre–pension systems and increasing the discount on early retirement pensions relative to those taken at the official retirement age to the actuarially neutral rate. In addition, incentives to work could be strengthened by reducing the overall generosity of pension benefits and making it harder to accumulate imputed years of contributions. Such reforms would reduce implicit tax rates on continued work and would be a particularly important avenue for bolstering labour utilisation rates as Luxembourg's population continues to age. Similar reforms have been very effective in other European countries such as France and the Netherlands. If the implicit tax rate on continued work in Luxembourg was reduced to the OECD average, the employment rate amongst 55 to 64 year olds could be boosted by more than 5 percentage points (Bassanini and Duval, 2006). At the same time, insufficient incentives to remain in work are just one of the structural problems with Luxembourg's pension and retirement system (Chapter 1). Consequently, reforms addressing work incentives must also be considered within the broader context of improving pension sustainability.

Improving activation policies and labour market programmes would reduce unemployment

42. Publicly–funded employment services can be an effective way of identifying the barriers to employment. Intensive assistance can either match the unemployed with suitable vacant jobs with local firms, or offer retraining and other support to gain the skills necessary to find a job. Employment services can also help to identify those unemployed not engaging in active job search and offer a range of carrots and sticks to increase the intensity of job search. Activity testing is an essential complement to changes in tax–benefit systems that raise financial incentives to look for and accept low–wage jobs. More generally, high replacement rates are only sustainable if there is a strong approach to labour market activation. Empirical evidence indicates that employment rates are higher in those countries that spend more money per unemployed person on active labour market programmes (ALMPs) such as training, job creation schemes and wage subsidies to firms (Bassanini and Duval, 2006).

43. The Luxembourg employment service (ADEM) does not provide adequate support to jobseekers and firms (Grubb, 2007; OECD, 2006). Caseworkers assigned to unemployed people are overburdened, which reduces the effectiveness of assistance. The agency often misclassifies job seekers' skills and placement officers do not always understand employers' needs, leading to unsuitable people being sent to interviews. In turn, this undermines confidence in the agency and means that employers tend to draw employment from the pool of cross–border workers instead of domestic workers looking to change jobs. There are also too many placement services catering to different types of unemployed people, which spreads resources too thinly and prevents co–ordination of activities and information flow.

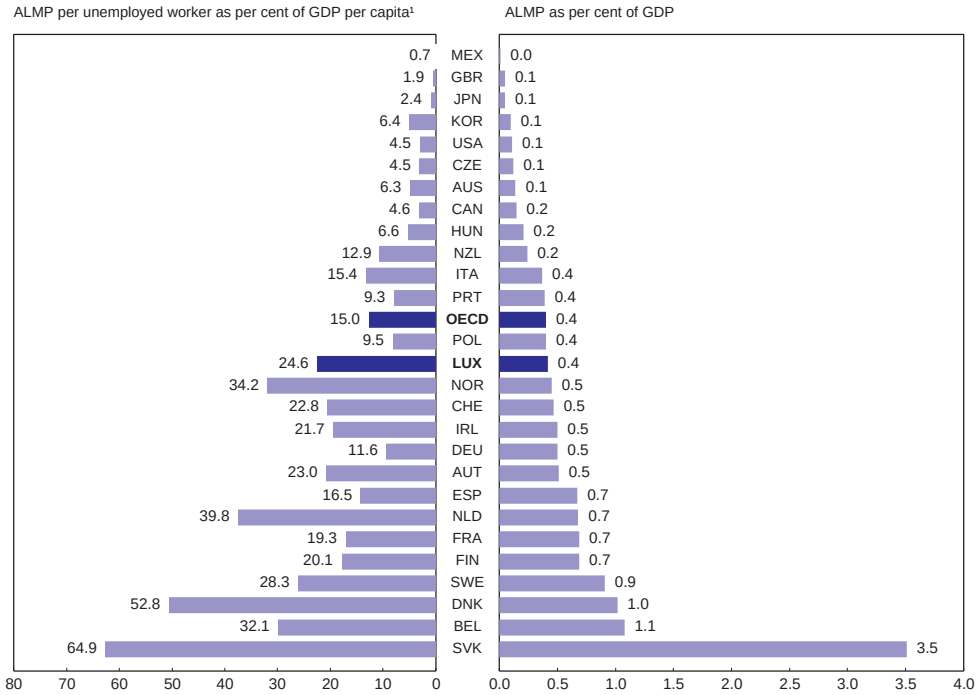
44. The activation system has other weaknesses. Although activity testing has increased in recent years and the agency is empowered to suspend insurance if the unemployed do not comply with job search or training requirements, there is insufficient gradation in penalties effectively and fairly to encourage job search. A further problem is the split responsibility for the unemployed between ADEM and the SNAS (*Service National d'Action Sociale*) that administers the RMG. Unemployed people sign integration agreements and become eligible for more intensive assistance only once they are no longer eligible for unemployment insurance. This means that short–term unemployed people at high risk of becoming long–term unemployed do not receive adequate early intervention. In addition, the two organisations run separate labour market programmes and it appears that too many people are assessed as unfit for, or unable to find, work.

45. The surge in unemployment since the beginning of the financial crisis means that it is crucial that support services for the unemployed operate effectively to help prevent short–term unemployment translating into long–term unemployment. This can be achieved by reducing the caseloads of ADEM employees by adding staff and rationalising the placement services. This would allow more personalised

assistance for the unemployed (OECD, 2006). The organisation should be more responsive and there is scope to encourage competition between local employment agencies by issuing public ratings of their success in matching jobseekers with available jobs. More could also be done to ensure a seamless transition between unemployment insurance and the RMG and provide early intervention to jobseekers at risk of becoming long–term unemployed. This could be done by instituting a mandatory assessment of jobseekers' progress after three months of registration with ADEM: those assessed as at risk being required to sign integration agreements similar to that required of RMG recipients. Risk assessments should then be repeated as the length of an unemployment spell increases. Implementing the recommendations in this regard of the 2006 *Survey* would be particularly useful in the current circumstances of increased unemployment.

46. Job prospects amongst the unemployed and cost effectiveness would benefit from a better design of labour market programmes. Luxembourg's spending on active labour market programmes per unemployed person (scaled by GDP *per capita*) is about average in the OECD (Figure 17). Labour market programmes are subject to only a basic evaluation of their effectiveness, which makes it difficult to determine their true impact. The analysis that has been conducted has found "no systematic" favourable impact (Grubb, 2007); this is a concern when the government currently spends just under EUR 20 000 per unemployed person on ALMPs. This low effectiveness is partly because ALMPs in Luxembourg are heavily biased towards temporary job creation schemes. In 2008, only 25% of ALMPs had any training content. Job creation schemes are generous, excessively long (often 12 to 24 months) and many encourage "carousel" effects whereby most participants return to unemployment after their completion. The authorities could initiate a comprehensive review of existing active labour market programmes, institute a robust strategy to evaluate their effectiveness in accelerating jobseekers employment prospects and reducing long–term unemployment, and scrap any programme not delivering value for money. The savings accrued from more cost–effective labour market programmes could be diverted to supporting stronger activation policies.

Figure 17. Share of spending on active labour market programmes, 2007



1. Countries are ranked from highest to lowest labour market program share of GDP in 2007.

Source: OECD, *Labour Market Programmes database*.

Conclusions

47. With powerful macroeconomic forces driving employment growth in Luxembourg in recent decades, labour market institutions have had to deal with a number of complex challenges. The rapid development of the financial sector has necessitated a reallocation of capital and labour within the economy that has at times been painful for people trained to work in the economy's more traditional sectors. It has also encouraged the authorities to try to offset the impact on income inequality of high financial rewards from working in the financial sector through redistributive wage and benefits policies. Strong growth has attracted a large number of immigrants from linguistic and cultural backgrounds very different to that of longer–standing residents, as well as stimulating large flows of cross–border workers from neighbouring countries. The latter has in turn drawn attention to how the different design of labour market institutions and tax–benefit policies impacts work incentives on either side of the border.

48. In many ways, Luxembourg has coped well with these challenges. Employment rates amongst prime–aged males and females are high by international standards, the unemployment rate has long been below the euro area average, and income inequality has increased little over the past decade. Aspects of the design of labour market institutions and tax–benefit policies have contributed to these outcomes. Tax wedges and marginal tax rates are low for most workers and the tax–benefit system penalises many second earners less than in many other countries. The large cross–border employment flows also help to absorb the idiosyncratic shocks hitting the economy.

49. Nevertheless, important aspects of the country's labour market institutions and the design of the tax–transfer system would benefit from reforms towards current international best practice. The current system reduces firms' demand for younger and less skilled workers, and diminishes incentives to supply labour for older, younger and prospective low–wage workers. It also makes the labour market vulnerable should the future macroeconomic environment be less favourable than that of recent decades. Luxembourg is one of only a few OECD countries not to have instituted significant reforms to modernise labour market institutions and the tax–benefit system and is now lagging behind best practice. The gradual increase in Luxembourg's unemployment rate over the past decade is an indicator of the costs of this lack of reform.

50. Although the focus of the paper is on structural issues and longer term trends rather than the impact of the financial crisis and recession on labour market outcomes, an important lesson from the crisis is that for small, specialised, open economies like Luxembourg, strong growth cannot be taken for granted. Labour market institutions need to adapt to changes in economic circumstances. If longer run growth in the financial sector slows significantly, the imperfect design of local labour market institutions could interact with weaker labour demand to produce larger amounts of inactivity. Box 7 summarises the reforms outlined throughout the chapter that, if implemented, could significantly improve the overall functioning of the labour market.

Box 7. Policy recommendations to improve the functioning of the labour market

A number of reforms would increase the adaptability of labour market institutions and increase incentives to supply labour. Some of these recommendations were already set out in previous *Surveys* to help improve the functioning of labour markets so as to produce better employment outcomes and bolster living standards. The recovery from the recession represents an opportune time to tackle these reforms. Prompt action will help to keep the increases in unemployment temporary rather than permanent.

To boost overall labour demand and help the labour market respond to future economic shocks the authorities should:

- Reform the system of wage setting. As a first step, wages should be indexed to core rather than headline prices to help prevent energy shocks from being permanently built into the price level. Ultimately, the system of legislated automatic wage indexation should be ended to ensure that wages remain competitive and allow necessary adjustments in relative wages. Wage co–ordination remains desirable and the objective could be achieved by centralised wage bargaining.

- Enhance the effectiveness of the statutory minimum wage by ensuring that the focus in setting it is the economic impact. An independent Minimum Wage Council should be set up to set the minimum wage taking into account macroeconomic conditions, as well as impacts on low–skilled and inexperienced workers. Phase out minimum wage premia for workers with trade qualifications.

- In the period before the Council becomes operational, allow the minimum wage to fall relative to average wages by indexing to core inflation rather than average earnings.

- Reduce the strictness of employment protection legislation. Undue restrictions on temporary contracts should be limited by extending their total duration and facilitating renewals. To ease conditions for regular workers, lift thresholds for collective dismissals; reduce additional notice periods and severance payments following the negotiation of social plans; and extend trial periods for regular contracts.

To boost work incentives and ensure that the reforms to labour market institutions raise employment amongst resident workers the authorities can:

- Phase down unemployment benefit replacement rates for workers during the course of the insured period and further tighten young people's eligibility for unemployment insurance.

- Reduce the generosity of social benefits and decouple increases from average wages by indexing those benefits to core inflation only.

- Consider introducing a comprehensive approach to raising work incentives such as a system of in–work benefits (IWBs). Ensure that the system of IWBs is properly integrated with the existing tax–benefit system, is tailored to the distribution of working hours and that disposable incomes are genuinely raised for targeted individuals and families.

- Implement recommendations from previous *Surveys* to reform the pension and related schemes to reduce incentives for older workers to retire early.

- Improve the efficiency of the public employment service and strengthen activation policies by: rationalising placement services for different types of jobseeker; improving accountability of local employment centres by publicly rating their success in moving jobseekers into work; bringing forward interventions for jobseekers at risk of becoming long–term unemployed; ensuring that all RMG recipients with the potential to work are offered integration contracts; and raise resources available to ADEM for stronger activation.

- Comprehensively review existing active labour market programmes with a view to improving their effectiveness and impact on employment outcomes. Reallocate funding from all programmes that are not cost–effective to support stronger activation policies.

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