



GENDER DIMENSION OF THE LABOUR MARKETS OVER THE PAST TWO DECADES

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Abstract

Position of females on the European labour market has improved strongly over the past two decades. Changes in women's employment were not only positive, but also managed to alleviate the negative developments in male employment rates, becoming thus a major driving force behind the efforts to achieve Lisbon's employment goals. Yet, the observed changes were quite heterogeneous across countries and age groups. In particular, the process of female employment rates' convergence was slow, as countries with worse initial conditions achieved only slightly higher increases in women's employment rates. Older cohorts of women contributed most to the employment improvements, changes were also positive among prime-aged women, while the youngest ones experienced declining employment rates in a great majority of countries. A decomposition of the observed changes in female employment rates reveals that they were driven mostly by intensity improvements, i.e. pure "utilisation" of the labour among different cohorts of women. Increasing education levels played a relatively small role for the overall employment growth, while demography – though important for shifting the significance of particular age groups in the total workforce – had altogether virtually no effect for the overall female employment growth.

The reviewed country studies suggest that the major policies driving increasing intensity of female employment were concentrated in two areas: retirement policies and those regarding flexible employment arrangements. Limiting access to early retirement schemes and increasing female statutory retirement age prolonged women's labour market participation, and, in consequence, translated to increases in their employment rates. Reforms that aimed at introducing more flexibility into job contracts legislation, leading to more part time and/or more fixed term jobs, also appear to contribute positively to female employment rates, though the quality of these jobs remains a concern.



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1. Introduction

The aim of this paper is to present a picture of changes in female participation in European labour markets over the past two decades, and try to tackle the reforms in institutional setting which may have driven these changes. This analysis will serve as a background for further research within the Work Package. Changes in the institutional setting which we take into account reflect the socio-ecological transition subject to analysis within the NEUJOBS project, mainly its demographical and skill dimensions.

The analysis puts a particular attention to employment changes among women in different age groups, as both the observed changes and their institutional drivers have been quite heterogeneous across age. We also separate the analysis into two sub-periods: 1990s and 2000s, due to both various economic conditions in these two decades and data availability for New EU Member States.

Women's participation continuously rose over the last century in many advanced economies. In the US, at the beginning of 20th century, average labour force participation of women was about 20%, and by the end of the century it reached 60% (Costa 2000). Similar developments occurred in European countries, although to various extent. There were several factors behind the growth of female employment rates. Firstly, many authors pointed to changes in social attitudes, such as disappearing of stigmatisation of working married women and change in women's perception of professional careers (Pissarides 2003, Fernandez et al. 2004, Goldin 2006). Secondly, rising female educational levels contributed considerably to their higher participation rates (Pissarides 2003, Euwals et al. 2007). Also changes in household appliances technology, which allowed women to decrease the amount of time spent on housework, increased their engagement in the labour market: Greenwood et al. (2003) found that this factor can account for over the half of female participation change; Cavalcanti and Tavares (2008) suggest that increasing accessibility of the appliances resulted in 10%-15% growth of women's participation in the UK between years 1975-1999. Finally, also availability of easy contraceptive played a positive role in increasing women's employment in highly professional jobs (Goldin and Katz 2002, Bailey 2006).

There were also demand side factors driving female participation on the labour market, mainly the increasing share of service sector jobs and female-friendly occupations, as well as part-time jobs (Galor and Weil 1996, Jaumotte 2003, Pissarides 2003, Cipollone et al. 2012). Changes in tax-benefit systems encouraging female employment also played a role (Selin 2003, Bar and Leukhina 2005, Jaumotte 2003).

Our methodological approach in this paper merges the quantitative analysis and qualitative study. In the first step we assess to what extent changes in employment rate of people aged 15-64 into in a given time period were due to the changes the employment rates of women and men. Secondly, we decompose this changes into the contribution of the young (aged 15-24), prime-aged (25-44) and (45-54) and older (55-64) women to the overall female employment rate changes. Finally, for each of these age groups we decompose the contribution into three components: (i) demographics (i.e. the effect of shifts in the population age structure), (ii) quality (impact of changes in the educational

structure) and intensity (which is “pure” employment growth, changes in employment of particular socio-demographic groups). The methodology of decomposition is presented in Annex I.

In the second part of the report we rely on qualitative studies of six countries we select as interesting cases for an in-depth investigation. We review their institutional setting and its changes over the past two decades, concentrating on those policies which were most likely to impact female employment. We aim at presenting reforms and changes that were most probable drivers of the observed progress (or lack of it) in female employment intensity.

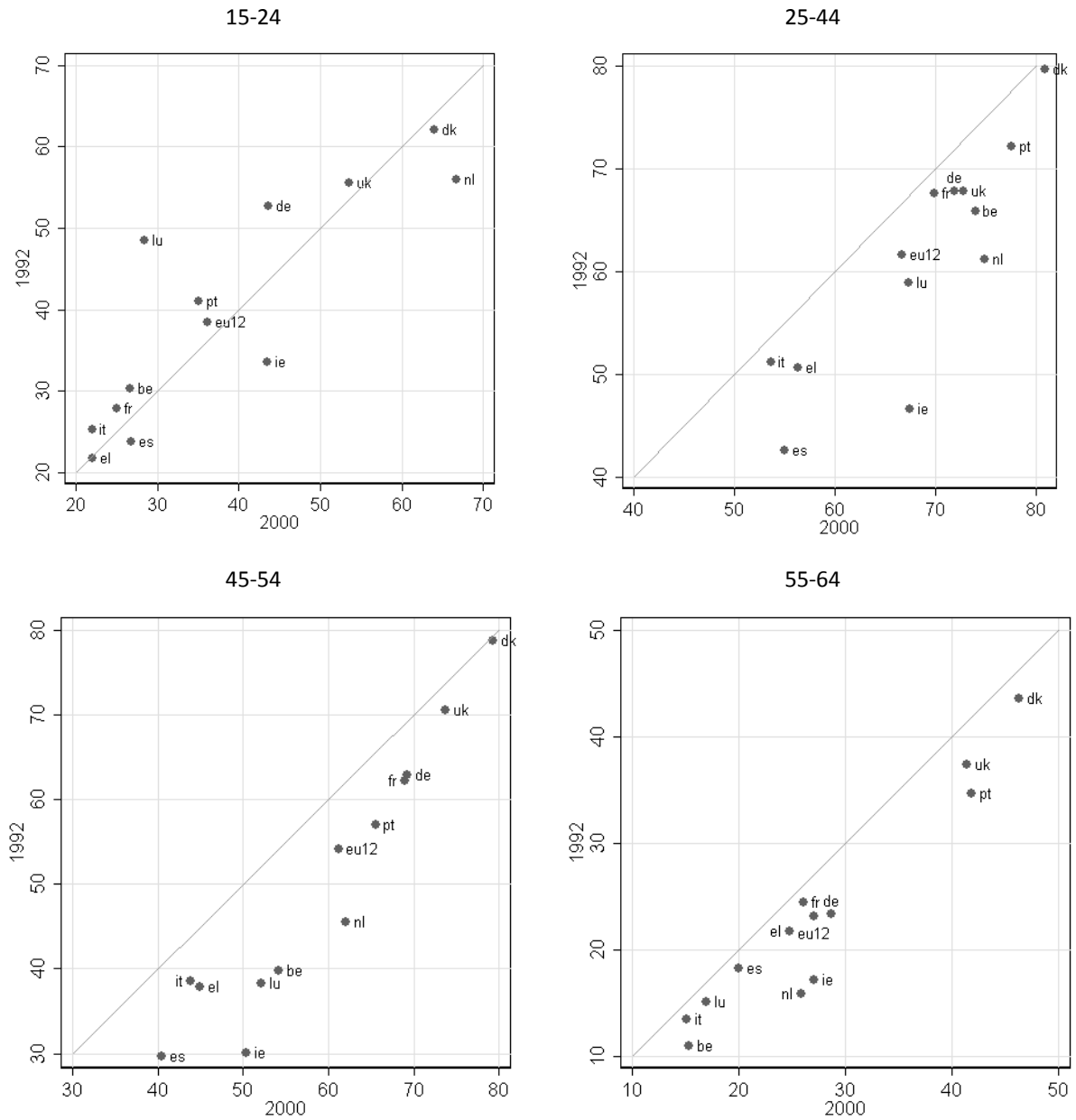
2. Male and female labour markets over the 1990–2011 period

The last two decades were a period of increasing employment in the EU countries. The increase in total employment rates was driven primarily by women, whereas the percentage of men in employment in fact fell. As a result, there was a substantial decrease in gender employment gap over the two decades. Between 1990 and 2000 in the EU12 it diminished by 7.8 p.p., though it was still large and amounted to 19.2 pp. The crisis of 2008 had an impact primarily on men, further contributing to lowering the EU27 gender employment gap from 17.1 pp. in 2000 to 11.6 pp. in 2011, and in the EU15 states from 18.6 pp. to 11.5 pp., respectively.

Changes in the overall female employment rates were strongly heterogeneous from the age perspective, with important differences over time and between age groups. Starting with the youngest cohorts, in the 1990s most EU12 countries did not experience any significant changes in the employment of women aged 15-24. The Netherlands and Ireland were notable exceptions, with growth in these employment rates of +10.8pp and +10.0pp respectively. Luxembourg, on the contrary, distinguished itself by a considerable fall of by 20.1pp (cf. Figure 1). The growth in female employment in this period came mainly from large increases in employment rates among the prime-aged (25-44) and older groups, both those aged 45-54 as 55-64. Again, there were large differences across countries. Ireland’s impressive progress concerned all of those age groups, though again, in each case the starting point was relatively low. Also the Netherlands enjoyed rapid employment growth across the age spectrum, particularly among the 55-64 year-olds. Interestingly, in the case of the Dutch prime-aged women, the starting point was at the level of European average and it exceeded it substantially by 2000s. None of the EU12 countries experienced a fall in employment rates among prime aged and older women.

The situation changed slightly in the following decade. There was still a general tendency of falling employment rate of young women (15-24 year old) among the analysed countries; the only significant exceptions being Estonia (improvement of +8.3pp) and Austria (+2.9pp). However, while the positive changes among prime aged women (25-44) in “old” EU countries slowed down considerably, those among New Member States changed little in the last ten years. Some countries which exhibited relatively low employment rates at the beginning of 2000s, such as Spain or Malta, experienced significant improvements, though the latter still distinguishes itself with very low female employment rates, in particular among women aged 45 and more. Positive employment trends among women aged 45+, observed in the 1990s in the EU12 countries, were spread among nearly all European countries a decade later. With a notable exception of Romania, all EU27 member states experienced significant improvements in employment of women aged 45-54 and older (55+). The greatest improvement among women aged 45-54 was observed in Spain (by 17.3%).

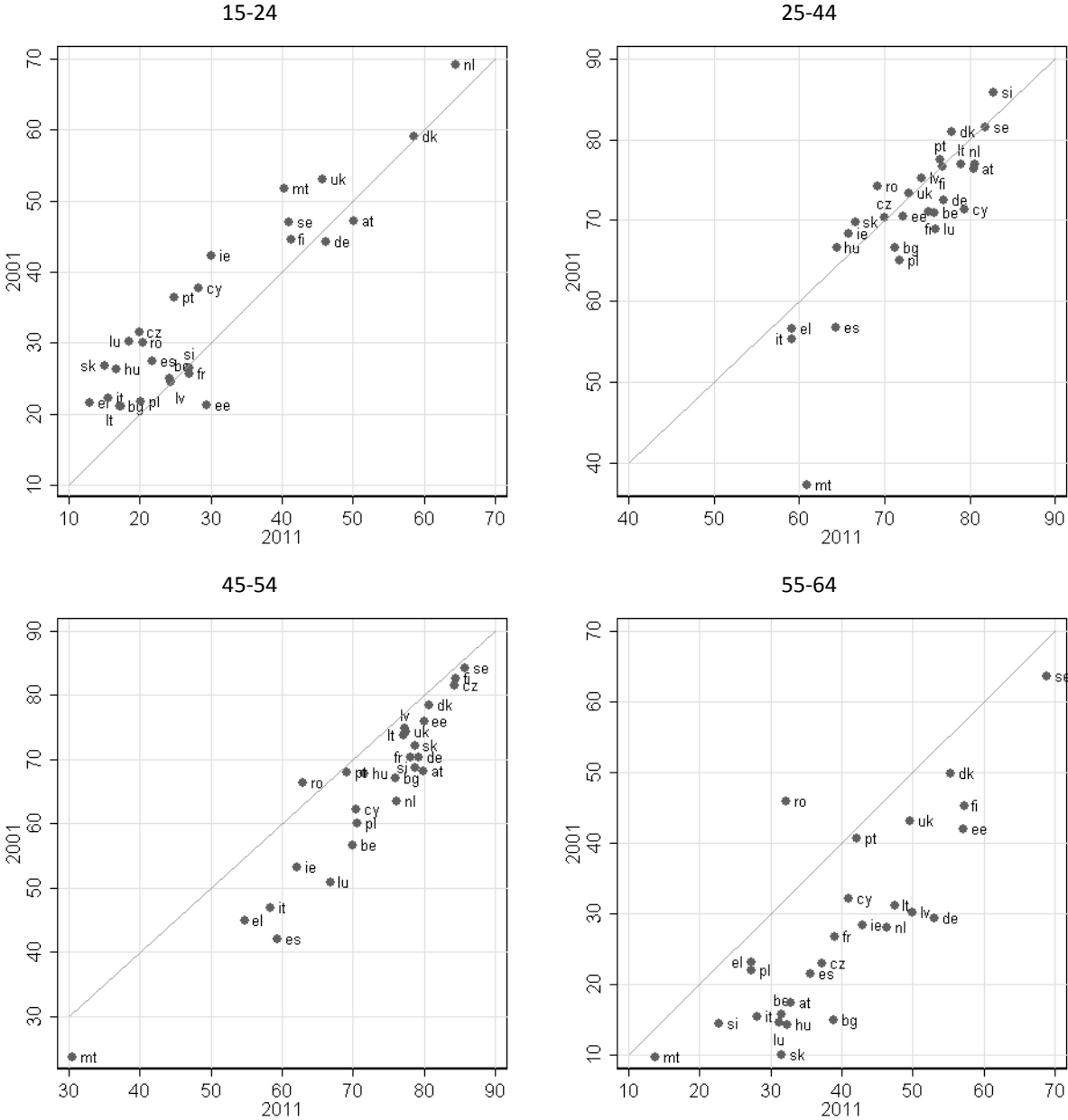
Figure 1. Women's employment rates in the EU12 countries, 1992 vs. 2000.



Source: Authors' calculations based on Eurostat data.

Furthermore, in both decades there was a clear negative relationship between the initial level of female employment rate and subsequent improvements, in virtually all age groups (though it was the weakest for the youngest cohorts). This might be seen as a sign of convergence (albeit slow) in women's employment patterns among European countries.

Figure 1. Women’s employment rates in the EU27 countries, 2001 vs. 2011.



Source: Authors’ calculations based on Eurostat data.

A question arises on the forces driving these changes, and their heterogeneity across time and countries. Historically, changes in social attitudes and the decreasing time burden of housework were important factors behind growing female labour market participation after the second world war (Pissarides 2003, Fernandez et al. 2004, Goldin 2006). In the 1970s several advanced countries started introducing changes into the institutional setting of the labour market with the aim of increasing female employment rates. These included modifications in the tax system or the family and benefit policies, which usually tended to discourage second earners from the labour market. As the analysis in section 5 shows, changes in the institutional background were also the major driver of changes in female employment rates in the 1990s and 2000s.

3. Decomposing the changes in employment growth: the role of demography, employment intensity and human capital

In this section we perform a decomposition of changes in employment rates (by gender and age and separately for the two sub-periods studied), to quantify the contribution of changes in demographics, human capital and labour intensity into change in women's employment rate over the selected periods. Contribution of demographic factor corresponds to changes in the age structure of the population of women – for instance, if the share of prime-aged women increases, it contributes to a rise in the overall employment rate as this age group has above-average employment rates itself; this part of the increase would be assigned to a demographic factor. Contribution of human capital factor is related to changes in the educational structure of successive cohorts of women – if, e.g. share of tertiary-educated among prime-aged women rises and share of less educated women decreases correspondingly, this (in most cases) raises this age group's employment rate and the overall employment rate in consequence – such change would be assigned to a human capital factor. Finally, intensity reflects “pure” changes in female employment rates, regardless of their education attainments or changes in the age structure – in other words changes in employment rates of particular subgroups distinguished on the basis of age and education. These reflect changes in female labour market participation and/or unemployment rates due to (usually) changes in the institutional setting shaping individual labour supply curves.¹ The decomposition's methodology is presented in Annex I and its detailed results in Annex II.

3.1 Sources of women's employment growth in Europe

The decomposition shows several interesting results. Firstly, results in Table 1 confirm that female employment was the major driver of positive changes in total employment rates. In 1990s men's contribution to employment change was higher than women's only in 5 of current 27 EU Member States – Denmark, Finland, Latvia, Slovenia and Sweden. In 2000s it was again the case in Sweden, and also in 5 New Member States: Bulgaria, Czech Republic, Poland, Romania and Slovakia. Over the entire period, women's employment rates declined in only four countries which initially had high women employment rates: Czech Rep., Romania, Slovakia and Sweden. In the remaining countries females' employment rates grew and, with exception of Finland, Portugal and Slovenia, contributed more to the overall employment growth than males'. In the 1990s males' employment rates in the EU15 were stagnant and in 2000s actually fell, whereas females' rose in both periods, in the 2000s even stronger than a decade earlier. In the New Member States the contribution of women's employment growth was also positive, though altogether smaller than that of men and smaller than in the UE15. Yet, this difference had a relatively small impact on the total EU27 pattern, where it was women's employment growth that drove the positive changes in total employment rates.

¹ Or due to business cycle factors. However, by decomposing changes in medium-term we are able to focus the analysis on medium-term employment shifts which are more likely determined by institutions.

Table 1. Contribution of males and females to total employment rate change in the EU countries in 1990s and 2001-2011 (in percentage points).

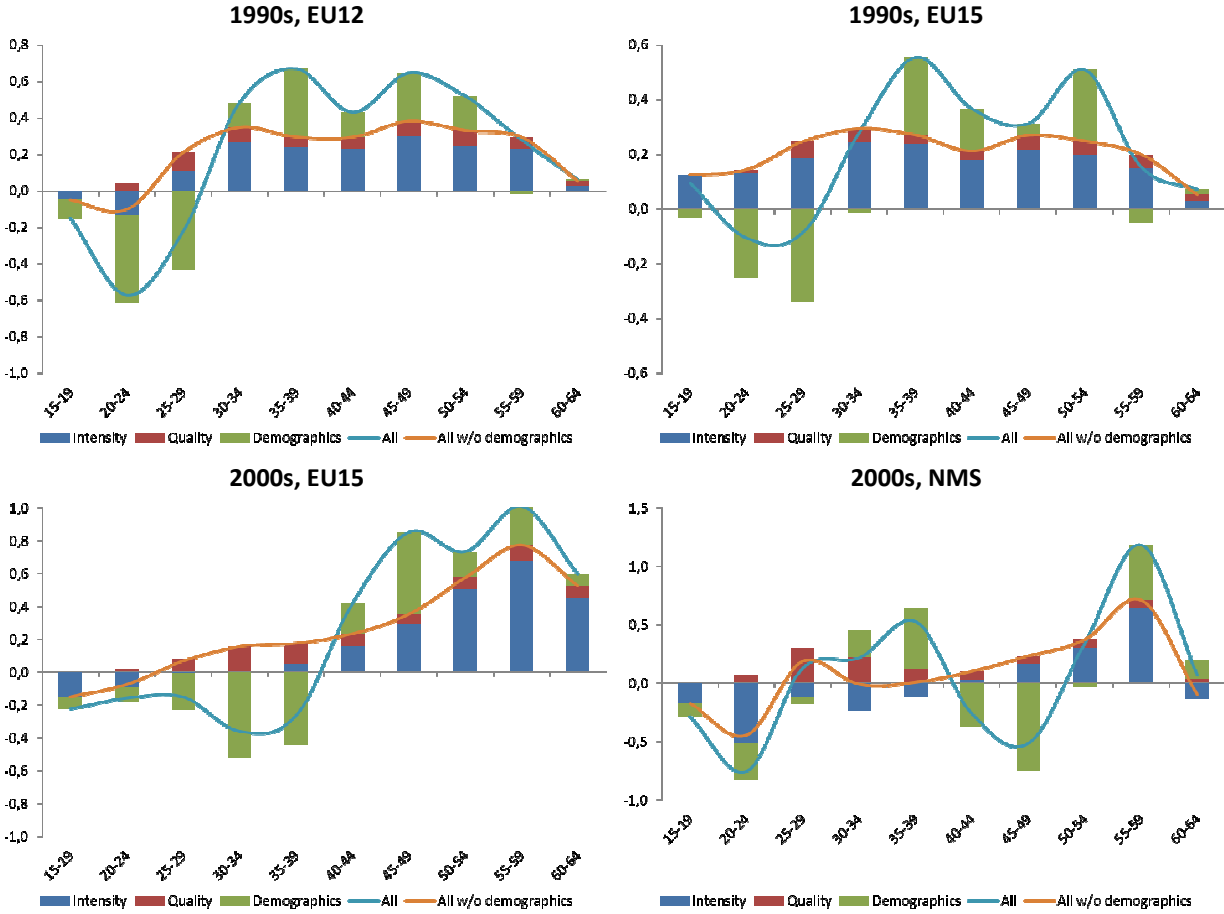
Country	1990s			2000s		
	Females	Males	Total	Females	Males	Total
Austria	0.5	-0.7	-0.2	3.4	0.9	4.3
Belgium	3.6	1.1	4.7	3.0	-0.8	2.2
Bulgaria	-	-	-	3.9	3.9	7.8
Cyprus	1.5	0.4	1.9	1.6	-1.4	0.2
Czech Rep.	-0.9	-1.3	-2.2	-0.3	1.1	0.8
Denmark	1.0	1.2	2.2	-0.3	-2.4	-2.7
Estonia	-1.5	-2.3	-3.8	3.1	1.3	4.3
Finland	3.8	5.3	9.1	0.4	-0.5	-0.1
France	1.5	0.6	2.0	2.2	-1.0	1.2
Germany	0.9	-2.1	-1.2	4.5	2.3	6.8
Greece	2.4	0.6	3.0	1.5	-2.4	-0.9
Hungary	2.3	1.7	4.0	0.3	-0.5	-0.2
Ireland	8.1	5.7	13.9	1.0	-6.9	-6.0
Italy	1.4	-0.8	0.5	2.8	-0.4	2.4
Latvia	-1.2	-1.2	-2.4	2.0	1.1	3.1
Lithuania	0.1	-2.6	-2.4	1.5	1.0	2.6
Luxembourg	2.0	-0.9	1.1	3.0	-1.3	1.7
Netherlands	4.3	3.2	7.6	2.6	-1.8	0.8
Poland	-1.2	-2.4	-3.6	2.4	3.6	5.9
Portugal	1.8	0.9	2.8	-0.7	-4.0	-4.7
Romania	-0.8	-1.5	-2.4	-3.4	-1.5	-4.9
Slovakia	-1.1	-2.7	-3.9	0.1	2.6	2.7
Slovenia	0.1	0.8	0.9	0.6	0.2	0.8
Spain	4.7	2.7	7.4	4.5	-4.5	0.0
Sweden	-0.1	0.5	0.4	-0.4	0.1	-0.3
United Kingdom	2.2	0.7	2.9	-0.4	-1.5	-1.9

Source: Authors' calculations based on Eurostat data.

Contrary to men, in which case negative changes in the intensity of employment were only slightly alleviated by positive contribution of demographic and human capital quality factors, intensity improvements among women in the EU15 contributed to around ¾ of total women's employment growth in both decades studied (figure 3). Virtually all EU15 countries managed to intensify the participation of women on the labour market (regardless of the impact of demographic shifts and improving human capital), obtaining a pure, within-age-group and within-skills employment growth. The changes in female employment intensity were positive also for majority of the NMS countries in the late 1990s and 2000s. However, Romania stood out as a case of a considerable fall in the utilization of female labour force; making the overall effect for the NMS12 close to zero.²

² This effect is driven by large changes in employment in Romanian agriculture over that period, that is a large fall in declared self employment and employment as helping family members (Stănculescu, 2006). Moreover,

Figure 3. Decomposition of changes in female employment rates, 1990s (upper panel, EU12 on the left, EU15 on the right) and 2000s (lower panel; EU15 on the left, NMS on the right).



Source: Author’s calculations and analyses based on Eurostat data.

A striking variation concerns the age heterogeneity: while in the 1990s the highest share of the changes in intensity came from its increases among women in prime-age (25-44), and changes in employment intensity of women aged 60-64 were barely positive, in the following decade it were the women aged 45+ (in particular 55-64 in several countries) that contributed the most (cf. Table 2). In the 1990s Spain stood out as with both high growth of employment intensity among prime-aged women, and its contribution to the overall employment intensity increase. The contributions of intensity growth among women aged 45-54 were high in Greece, Hungary, Poland, Slovakia and Slovenia, whereas Bulgaria, Czech Republic, Denmark, Hungary, Slovakia and the Baltic States managed to increase the intensity of employment among women aged 55-64 to the highest extent (cf. Table A1 in Annex I). In Austria and Germany, examples of countries which achieved the main employment objectives of the Lisbon Strategy, almost half the increase in total employment in 2000s resulted from employment growth among people aged 55-64, and the role of increasing employment of women was dominant – in Austria 90 per cent of the total increase in employment of people aged 15-64 can be ascribed to increasing women’s employment intensity. On the other hand, virtually all countries experienced falling (or close to zero changes in) employment intensity among young women: Estonia stood out as an exception with a rise of almost 0.5 pp.

according to Eurostat data, this fall reflects more a “correction” after a large increase in the declared number of self employed in agriculture in the late 1990s.

Table 2. Employment intensity contribution to women's employment change by age-groups.

	15-24	25-44	45-54	55-64	15-64
EU12 1992 - 2000	-0.19	0.84	0.54	0.26	1.45
	-13%	58%	37%	18%	
EU15 2001 - 2011	-0.24	0.19	0.79	1.12	1.86
	-13%	10%	42%	60%	
EU27 2001 - 2011	-0.31	0.07	0.7	0.98	1.45
	-21%	5%	48%	68%	

Source: Authors' calculations based on Eurostat data.

Changes in the education structure of female labour force, understood as human capital factor, accounted for a relatively small share of their total employment growth among Western European countries (approximately 30% both in the 1990s and the decade later: 0.60 out of 2.14 pp. and 0.76 out of 2.43 p.p., respectively). They were much more important in the 2000s in most of the New Member States, where improvements in this regard (alongside increasing intensity of female employment) managed to alleviate negative changes in demographic structures. The contribution of increased quality of the labour force was of particular importance in Hungary, Czech Republic, Slovakia and Slovenia. From the age perspective, the increase in human capital was in both subperiods by far the largest among prime-aged women (reflecting increasing participation in tertiary education on successive cohorts of women), although Bulgaria and Finland experienced high increases in the quality of female workers aged 55-64.

Demographic factors have been influencing the age structure of labour force across Europe, but had virtually no effect on the total changes in female employment rates, neither in the 1990s nor in the 2000s, as the negative effects for younger women were cancelled out by positive contributions among older cohorts. In the 1990s the negative contribution of young women to total employment growth was driven primarily by demography (i.e. by decreasing share of this group in total labour force), the fall in intensity (decrease of employment rates of young women regardless of their education) was present, but less important. A decade later the impact of demography among women aged under 30 was also negative, though smaller.³

On the other hand, changes in the age-composition were an important factor behind the high positive contribution of prime-aged women to total employment growth in the 1990s, though not a decade later. Demographic shifts had also a positive (though smaller) impact on the input of older cohorts to total employment (a trend reinforced in the 2000s), in particular among the EU15 countries. In the 2000s the role of demography was marginal in case of changes in the EU15 female employment and slightly more important in the New Member States. In general, although the age structure of European populations has been changing as the population ageing gathered pace, the impact of these changes on overall employment rates has been insofar small.⁴ Nevertheless, it is expected to increase in next three decades – Bukowski et al. (2011) show that unless employment

³ The UK, Germany and Austria, i.e. countries which have been attracting relatively numerous groups of migrants, were exceptions in this regard, experiencing positive impact of the demographic factor in the group of 15-25 year olds on total employment rate.

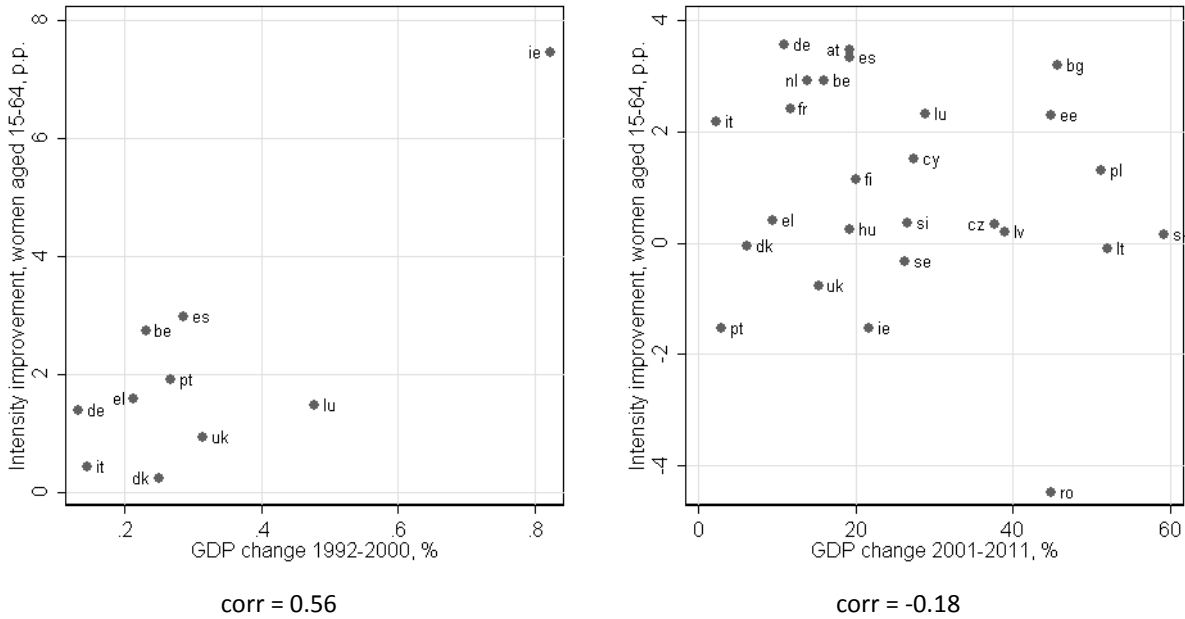
⁴ There are exceptions, especially in countries with more advanced population ageing, for instance in Finland the impact of deteriorating age structure of the workforce on the employment rate was visibly negative, but it was cancelled out by positive contributions of intensity and human capital factors.

patterns over the life cycle change, in 2050 Ireland is expected to be the only European country with labour supply higher than in 2010, and in all countries except Denmark, France, Netherlands Norway, Sweden and United Kingdom, the expected decline is at least 10%.

3.2 Structural character of employment intensity changes

In the next step we contrast contributions of intensity factor into female employment rate changes with GDP growth over the same period. In the 1990s association between changes in GDP and in female employment intensity arises: countries with the strongest economic growth experienced also better female labour market outcomes (Ireland is a clear case). Nevertheless, with similar levels of GDP growth, female intensity increased much more in Spain and Belgium than in the UK or Denmark. However, In the 2000s a strong cross-country heterogeneity emerges and correlation between GDP growth and women’s employment intensity contributions disappears (cf. Fig. 4). Several EU countries managed to improve women’s employment rates despite weak economic growth (Italy, Germany, Austria); others obtained a similar progress alongside a much stronger growth (Bulgaria, Estonia). Slovakia’s intensity of female employment did not change despite highest cumulated GDP change over the period, whereas Romania, with also strong economic growth saw the employment intensity among women fall considerably. Heterogeneity of employment rate growth in Europe and the fact it ceased to correlate with GDP growth indicate that the described changes are more of structural character and their roots should be traced back to institutional settings of particular labour markets.

Figure 4. Women’s intensity contribution to employment rate change vs. GDP growth in 1990s and 2000s.

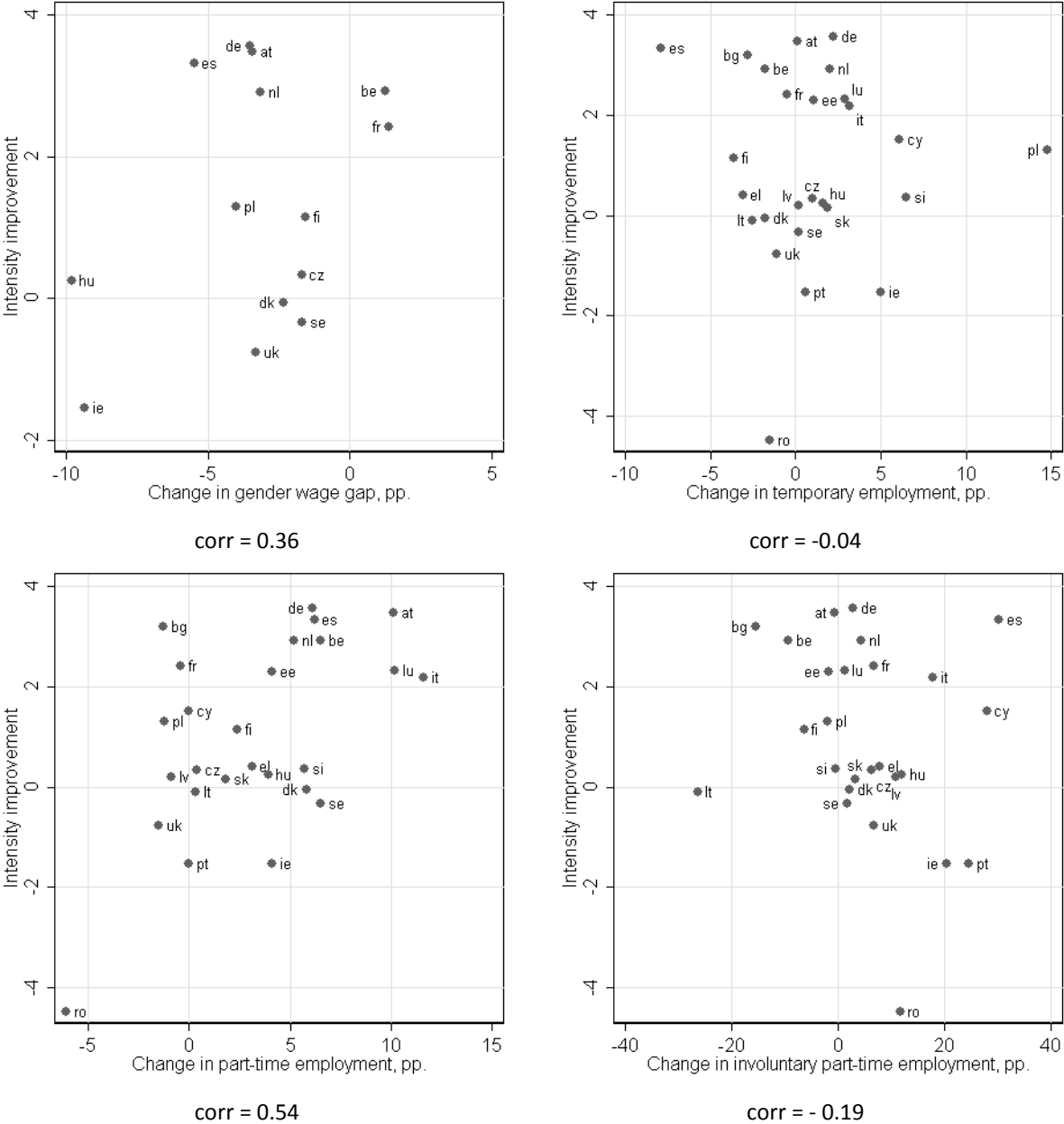


Source: Authors’ calculations based on Eurostat and IMF data.

Along with increasing employment, quality of employment has been one of main objectives of European policies. The Lisbon Strategy explicitly targeted ‘more and better jobs’. Judging whether women’s employment rates improvement was accompanied by job quality improvement is, though, a problematic issue since job quality is broad and not strictly defined notion. Generally it is a multidimensional phenomenon that covers aspects of work such as: physical conditions of work, social environment, health impact and hazards, remuneration and benefits, training and experience acquisition, promotion prospects, interesting and meaningful tasks, autonomy of the position, type

of contract and stability, working hours and flexibility arrangements (see Muñoz de Bustillo et al., 2009). Clark (2012) points that in workers' perception job security and having interesting job are most often described as important aspects of work. Measuring of some of these aspects is tricky.

Figure 5. Women's intensity contribution to employment rate change 2001-2011 versus: (a) change in gender wage gap 2001-2009 [pp.], (b) change in women's temporary employment rate 2001-2011 [pp.], (c) change in women's part-time employment 2001-2011 [pp.], (d) change in women's involuntary part-time employment 2001-2011 [pp.].

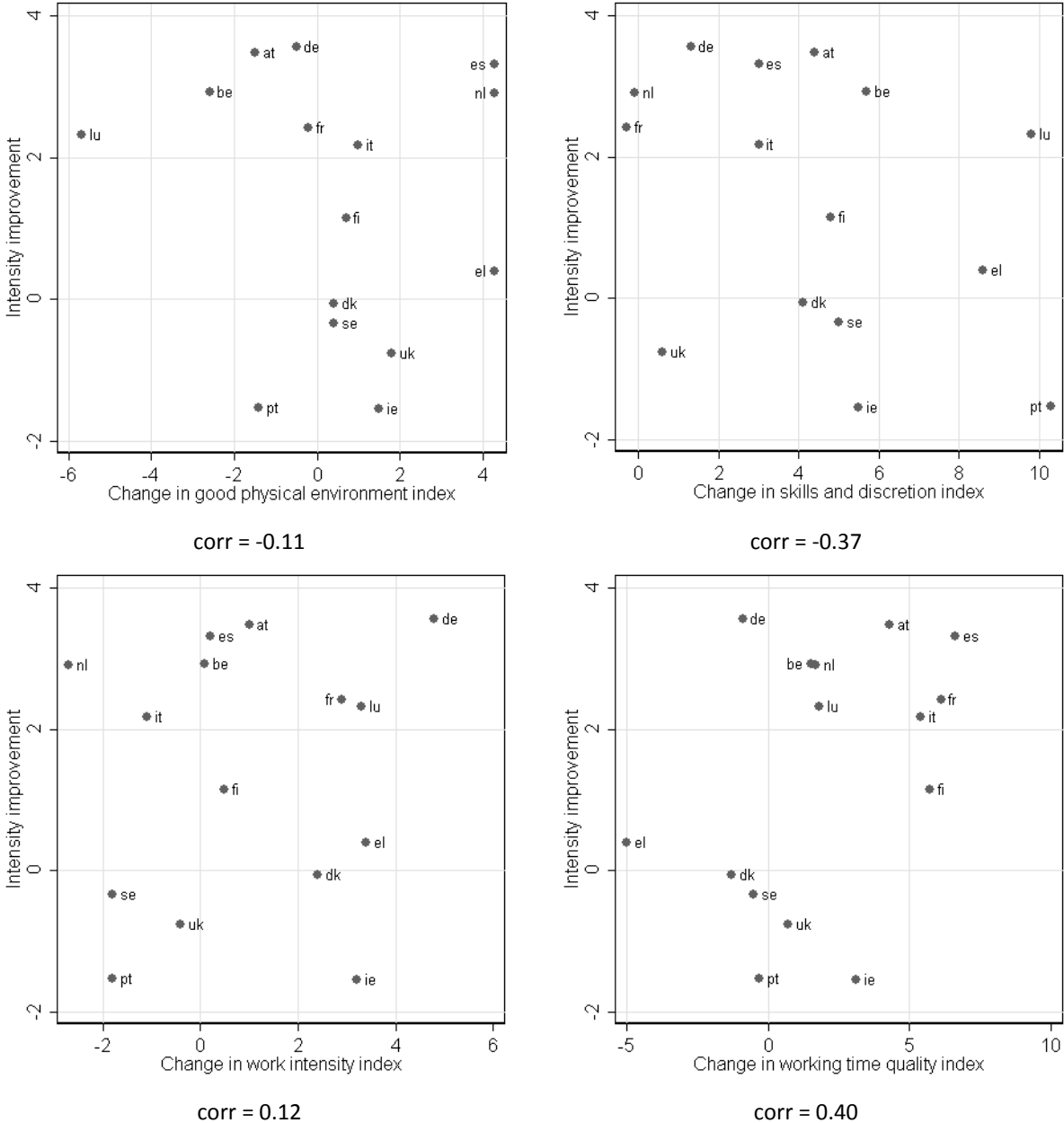


Source: Authors' calculations based on Eurostat and OECD data.

On Figure 5 we present women's intensity contribution to employment rate change 2001-2011 (obtained from our employment rate decomposition) against changes in several (measurable) dimensions crucial for job quality. Part-time and temporary employment are often regarded as providing lower level of job autonomy and security than regular full-time employment. The gender wage gap aims to reflect financial dimension of job quality. It can be seen that greater intensity contribution was in general recorded for countries where women's part-time improvement grew

stronger. However, the correlation between intensity contribution and change in women’s involuntary part-time employment was negative, which indicates that increasing employment in successful countries was due to increase in voluntary part-time employment. Involuntary part-time employment was rising rather in the countries struggling to improve the intensity factor. On the other hand, there was also a moderate positive correlation between intensity contribution and change in gender wage gap, although the gender wage gap has declined in all countries except Belgium and France. Also, there was no correlation between intensity contribution and temporary employment change.

Figure 6. Women’s intensity contribution vs. change in EWCS-based job quality indices, 2001-2011.



Notes: Changes in employment quality indices were computed using values taken from Eurofound 2012. Because EWCS is conducted every five years, values for 2000 and 2010 were used instead of 2001 and 2011 respectively.

Source: Authors’ calculations based on Eurostat data and Eurofound (2012).

The most comprehensive attempt of measuring job quality broadly is European Working Condition Survey that is conducted every 5 years since 1990. The survey covers all EU Member States as well as some non-EU countries. Post-survey report (Eurofound 2012) provides calculations of four quality measures calculated for period 1995-2010. The measures are: Good Physical Environment index (GPE, focusing on safety of work), Skills and Discretion index (SD, proxying level of skills required to do a job), Work Intensity index (WI, measuring pace of work life), Working Time Quality (WTQ, covering information on duration and schedule of working hours). On Figure 6 we depict changes of those measures against women's intensity improvements. There was a moderate positive correlation between intensity contribution and WTQ index, which means that duration and schedule of work has been improving more in the countries where women's employment rates were rising faster (which is consistent with the above finding regarding part-time employment, especially voluntary one), and weak negative correlation with SD index, so the increases in intensity could have been more often via less than average skilled jobs. Finally, there is no statistical relation between intensity improvements and changes in workplace conditions and pace of work. Thus, it seems that improvements along the intensity dimension have been to some extent related to improvement in women's job quality – there was more voluntary, but less involuntary part-time employment, and no systematic change in temporary employment. Wage gaps decreased in all countries except Belgium and France, and in most of the countries workplace conditions and pace of work have also become more comfortable – although this was unrelated to changes in employment intensity factor.

Developments in female employment intensity, their heterogeneity across countries over age spectrum are of particular importance, as they are likely to reflect changes in the institutional settings which shape women's performance on the labour market. It is therefore interesting to look at those countries, which managed to increase female employment intensity particularly high for some of the age groups, so as to be able to pin down the potential policies behind these changes.

The first country we select for an in-depth institutional investigation is Estonia, in which case we look at the youngest group of economically active women and the potential factors behind the success in increasing its employment intensity. Estonia was an obvious choice for the 15-24 age group, as it managed to increase its employment rate substantially (including a large positive change in intensity) over a period where virtually all other countries (also those with low starting levels) saw these rates fall or stagnate. Moreover, its intensity improvement among young women was in fact higher than among the prime-aged ones.

Spain was chosen as an interesting case for studying policies impacting employment of prime-aged women. It distinguished itself with a relatively large positive changes in their employment rates, in both decades analysed, driven by strong improvements both in intensity and human capital quality. The contrast with large negative changes in employment of men over the same period in Spain reinforces the need for a deeper investigation.

We further analyse changes in the Poland's institutional setting that might have driven increasing employment among Polish women aged 45-54. Poland one was on the EU countries with high female employment intensity growth in this age group, which was enough to balance the negative demographic changes affecting this group.

We decided to analyse policies affecting employment rates of women aged 55-64 using Germany as a case study. It recorded large improvements in this respect in both subperiods, virtually only due to changes in intensity. Moreover, large increases in employment intensity among older women took place despite overall weak economic growth in 2000s.

Finally, we also consider three countries where we look at the overall changes in female employment rates and the potential policies behind, without considering particular age groups. Firstly, Slovakia stands out as an interesting – though negative - case of a country with no changes in female employment rates over the last decade, despite high economic growth and large increases in male employment. This is mostly driven by a large fall in the intensity of employment among young and prime-aged women. Secondly, the cases of Italy and Spain provide an interesting case study for the 1990s – they both had very low levels of initial female employment rates and while Spain managed to improve them over the 1990s, changes in Italy were very small.

4. In depth country studies

In the last two decades an objective to increase women's participation in the labour market has led to a scope of various activation and labour supply enhancing programs being carried out in different countries and having a varying degree of success in increasing female employment intensity. Since these programs have not been always targeted exclusively at women's participation, various age groups of women were affected differently by such policies. Among the policies that affect participation of women and men in the labour markets differently are parental benefits, gender-differentiated retirement schemes and programs targeted at bridging the gender gap in wages and forms of employment. Other programs and policies target vulnerable groups irrespective of gender; however, due to the fact that women are often overrepresented in such groups or due to the specific employment enhancing policies, women might be influenced by such programs more than men. In the last two decades a move from activation policies addressed to specific groups (in the 1990s) towards more universalized flexible set of activation policies targeted at whole working age populations has been observed (Eichhorst and Konla-Seidl, 2008). In relation to these shifts, study of the age-gender correlation and related programs allow for a more nuanced understanding of policies that can make a meaningful intervention into shaping women's participation in labour markets.

The following country-by-country overview of women's employment in the respective age groups will look into possible drivers behind the intensity of employment changes in the identified countries. This preliminary overview is a first step aiming at identifying critical points of policy intervention, according to their relevance for the particular country and age group, based on the available literature and policy reviews. These first-glance results will be elaborated and critically developed in the subsequent tasks of this work package (WP) particularly in WP16.2 that will look into the most and the least successful countries in integrating women on the labour market with a focus on different socio-ecological, socio-economic and socio-demographic groups(16.2). Further research on specific policies and evaluations of their impact should endorse or refute these preliminary findings.

Our findings confirm some of the concerns drawn by related NEUJOBS work packages, in particular WP5,⁵ that intensity of employment should be explored in close connection with an increasing gender gap in terms of quality of jobs (Cipollone et al., 2012). Recent literature indicates that women's achievement in employment rates are often jeopardized by sub-standard work conditions, fixed-term and part-time contracts, self-employment, marginal jobs, jobs with low wages or limited career opportunities, which often become detrimental for their social security and career development (Schmid 2011:1). However, preliminary results shown in Section 3 suggest that female employment intensity improvements were not detrimental to job quality.

Further on, the development of the results of this Task will be done with a reference to several other work packages within NEUJOBS, that seem to overlap in their scopes with the factors important for employment of women in various age groups. Namely, WP 13, dealing with care demand, provision (including immigrant labour) and attitudes, WP17 focusing on employment of elderly and WP 12, that analyzes population ageing in the context of socio-ecological transition and its affects on family structure and life-style. All these work packages can provide useful close up into a situation of particular age groups, however, still being at the very early stage of development, it was impossible to incorporate their findings into this paper. Other tasks of this work package, especially WP 16.3 (looking into the ways in which alternative forms of employment (part time jobs, flexible employment) change the female labour market) and WP 16.4 (dealing with changing patterns of sharing domestic duties and their impact on women's employment) will have a closer link to the relevant work packages.

a. Estonia: age group 15-24

Decompositions presented in Section 3 indicate that Estonia stood out with a 0.47 percentage point increase in the female intensity in the 15-24 age group, a significant improvement against the overall EU27 decline in this age group (Table A2). Along substantial economic growth in the 2000s Estonia has reached the highest employment intensity among women of 15-24 age group in the EU 27. Among the institutional settings that shape employment participation of women in this age group we identify the following critical factors: **women's educational choices and transition from school to work, child-birth and possibility of reconciliation of work and family life**, as well as **conditions for return to employment after the maternity leave**, and **flexibilization of the types of the employment contract**.

Estonian women have made a significant progress in the sphere of education, however a complex link between the educational achievements of Estonian women and the ambiguous opportunities it opens for women's carriers and wages deserves a more elaborate analysis. Before recent economic crisis, Estonia exhibited one of the highest (in terms of GDP share) public spending on education among the OECD countries (OECD 2012), and Estonian women had an active role in participation in the tertiary level of education – females constitute around 70% of graduates in Estonia against the 55% average for the EU 27 (EC 2009c). In this case, the most positive contribution of intensity factor in Estonia in the youngest group raises the question of combining education and employment.

⁵ Here we refer specifically to two works in progress: "Women labour market performance in Europe: trends and shaping factors" by Angela Cipollone, Eleonora Patacchini and Giovanna Vallanti (2012), "Jobs first? In search of quality" by Janos Mátyás Kovacs (2012).

Literature indicates that there is rather normative gendered division into female and male dominated sectors of education, with majority of women pursuing studies in such fields as education, humanities and arts, health and welfare, while seriously lagging behind in engineering, contraction, science and computing (Eurydice Network Study 2010). A recent tendency seems to be rather high share of women pursuing education in social sciences, business and law, although it is possible that within these three fields women and men are probably represented differently and reach different career levels within the same professions. The positive educational achievement of Estonian women is compromised by one of the highest wage gaps in the OECD countries. Estonian women with tertiary education in the age group of 35 to 44 receive only 64% of the salaries received by men and 74% for the age group between 55-64, while the OECD average is 71% for both age groups (OECD Family Database, 2011).

Therefore, while education plays an important role in employment opportunities in Estonia, an important is which structural opportunities and obstacles accompany women's transition from education to work. As Leetmaa et al. (2009) indicate, there has been a rapid growth of both young people obtaining higher education and in the number of higher education institutions, which has often led to lack of control over the quality of education. This has in turn been followed by the increase in share of young people with higher education among the unemployed, problems with finding jobs which correspond to the level of education of graduates, and settling in jobs that demand lower qualifications (Leetmaa et al., 2009). Nevertheless, the recent economic crisis has proved education to have a direct impact of employment opportunities, particularly that of the youngest age group. Thus, while youth got hit particularly hard by the unemployment, the unemployment among low-skilled youth reached over 43% in Estonia, while it reached less than 10% among high-skilled youth (Scarpetta and Sonnet, 2012). Thus, the fact that since 2009 Estonia has seen the largest drop in education funding compared to other OECD countries (OECD, 2012), and ALMP programs are rather undeveloped (Leetmaa et al., 2009) form a worrying trend.

Childbirth, availability of formal care and possibilities to return to the labour market after maternity present another important set of factors effecting women's carriers. In the last decade, Estonia has experienced a steady tendency towards rising the age of the first childbirth; the highest number of first births are now among the age group 25–29, while the number of women giving birth in the group aged 24 or under is constantly declining (Tamur and Rahno, 2011). However, women's employment before child-birth can be made more complicated precisely due to their decision to postpone child-bearing and due to the gender-related recruitment and promotion patterns. Turk et al. (2011) argue that "Employers fear that women of child-bearing age are more likely to drop out of working life for some period, which means that their recruitment, promotion and also training may create extra work and costs for the employer" (Turk et al. 2011). The return of women to labour market after giving birth is not encouraged by the long period covered by the parental benefits (3 years), lack of child-care services for children under 3 years old, and low participation of fathers in childcare. Thus, in 2000–2009 the employment rate for women with small children was 45-55% (Turk et al. 2011). While Estonia has a well-organized formal pre-school care with over 90% of children aged 4-5 attending pre-school child institutions, the flexible approach to paternity benefits has not been introduced in Estonia; paternity regulations provide neither entitlement for part-time employment, nor a switch and splitting between paternal and maternal leave.

Finally, it is important to address the quality of female employment, the correlation of the type of the contract and the wages, and security that accompanies these jobs. The national labour market of Estonia is characterized by high level of full-time employment; in the period 2000–2008 only 6–8% of all employees worked part-time. Among women an average of 8–12% worked part-time, compared to only 3–5% among men (Burchell et al 2007). The correlation between the short hours and disproportionate low wages can be an issue as Estonia has a particularly high wage gap; 25%, as compared to the average of 15% in the EU27 (Ghailani, 2007). Between 2000 and 2008 the unadjusted pay gap was on the average 24.3% according the LFS data.

Brief summary: Increase in the percentage of women obtaining tertiary education seems to have a positive effect on employability of women, especially in the youngest age group and on closing the wage gap (mostly in the pre-retirement age group); however, the long-run effect of significant increase in the number of graduates with tertiary education and the falling quality of such education might backfire at both male and female graduates. The positive effect of the education for young women might be cancelled in the process of transition from education to work and if Estonia does not maintain a public infrastructure for pre-school child-care and working policies on family / work reconciliation that would allow women to return to work. Further research and additional data would be needed to look into the percentage of part-time work employment among women of different age groups, the relation between the employment and the policies towards the equalizing the wage gap.

b. Spain: age group 25-44

Spain was selected as a case of a steady increase in female employment over the last two decades. Thus, since 1980s Spain has achieved “spectacular results” (Guillén, et al. 2009) in incorporation of women into labour market; this success is widely attributed to accelerating access of women to higher education since 1980s, family and work-life reconciliation policies that facilitate women’s reintegration at workplace during the child-rearing period, and massive increase in informal care due to immigrant labour inflow in the last decade that uplifted the burden of child-care from Spanish women. Looking at the intensity of employment among women of the first prime age group, we find it necessary to address **women's educational choices, forms of employment contracts, and family and work reconciliation**. To address the steady improvements in women’s intensity and quality of employment against the decreasing employment of Spanish men, we briefly look in to the **labour market changes triggered by the economic crisis** of 2007-8 that hit Spain particularly hard.

A long period of economic boom accompanying Spain's convergence to the EU standards since the early 1990s marked a significant improvement in women's education and labour market participation. On the one hand, Spain's familistic model based on male bread-winner, in which all care responsibility is the women's burden, was challenged by the late 1980s. The first Spanish Plan for Equal Opportunities (1988-1990) addressed women's equality in the areas of education and employment. Nevertheless, Spain exhibits a high level of horizontal professional segregation – women acquire education in “typically” female professions, i.e. health (women are 78.9% of all graduates), education (81.9%), services (56.6%), humanities and arts (64.3%)(Eurydice network study 2010). Currently Spain also scores higher than EU average in adults’ participation in lifelong learning (age 25-64): 10.4% of adult population in Spain participates in education and training compared to 9.2% average for the EU27 (Eurydice network 2010).

In the meantime, one (usually male) bread-winner model was compromised through consequent labour market reforms, i.e. seven major reforms (1984, 1994, 1997, 2002, 2006, 2010, and 2011) and 52 additional minor legal changes aimed mostly at flexibilization of labour contracts (Betolila et al., 2008). Such changes, reflecting the need to relocate workers out of male-dominated industries (such as mining, shipbuilding, and steel), while challenging the employees security, opened up an opportunity for part-time and flexible contracts which allowed more women to combine family and work life.

Today's Spain has one of the largest share of temporary employees in the EU; under 35% of all Spanish employees work on the temporary contracts, while the EU average incidence of this type of employment is just under 15% (in 1996-2007). While the move towards the temporary employment has been consistent since the mid 1980s (in the 1980s, 90% of contracts being permanent), women have consistently had higher level of temporary form of employment: in 1990 – 40% of working women had temporary contracts compared to over the 30% by men; in 2001 – 35% of women compared to 30% of men; in 2007 32% of women and 27%.

In Spain a large gap separates the degree of employment protection available for the workers on the temporary and permanent forms of contract. It has also been stressed that the high rate of temporary contracts (especially among women) has a direct connection to low fertility rates. Guillén et al. (2009) argues that nearly 41.5% of wage-earning women between 25 and 29 have temporary contracts, but only 29.7% for the 30-39 age group, which according to these authors has a direct impact on the postponing the age of the first child-birth and consequently a likelihood of having more than 2 children. In the 1980s care obligations have been considered a “family” business rather than the state responsibility and maternity leaves where a part of sick leave system. From the late 1980s Spain has made significant steps in reconciliation of work and family life, particularly in the following directions: providing paid parental leaves, including benefits for fathers; paid leave to care for sick children, affordable day care, and child allowances, tax policies, reduced social contributions as measures to foster women's return to work and keeping their job and considering care periods as work time from the point of view of Social Security contributions. Flexibilization of work time and contracts has been seen as another form of reconciliation policies and two major legislations have been introduced to “de-familialise” Spanish welfare, namely Law on Dependency in 2006 (aimed at universalizing care services) and Equality Act in 2007 (Guillén, et al. 2009).

Today Spain has one of the longest parental leave provisions which allows both parents to stay at home – and return to their prior job or a comparable one – for 3 years with guaranteed 18 weeks of full-time equivalent pay (CEPR, 2009). While the labour regulations do not allow dismissals of women due to pregnancy, temporary and fixed-term forms of contract leave it up to the employer whether to renew the contract after the maternity leave, thus increasing women's insecurity. In this context, a particularly strong role is played by women's cross-generational support; thus grandmothers play a significant role in freeing their daughters for fuller participation in the labour market. Ibanez (2009) claims that in 1998 26,7% of working women indicated that it was their mother who allowed them to combine work and care while 24,7% indicated that it was due to their partner's help.

It is worthwhile paying special attention to the developments of the employment policies during and in relation to economic crisis of 2008-9; not only Spain was severely affected by it (after a the long boom that started in the late 1990s and ended abruptly in 2007) but also it has spurred a new wave

of renegotiations of the employment policies, namely the labour market reforms of 2010, 2011 and 2012 (Bentolila et al., 2012). Spanish employment declined strongly during the crisis (even in the comparison to GDP contraction), with increase in unemployment due to crisis of 6-10 percentage points (comparing to average 2 pp. for the EU). Though the industries that were affected most were male-dominated (construction and manufacturing with men's unemployment increase by 6 pp. higher than women's), women were affected as long as the employment reduction happened due to firing workers on the temporary contracts, where women are over-represented.

Brief summary: The significant increase in Spanish women's labour participation can be attributed to the high level of part-time and other forms of flexible contracts, in which women are overrepresented. Increasing educational level and more equal share in parental responsibilities (as well as increase in public care services) could also increase women's chances for accessing better forms of employment.

c. Poland: age group 45-54

Evolution of labour market situation of women aged 45-54 in Poland is interesting due to two main facts: i) in the 1990s intensity of employment declined, but the 2000s, Poland experienced one of the highest female employment intensity growth in the EU in this age group; and ii) its contribution to overall employment rate growth was much higher than other age groups in Poland (see Table A2). We identify the following structural policy areas that could have played important role in women's increase in participation in the labour market in this age: **changes in welfare system which favoured employment over inactivity, ongoing restructuring of Polish labour market that favours women dominated sectors of economy, high level of education and training among women, moving away from precariousness of child-bearing age and family and work reconciliation.**

The transformation of the Polish labour market in the last two decades has led to significant changes in women's employment structure (namely, reducing the share of women in manufacturing, health care and social work and increasing the share of education sector). Literature points out that in the 2000s particularly the age group between 30 and 54 experienced improvement in occupation, wider access to better jobs and hierarchical advancement due to an accumulation of professional experience (Bukowski et al., 2010). Restructuring economy in the last two decades leads to the growing importance of the service sector in 2003-2008, and there are still more women than men work in the public sector. This tendency might arise from the fact that significantly more women than men keep choosing to work as teachers or public officials, where the state is the major employer. The importance of the public sector as a major employer is higher for older age groups. As a result, gender differences tend to exacerbate with age. In 2008, 72% of women and 87% of men in the youngest age group worked in the private sector, while only 52% of women and 69% of men aged 30-54 (Bukowski et al., 2010).

First decade of transition in Poland was characterised by declining women activity rates and effective retirement age, which was related to large numbers of disability pensions and preretirement benefits being granted not only to individuals aged over 50, but also 40-49. These were gradually reformed – in the late 1990s eligibility rules of disability benefits were tightened, similar move in case of preretirement benefits was made in the middle 2000s and additionally these benefits were made financially less generous. The welfare reforms were completed with abolishment of early retirement from 2008 on and the process of gradual increase of retirement age to 67 for both men and women

from 2013. All together they prolonged the labour market participation of women, reduced significantly possibilities of leaving the labour market for welfare before the age of 60, and increased the attachment to labour market of women aged over 45.

The literature indicates that education plays a particularly strong positive role in the occupational improvement for the age group 30-54, but it ceases to make such a strong positive effect for the age group above 55; thus tertiary education seems to have the biggest positive effect on employment opportunities for women in the former group, while the effect of tertiary education on employability above 55 becomes lower (Bukowski et al., 2010). The question of transferability of skills is also important; often education received by people above 55 does not meet the rapidly changing demands of the restructured labour market, and people in this age group fall behind the youngest group. Thus it is important to look at the adult education and lifelong learning policies implemented in Poland. Poland is characterized by quite low participation of adults in lifelong learning education; Poland average share of employees who improve their skills through lifelong training is 21%, compared to the 34% on the average in the EU. Lewandowski and Skrok (2009) point out that particularly the participation of the older people in these programs is limited, and they argue that is a result of the weaknesses of the adult education system and inadequacy of its offer to the needs of the labour market.

Fixed-term contracts have become typical for the Polish labour market in recent years, however in comparison with the EU15 countries, part-time work is a seldom practice (Bukowski et al., 2010), although more widespread among women than men. Even though between 2003 and 2008 this gendered tendency intensified especially in case of older workers in Poland, the incidence of part-time employment remains low among workers in the 30-54 age group (8% for women and 3% for men) (Bukowski et al., 2010).

However, literature indicates that women in Poland still struggle to balance family and work life, also because public perception of women mainly as mothers, while welfare strategies have been structured in such a way as to promote monetary compensation for childcare and welfare provisions for a child-carer who stays at home, rather than to encourage women's return to work and more active participation in the labour market (Matysiak and Steinmetz, 2008). In some cases, employers are known to demand that female applicants present a medical certificate proving that they are not pregnant and/or sign a written declaration that they will not take leave to care for sick children or become pregnant during a given minimal period (Heinen and Wator 2006). This is exacerbated by shortage in child-care supply - only 2% of Polish children under the age of three are in child care centres. The lack of institutional child-care triggers makes return to the labour market after parental leave more difficult (Titkow, 2003). To some extent, the highest intensity improvement in employment rates among 45-54 year-olds in Poland, may result from the fact that this age group is past the insecurities of what is considered to be the prime child-bearing age.

Brief summary: Among the factors that seem to have a strong positive effect on the women's employment intensity change for the 45-54 year age group in Poland we have identified changes in early retirement schemes that decreased the share of women withdrawing early from the labour market, the increase in the levels of education (particularly tertiary levels of education) of successive cohorts and development of private and public services sector. Leaving behind the insecurities of childbearing, women of this age group enjoy better chance for employment in comparison with

younger age groups that need to find ways of reconciling more intensive child-care and work. Similarly, the ineffectiveness and lack of developed lifelong learning programs increase risk of long-term unemployment and early retirement in the age group above 55 (Bukowski et al., 2010).

d. Germany: age group 55-64

Despite moderate economic growth in the last decade, Germany demonstrated an impressive increase in employment intensity among older women, as contribution of employment intensity factor in the age group 55-64 was more than double the figures for other age groups (see Annex II). Among the factors that could be identified as contributing to the favourable employment rates in this age group are **pension and retirement system reforms, programs on active aging and lifelong learning** and **collective bargain leading to flexibilization of working hours and contracts** (especially in the aftermath of the economic crisis).

In response to ongoing population ageing, German labour market is undergoing a transformation based on increase of the retirement age (the retirement age will increase to 67 during the next two decades), bridging gaps in the pension systems between two formerly separated parts of Germany and introducing active ageing programs. The latter would prolong professional lives, especially eastern regions of Germany (former DDR). Increase in the retirement age can account for the rising employment intensity in this age group, and a number of policy and economic measures may have encouraged prolonged economic activity. However, early retirement option is still available in Germany at the age of 63 with 35 years of contributions, although retiring before 67 reduces benefits by 3.6% per year of early retirement, while deferring retirement past 67 earns a 6% increment for each year of additional work (OECD, 2011). However, there is a certain back-step on such policies due to the economic crisis of 2007 that brought back the pressure for re-establishing a number of programs that support early retirement and gradual entrance into full retirement. Identifying age group over 50 as a potential risk group in employment, a program called "Perspective 50plus" was introduced in 2011 by the Federal Ministry for Labour and Social Affairs. The aim of the program is to reintegrate senior long-term unemployed in certain regions through the commitment of partners (case managers, local entrepreneurs, trade unions, welfare associations etc.) and to improve chances of the jobless to get back into decent work.⁶

Still, female-to-male ratio of employees working small-income jobs without social insurance for an extra low tariff is 3 to 1. Such jobs are mostly generated in the maintenance and manufacturing sector and increasingly in the hotel and restaurant industry. There is a significant difference in the quality of social security in different types of employment: 54.2% of men are employed within the scope of social insurance, the same holds true for only 45.8% women. In addition, women have much more often a part-time occupation than men (4.3 million to 0.8 million) (FEA 2010, cited in WILCO 2012). Therefore, further research is needed into the occupational quality of women in this age group, as well as the relevant wage gap.

The recent crisis has led to a considerable re-negotiation of employment conditions in Germany and a number of collective agreements aimed at flexibilization of employment protection in return for preserving jobs. The way German employment fared in the aftermath of the financial crisis of 2007 is

⁶ Perspective 50 plus of the Federal Ministry of Labour and Social Affairs (BMAS): www.perspektive50plus.de.

enthusiastically referred to as “German miracle” (Bosch, 2011) despite the large drop in output, the level of employment remained consistently high. Literature identifies the following factors that contributed to such success: i) state intervention in the labour market by subsidizing labour hoarding through short-time work benefits (such benefits provided a financial incentive to adjust to lower demand by reducing hours worked rather than cutting employment) (Bohachova et al. 2011, Dietz et al. 2011), ii) introducing working-time accounts (instead of working fixed daily or weekly hours, employees accumulate working time depending on whether actual hours worked exceed or fall short of contractual working hours, iii) alliances for jobs at the company level and collective agreements that would allow to safeguard employment through a joint reduction of working time and pay (Bellmann and Gerner, 2010).

In Germany the crisis hit people aged 50-59 less than expected, potentially due to impact of programs towards pension reform and raising retirement age but also due to working time reduction (Vaughan-Whitehead 2012). Germany recorded one of the largest reductions of average weekly working hours in Europe (Bukowski et al., 2011). Measures such as a collective agreements aiming at resisting effects of the crisis favour “preservation” of core workers (Dietz et al., 2011), but they are likely to freeze new hires, making it particularly hard to enter labour market for the first time, or to re-enter it after significant breaks due to unemployment or child-care. This might account partially for the exceptionally high employment rate of people aged 55-64 years, whose employment is characterized by continuity and is not likely to be interrupted by care-related pauses in employment.

Brief summary: Germany has demonstrated a particularly good result achieved through Active Ageing policies and due to collective bargaining being carried out at the company level. Such collective agreements allowed for the reduction of working hours and internal labour force management, thus allowing to avoid dismissals of workers. Literature however indicates that such a path might not be available to all EU27 countries, as it requires a considerable level of social trust and initial stability of economy that allows one to fall back on saved resources in times of crisis (Dietz et al., 2008).

e. Slovak Republic: age group – overall 15-64

Slovak Republic was selected because its high economic growth coexisted with stagnating female employment in the 2000s. Despite the common EU27 trend of increase in female and decrease in male employment rates, Slovakia recorded only 0.14 pp. employment intensity increase for women, compared to 1.68 pp. intensity increase for men (Annex II). The two age groups of women which improved are the 45-54 (0.57 pp.) and 55-64 years age group (1.81 pp.), while the two younger age groups (15-24 and 25-44) demonstrate a sharp drop in labour intensity, of -1.19 and -1.04 pp. respectively. Considering the age pattern of these changes, we look into **the family and work life reconciliation, educational choices, gender equality policies implementation and pension reform.**

In the beginning of the 2000s Slovak social security, labour code and health care (among other spheres) were reformed along the so-called “neoliberal turn” characterized by diminishing of the social responsibility of the government and transferring social and economic risks to individuals (Fisher et al., 2007). Labour Code introduced in 2001 and following it over 200 amendments turn Slovakia into one of the most employer- and capital-friendly labour markets, marked by restricted labour mobility, shifted responsibility for job search and employment on to the individuals and limited the role of trade-unions in negotiations with the government (Fisher et al. 2007, Duman and Kureková 2012).

Labour Code has also addressed the issue of **parental leave and reconciliation of work and family** life, primarily by stipulating flexibilization of labour arrangements and discussing the financial entitlements in case of child-birth. Act on Parental Benefit identified such benefit as: “a state social benefit through which the state makes a contribution to a parent to provide personal and proper care for a child up to three years of age” (Repar 2007), leaving the issue of care-work practically legally neglected. In the meanwhile, the pre-school care facilities have been declining drastically due to the withdrawal of the state support; literature indicates that in 2001-2004, a total of 217 kindergartens have been closed and 180 municipal kindergartens in 2003-4, replaced by 4 private kindergartens and 16 church kindergartens that are funded by the state in the same period (Repar, 2007). Only 5% of children 0-3 years use formal care arrangements and about 70% of children between 3 and pre-school age make use of formal childcare (European Commission, 2009b).

In addition, the Slovak labour market is characterized by a significant gap in earnings between men and women, when women with primary and lower secondary education earn 74% of what men with the same level of education earn and consequently 77% of men’s earnings at the upper secondary level and only 65% on the tertiary level of education. Additionally, Slovak Republic demonstrates one of the highest in Europe levels of vertical segregation, namely it occupies the second place after Czech Republic (European Commission 2009a). Despite the target set by the EU in promotion of Active Ageing programs, Slovak state has not yet developed or implemented a comprehensive policy approach in this sphere; moreover, the results of the Special Eurobarometer on Discrimination in the EU (2009) has revealed that almost two thirds of Slovaks consider age discrimination as the most widespread form of discrimination at the workplace (Vagac, 2012).

Slovakia shows a positive trend in female employment in the age group 55-64, a record that can be attributed first and foremost to an increase in the legal retirement age. A set of pension reforms was introduced in Slovak Republic in 2004 and 2005, bringing closer the retirement age to the EU27 level and establishing a stronger link between career earnings and retirement pensions. The retirement age is set at the age of 62 for both men and women, a benchmark that was reached by men in 2008 and that is to be gradually achieved for women (formerly retiring at the age of 53-57) by 2024. The reforms have resulted in steady increase in employment rates since early 2000s; by 2007 male employment rates have reached the EU27 level in this age group and improvement in female employment is observed since around 2003. However, by 2010 Slovak women in this age group still by 10 percentage points lag behind the EU27 average employment in this age group, which is close to 40% (Vagac 2012, European Commission 2012). The positive achievements in the employment rate in this age group are, however, threatened by the gender pay gap; decreasing to around 19% after 55 and then going back to 24% among workers aged 60+ thus directly affecting the amount of pensions among men and women and increasing women's poverty risk (Vagac, 2012).

Brief summary: Women’s employment has been affected mostly by the larger restructuring of the Slovak economy and partial withdrawal of the state from responsibilities linked to employment, education and other social provisions, which placed more risks on individuals. The literature indicates that the reform of the labour code might have left women more vulnerable to the uneven quality and gender gap of flexible forms of employment. Further, the deterioration of the institutional child and other care increased the double burden on women. However, there is very little empirical data on manifestations of gender inequalities in the Slovak labour market.

f. Italy: age group – overall 15-64 (the 1990s)

Italy provides another example of familistic social policy model in Europe which was discussed earlier in relation to Spain. However, unlike Spain, Italy has not been able to improve the situation in female employment in the 1990 and continued to show little progress throughout the 2000s. As Annex II indicates, in the 1990s Italy had overall declining women employment intensity. Looking into structural factors in the 1990s, we would like to bring out **the role of familistic model and link it to redistribution of state-provided benefits, employment patterns and a combination of high employment protection in some sectors and lack on it in the others, and ineffectiveness of labour market reforms due to the low trust of the social actors.**

Italy entered the 1990s with one of the lowest total fertility rates in whole Europe (1.25) which is widely attributed to the economic and employment insecurity that caused women to postpone childbearing until securing a stable job, and hence a decline in fertility rates (Prifti and Vuri 2012, Matysiak and Vignoli 2010). Italian welfare was designed in such a way as to protect standard needs and risks of the male-breadwinner worker and depending primarily on his contribution to the system. The extended family network was to make up in an informal way for needs of care and, through the redistribution of income to support family members with less income. This resulted in lack of social care infrastructure and “substitution” for this lack with monetary subsidies (Anttonen and Sipila 1997), and fragmented policy provisions for family/work life reconciliation (Graziano and Madama 2009). Analyzing disproportionate social welfare expenditure of the Italian state in the 1990 on the old age compared to family expenditure (Graziano and Madama, 2009), one can conclude that Italian state policies are characterized by the familistic bias that privileges “male bread-winner/female carer” model and does not encourage female labour force participation: “As a consequence, policies to promote work-life balance - namely flexible work arrangements, the system of parental leave and the provision of social services –have remained marginal and poorly coherent” (2009: 3).

In the 1990s Italy was considered among the countries with one of the highest level of employment protection (Bonoli and Emmenegger, 2010), however, due to the fact that 95% of the economy was made up of small firms which employed nearly 60% of the total number of workers, a large share of the working force slipped through the system and remained without any job protection (Prifti and Vuri 2012). Several steps have been made by the Italian state in the 1990s that could have increased participation and employment security for women. In 1990 Italy passes employment protection regulation that expand employment protection measures to private companies with less than 15 employees, 1998 introduces means-tested maternity benefit, paid for five months, targeted to women who are not covered by contributory-based social insurance schemes (Law 448/1998) and 1998 - means-tested benefit targeted to families with more than 3 children below 18 years of age (Law 448/1998) (Prifti and Vuri, 2012). However, the literature reveals that the effect of flexibilization of the labour market did not reach its potential due to the low trust among the social actors. This leads to reforms controlled directly by the state rather than achievement of the collective bargaining at the company level (Bonoli and Emmenegger, 2010).

Public sector jobs played an important role in female employment throughout the 1990s, though its function and value varied between two economically unequal regions, i.e. the South and North of Italy. Literature indicates that about half of the public wage bill in the South of Italy could be defined as a “subsidy,” as though it did provide universalized income throughout Italy, the level of wages and

lack of opportunities in the private sector made public employment much more attractive in the South of Italy. Public employment was characterized precisely by rigidity of labour protection described earlier, causing path dependencies and rigidities (Alesina et al., 2001).

In the 1990s, the entitlement to maternity benefits was universal for women and did not depend on the type of employment or the size of the company. It consisted of a paid mandatory leave of 5 months and further protection from firing for the period of 21 months. Besides child-care, women's care responsibility extended considerably to providing care for elderly family members. In the context of Italy's ageing population, and lack of formalized state-provided care for elderly and sick, the burden of the geriatric care often created an obstacle for the participation of the middle prime aged women in the labour market. Here, a further research is required into the provisions and benefits linked to the geriatric carers, as well as a closer look into the role of legal and illegal immigration in supplying affordable private geriatric care and freeing women for labour participation.

Brief summary: Throughout the 1990s, insiders on the Italian labour market were consistently privileged, as it was them who were guaranteed the full protection whereas outsiders, those who enter employment for the first-time or re-enter it (mostly young workers, women and immigrants), remained subjected to extremely precarious terms (Bonoli and Emmenegger, 2010). In this light, it seems that an attempt of flexibilization of the labour market introduced through labour protection reforms in the 1990s had limited effect on women, as increasing employment intensity rates among women in the second prime and older age groups can be attributed to labour regulations favouring those already employed but failing to encourage entering or re-entering labour market. Furthermore, familistic model continued to protect the interests of single (male) breadwinner, while child and increasingly demanding (due to the ageing population) geriatric care remained the double burden on women. While massive inflow of female immigrant labour helped to solve the issue of lacking public infrastructure for child and geriatric care from the native women, it remains a solution available rather for educated, better off women, thus increasing the gap in employment opportunities between Italian women with different skills and incomes.

5. Concluding remarks

In this paper we show that improvement in labour market situation of women was the main factor behind success in increasing overall employment rate in the EU countries in last two decades, especially in 2001-2011. It was also a crucial factor behind discrepancies in success of reaching Lisbon employment targets by particular countries, as female employment rates have barely converged over last two decades. Decomposing the changes in employment growth into contributions of employment intensity, human capital and demography we show that it was the first factor that explained most of successes and failures. Also, especially in the 2000s increasing employment intensity among women aged over 45, explained most of overall employment rate increase. Changes in the education structure of female labour force, understood as human capital factor, accounted for a much lower share of total employment growth in the EU than intensity factor, and demographic factors, although influencing the age structure of labour force across Europe, had virtually no effect on the total changes in female employment rates – this is however expected to change in the forthcoming decades.

Guided by the indicators of the pure increase in female employment intensity rates singled out in the first half of this paper via decomposition of the overall female employment rates, we have looked into the national structural and policy factors in identified six cases. While this analysis was aimed at providing preliminary identification of the likely factors that have shaped exceptional successes and failures in terms of female employment, a further policy analysis and desk research is needed to clarify the effect of national policies and women's labour market participation. Several concluding remarks can sum up the finding of this preliminary research.

The examined countries on the overall follow the common EU27 trend in which the increase of intensity in female employment has been reached mostly due to the increasing participation and employment of women aged over 45. We identify wide-spread changes in the national retirement and pension schemes (raise of the statutory retirement age, equalizing statutory retirement age between men and women, cutting on the early retirement schemes) as crucial policy factors that prolonged women's carriers. Thus, we see potential in further cooperation with those work packages of NEUJOBS that are currently still in the process of development and which focus on changes in the labour market linked to the ageing population (WP17 and 12) and with socio-ecological transition that can facilitate more meaningful and active work participation of the older age groups.

Labour markets of the NMS like Poland, Estonia and Slovak Republic were affected by drastic transitional restructuring of the economy after 1989; thus the disparity between the skills of younger and older age groups might be significantly higher than in old EU member countries. This means that younger generations have a head start in terms of skills and education, and calls for activation of lifelong learning programs that would facilitate meaningful training of new professional skills to the older age groups. We see that particularly women in the under 25 years of age and the younger prime age groups face increasing obstacles in their employment due to the deterioration of state provided child-care institutions, reinforced in some cases (Poland and Slovakia) by traditionalist normative vision of the gender roles family and consequent reorientation of the welfare into monetary compensation for the maternity rather than a structural facilitation to return to work.

None of the examined countries demonstrates significant improvement in formal provision of child-care services, preferring to make it an internal family arrangement. Import of cheap immigrant female labour has been one of the solution allowing mothers to return to work (particularly in Spain and Italy), however, this data hardly makes its way into statistical reports due to the common informal nature of such arrangements. In relation to this gap, a closer cooperation with WP 13. 2 that looks specifically into the role of immigrant labour in meeting the EU demand in care, will be particularly useful in the more detailed version of this paper, i.e. WP 16.2.

The cases of Spain and Italy present contrasting development within the familistic models, characterized by sole (often male) breadwinner and low participation of women in labour market. While Spain shows persistent increase in female employment rates since late 1980s, Italy remains persistently low in women's employment. Among the factors that could contribute to this situation, we single out high level of temporary forms of employment in Spain, in which women are over-represented in most EU countries and which is relatively low in Italy. Another factor of Italian low rates might be the regional disparity in the women's employment situation in the South and North, which adds up to the overall low national rates. A further research is needed into the occupational quality and gender equality within part-time employment in Spain.

Table 3. Summary table: major policies influencing women’s labour market participation and employment over the last two decades in selected EU countries.

Country	Age group	Major policy factors behind women’s employment intensity (+: success, -: failure, N – neutral, i.e. no evidence of any visible significance)
Estonia	15-24	<ul style="list-style-type: none"> - promoting tertiary education for women (+) - School -to-labour transition programs (N) - formal / institutional pre-school child-care (+) - flexible approach to paternity benefits, increasing role of men in child-care (-)
Spain	25-44	<ul style="list-style-type: none"> -high level of part-time and other forms of flexible contracts in which women are overrepresented (+) -increasing level of education (+) -more equal share in parental responsibilities (N) -immigration that helps to resolve care responsibilities tension for the native women (+)
Poland	45- 54	<ul style="list-style-type: none"> -high level of part-time and other forms of flexible contracts in which women are overrepresented (-) -increasing level of education (+) - family / work reconciliation (-)
Germany	55-64	<ul style="list-style-type: none"> - increase in retirement age (+) - collective bargain on reducing the overall work time and introducing more flexible contracts (+) - Active Aging programs and lifelong learning programs (N)
Slovakia	15-64	<ul style="list-style-type: none"> -Increase in the level of education on employability of women (N) -high level of part-time and other forms of flexible contracts in which women are overrepresented (+) -more equal share in parental responsibilities (-) - family / work reconciliation (-) - increase in retirement age (+) - lifelong learning programs (-)
Italy	15-64	<ul style="list-style-type: none"> -Increase in the level of education on employability of women (N) -high level of part-time and other forms of flexible contracts in which women are overrepresented (-) -more equal share in parental responsibilities (-) - family / work reconciliation (-) - collective bargain on reducing the overall work time and introducing more flexible contracts (+) -immigration that helps to resolve care responsibilities tension for the native women (+)

All over EU27 the youngest and the oldest age groups seem to be most vulnerable groups, however, the consequences of such vulnerabilities are manifested differently on the national level; the case of Germany has demonstrated that in the aftermath of the economic crisis of 2007-2009 more stable economies had a better chance to adapt, and a space for more smooth implementation of collective agreements with a long-standing feature, such as flexible forms of contracts, shorter hours of work, labour hoarding as alternative to massive lay-offs. Such collective bargaining allows for extending some form of employment even among the youngest and the oldest age groups. In this respect WP 17 (that looks into impact of ageing on the future size and structure of the labour force as well as on economic activity and labour productivity at older ages) and WP12 (dealing with the ageing of the population and changes in life style, family and employment structure) can provide further deeper

insights. Overall, economic crisis of 2007-2009 has triggered restructuring of employment patterns in the EU, raising the attractiveness of flexible, temporary and part-time employment for the companies. This can be seen as a hopeful sign for the female employment as women often lead in such forms of employment. However, it raises more than ever the issue of social protection of such forms of employment, wage gap for different forms of employment and the threat of reinforcing gendered wage and security gap.

Annex I. Decomposition of employment changes

A change (difference) in total employment rate (in particular of people aged 15-64) between the given moment (K) and the moment of reference (O) can be decomposed into the contribution of components determined by the characteristics of labour force (LZ), demographic factor (D), labour utilisation intensity (I) and quality of workforce (J).

$$LZ_K = ER_O - ER_K = \sum_{wpk} (D_{pk} + I_{wpk} + J_{wpk})$$

$$D_{pk} = ER_{Kpk} \left(\frac{P_{Opk}}{P_O} - \frac{P_{Kpk}}{P_K} \right)$$

$$I_{wpk} = (ER_{Owpk} - ER_{Kwpk}) \frac{P_{Opk}}{P_O} * \frac{P_{Kwpk}}{P_{Kpk}} * P_K$$

$$J_{wpk} = ER_{Owpk} \frac{P_{Opk}}{P_O} \left(\frac{P_{Owpk}}{P_{Opk}} - \frac{P_{Kwpk}}{P_{Kpk}} \right)$$

where:

ER – employment rate

P – population size

w – level of education (tertiary – 5-6 ISCED 1997, secondary – 3-4 ISCED 1997, primary – 1-2 ISCED 1997);

p – gender

k – age group (five-year age groups between 15 and 64 years of age).

Annex II. The results of the decomposition of changes in employment rates.

Table A1. Decomposition of employment rate changes in 1990s, details.

	Women				15-64	men	total
	15-24	25-44	45-54	55-64		15-64	15-64
EU12 (1992 – 2000)							
Intensity	-0.19	0.84	0.54	0.26	1.45	-0.68	0.77
Quality	0.04	0.30	0.17	0.09	0.60	0.18	0.75
Demographics	-0.57	0.22	0.45	-0.01	0.09	0.46	0.57
All	-0.72	1.36	1.16	0.34	2.14	-0.04	2.10
All w/o demographics	-0.15	1.14	0.71	0.34	2.04	-0.50	1.52
Belgium (1992 – 2000)							
Intensity	-0.26	1.46	1.28	0.26	2.74	0.23	3.07
Quality	0.05	0.46	0.21	0.08	0.80	0.26	0.98
Demographics	-0.35	-0.16	0.66	-0.10	0.05	0.59	0.62
All	-0.56	1.76	2.15	0.25	3.59	1.08	4.67
All w/o demographics	-0.21	1.92	1.49	0.34	3.54	0.49	4.05
Denmark 1992 - 2000							
Intensity	0.13	0.07	0.03	0.00	0.23	0.89	1.22
Quality	0.02	0.18	0.13	0.09	0.41	0.20	0.61
Demographics	-0.73	-0.12	0.93	0.26	0.34	0.15	0.40
All	-0.58	0.14	1.08	0.34	0.99	1.24	2.22
All w/o demographics	0.15	0.26	0.15	0.08	0.65	1.09	1.82
France 1993 - 2000							
Intensity	0.03	0.15	0.52	0.03	0.74	-0.03	0.74
Quality	0.02	0.29	0.08	0.08	0.46	0.11	0.53
Demographics	-0.40	-0.58	1.43	-0.16	0.29	0.48	0.78
All	-0.34	-0.14	2.03	-0.05	1.50	0.55	2.05
All w/o demographics	0.06	0.44	0.60	0.10	1.20	0.07	1.27
Germany 1992 - 2000							
Intensity	-0.46	0.81	0.47	0.59	1.40	-1.62	-0.24
Quality	-0.01	0.08	0.08	0.09	0.24	0.09	0.37
Demographics	-0.63	-0.10	-0.20	0.18	-0.76	-0.60	-1.37
All	-1.11	0.79	0.35	0.86	0.88	-2.13	-1.25
All w/o demographics	-0.47	0.88	0.55	0.68	1.64	-1.53	0.13
Greece 1992 - 2000							
Intensity	-0.03	0.82	0.52	0.28	1.58	-0.94	1.06
Quality	-0.02	0.43	0.15	0.02	0.59	0.04	0.58
Demographics	-0.09	0.79	-0.07	-0.45	0.19	1.53	1.35
All	-0.13	2.04	0.60	-0.15	2.36	0.63	2.99
All w/o demographics	-0.05	1.25	0.67	0.30	2.17	-0.90	1.64

Ireland 1992 - 2000							
Intensity	1.04	4.20	1.72	0.49	7.45	5.05	12.55
Quality	0.06	0.39	0.09	0.05	0.58	0.13	0.62
Demographics	-0.19	-0.05	0.33	0.02	0.11	0.55	0.68
All	0.90	4.54	2.14	0.56	8.14	5.73	13.86
All w/o demographics	1.09	4.59	1.80	0.54	8.03	5.18	13.18
Italy 1992 - 2000							
Intensity	-0.36	0.35	0.33	0.11	0.43	-2.40	-1.84
Quality	0.00	0.16	0.18	0.05	0.40	0.09	0.44
Demographics	-0.46	0.80	0.19	0.00	0.54	1.47	1.92
All	-0.82	1.32	0.71	0.16	1.37	-0.85	0.52
All w/o demographics	-0.36	0.52	0.52	0.16	0.83	-2.31	-1.40
Spain 1992 - 2000							
Intensity	0.12	2.08	0.73	0.05	2.98	0.98	4.05
Quality	0.03	0.80	0.25	0.07	1.16	0.16	1.27
Demographics	-0.29	0.79	0.26	-0.17	0.58	1.53	2.06
All	-0.14	3.66	1.24	-0.05	4.71	2.67	7.38
All w/o demographics	0.16	2.88	0.98	0.12	4.14	1.14	5.32
Luxembourg 1992 - 2000							
Intensity	-1.44	1.95	1.06	-0.08	1.49	-1.42	0.09
Quality	-0.06	0.20	0.25	0.17	0.56	0.21	0.69
Demographics	-0.63	0.19	0.46	-0.10	-0.07	0.36	0.38
All	-2.12	2.34	1.77	-0.01	1.98	-0.85	1.16
All w/o demographics	-1.50	2.15	1.31	0.09	2.05	-1.21	0.78
Portugal 1992 - 2000							
Intensity	-0.86	1.26	0.89	0.61	1.91	-0.77	1.40
Quality	0.03	-0.08	-0.03	0.00	-0.07	-0.06	-0.17
Demographics	-0.43	0.42	0.18	-0.17	-0.01	1.79	1.53
All	-1.25	1.60	1.03	0.44	1.82	0.95	2.76
All w/o demographics	-0.82	1.18	0.85	0.62	1.83	-0.84	1.23
United Kingdom 1992 - 2000							
Intensity	-0.18	0.76	0.19	0.16	0.93	0.68	1.46
Quality	0.11	0.37	0.20	0.11	0.78	0.40	1.24
Demographics	-0.83	0.36	0.77	0.17	0.47	-0.36	0.19
All	-0.90	1.48	1.15	0.44	2.18	0.72	2.89
All w/o demographics	-0.08	1.13	0.39	0.27	1.70	1.08	2.70
Netherlands 1996 - 2000							
Intensity	1.22	1.86	1.01	0.42	4.51	3.37	7.84
Quality	-0.03	0.10	0.07	0.03	0.17	0.07	0.25
Demographics	-0.45	-0.28	0.28	0.10	-0.34	-0.20	-0.52
All	0.75	1.68	1.36	0.55	4.33	3.24	7.57
All w/o demographics	1.19	1.96	1.07	0.45	4.67	3.44	8.09

EU15 1995 - 2000							
Intensity	0.25	0.84	0.41	0.18	1.68	0.83	2.53
Quality	0.01	0.18	0.11	0.07	0.38	0.12	0.49
Demographics	-0.28	0.09	0.30	-0.03	0.08	0.17	0.25
All	-0.01	1.11	0.82	0.22	2.14	1.13	3.27
All w/o demographics	0.27	1.02	0.52	0.25	2.06	0.96	3.02
Austria 1995 - 2000							
Intensity	-0.38	0.47	0.45	-0.20	0.33	-0.70	-0.51
Quality	0.01	0.16	0.08	0.08	0.34	0.35	0.82
Demographics	-0.61	0.32	-0.17	0.27	-0.19	-0.35	-0.53
All	-0.98	0.95	0.36	0.15	0.48	-0.70	-0.22
All w/o demographics	-0.37	0.63	0.53	-0.12	0.67	-0.35	0.31
Finland 1995 - 2000							
Intensity	1.39	0.67	0.54	0.39	2.99	5.08	8.22
Quality	0.05	0.52	0.17	0.16	0.91	0.42	1.19
Demographics	0.27	-1.31	0.83	0.07	-0.13	-0.21	-0.37
All	1.71	-0.11	1.54	0.63	3.77	5.29	9.05
All w/o demographics	1.44	1.19	0.71	0.56	3.90	5.50	9.41
Sweden 1995 - 2000							
Intensity	-0.02	-0.10	-0.35	0.09	-0.38	0.31	-0.03
Quality	-0.02	0.01	0.06	0.13	0.18	0.04	0.16
Demographics	-0.37	-0.11	-0.04	0.64	0.12	0.14	0.26
All	-0.41	-0.20	-0.34	0.87	-0.09	0.49	0.40
All w/o demographics	-0.04	-0.09	-0.30	0.22	-0.20	0.34	0.14
Czech Republic 1998 - 2000							
Intensity	-0.21	-0.58	-0.16	-0.16	-1.11	-1.56	-2.72
Quality	0.01	0.02	0.01	0.03	0.07	0.04	0.11
Demographics	-0.22	0.16	0.07	0.17	0.18	0.22	0.44
All	-0.43	-0.40	-0.08	0.03	-0.87	-1.30	-2.17
All w/o demographics	-0.21	-0.56	-0.15	-0.13	-1.05	-1.52	-2.61
Estonia 1997 - 2000							
Intensity	-0.15	-0.03	-0.09	0.18	-0.09	-0.79	-0.76
Quality	-0.33	-0.32	-0.25	-0.25	-1.14	-1.06	-2.29
Demographics	-0.03	-0.60	0.89	-0.52	-0.26	-0.42	-0.73
All	-0.50	-0.94	0.54	-0.59	-1.49	-2.27	-3.78
All w/o demographics	-0.48	-0.34	-0.34	-0.07	-1.23	-1.85	-3.05
Hungary 1997 - 2000							
Intensity	0.11	0.82	0.67	0.08	1.68	0.77	2.54
Quality	0.08	0.09	0.03	0.09	0.30	0.14	0.43
Demographics	0.19	-0.51	0.60	0.01	0.29	0.83	1.02
All	0.38	0.40	1.30	0.19	2.26	1.73	3.99
All w/o demographics	0.19	0.91	0.70	0.17	1.98	0.90	2.97

Latvia 1998 - 2000							
Intensity	-0.37	-0.36	-0.11	-0.18	-1.02	-1.03	-2.10
Quality	-0.01	0.01	0.00	0.05	0.04	0.08	0.16
Demographics	0.01	-0.24	0.13	-0.16	-0.26	-0.23	-0.46
All	-0.37	-0.59	0.02	-0.29	-1.23	-1.18	-2.40
All w/o demographics	-0.39	-0.35	-0.11	-0.13	-0.97	-0.96	-1.94
Lithuania 1998 - 2000							
Intensity	-0.34	0.13	-0.17	0.39	0.01	-2.49	-2.50
Quality	-0.04	-0.11	0.02	0.19	0.05	0.10	0.18
Demographics	-0.08	0.11	0.13	-0.09	0.07	-0.17	-0.13
All	-0.46	0.12	-0.03	0.49	0.13	-2.57	-2.44
All w/o demographics	-0.38	0.02	-0.16	0.57	0.06	-2.40	-2.31
Poland 1997 - 2000							
Intensity	-0.20	-0.22	-0.05	-0.38	-0.85	-2.28	-3.14
Quality	-0.02	-0.16	-0.08	-0.02	-0.27	-0.11	-0.35
Demographics	0.07	-0.82	0.81	-0.17	-0.11	0.00	-0.14
All	-0.15	-1.20	0.68	-0.57	-1.24	-2.39	-3.63
All w/o demographics	-0.22	-0.38	-0.13	-0.40	-1.13	-2.39	-3.49
Romania 1997 - 2000							
Intensity	-0.36	-0.33	-0.33	-0.08	-1.11	-1.58	-2.68
Quality	-0.02	-0.14	-0.15	0.03	-0.28	-0.18	-0.49
Demographics	-0.08	0.30	0.63	-0.30	0.56	0.24	0.82
All	-0.46	-0.17	0.15	-0.35	-0.84	-1.52	-2.35
All w/o demographics	-0.38	-0.48	-0.48	-0.05	-1.39	-1.76	-3.17
Slovenia 1996 - 2000							
Intensity	-0.76	0.23	0.17	0.04	-0.33	-0.32	-0.54
Quality	-0.06	0.07	0.13	0.07	0.21	0.08	0.29
Demographics	-0.30	-0.18	0.76	-0.05	0.22	1.06	1.19
All	-1.12	0.12	1.05	0.07	0.11	0.83	0.93
All w/o demographics	-0.82	0.30	0.29	0.11	-0.11	-0.23	-0.25
Slovakia 1998 - 2000							
Intensity	-0.58	-0.65	-0.19	-0.02	-1.43	-2.96	-4.38
Quality	0.02	-0.02	0.02	0.04	0.06	-0.03	0.01
Demographics	-0.01	-0.15	0.39	0.01	0.24	0.25	0.50
All	-0.56	-0.82	0.22	0.04	-1.12	-2.74	-3.87
All w/o demographics	-0.56	-0.67	-0.16	0.03	-1.36	-2.99	-4.36

Table A2. Decomposition of employment rate changes in year 2001-2011, details.

	Women				Men	Total	
	15-24	25-44	45-54	55-64	15-64	15-64	
EU15							
Intensity	-0.24	0.19	0.79	1.12	1.86	-1.00	0.96
Quality	0.02	0.43	0.13	0.17	0.76	0.24	0.91
Demographics	-0.16	-1.00	0.66	0.31	-0.19	-0.11	-0.31
All	-0.39	-0.37	1.58	1.60	2.43	-0.87	1.56
All w/o demographics	-0.23	0.63	0.92	1.30	2.62	-0.76	1.87
NMS12							
Intensity	-0.69	-0.45	0.46	0.51	-0.17	0.59	0.68
Quality	0.07	0.72	0.14	0.10	1.03	0.31	1.15
Demographics	-0.42	0.32	-0.78	0.64	-0.24	0.68	0.38
All	-1.05	0.60	-0.18	1.24	0.61	1.59	2.20
All w/o demographics	-0.63	0.28	0.60	0.61	0.85	0.91	1.83
Austria							
Intensity	0.18	0.76	1.28	1.25	3.47	1.08	4.50
Quality	0.00	0.09	0.06	0.14	0.29	0.16	0.46
Demographics	0.24	-2.16	1.54	0.06	-0.32	-0.38	-0.65
All	0.42	-1.30	2.88	1.45	3.44	0.86	4.30
All w/o demographics	0.18	0.85	1.33	1.39	3.76	1.24	4.96
Belgium							
Intensity	-0.16	0.48	1.26	1.34	2.92	-0.20	2.85
Quality	0.07	0.50	0.22	0.14	0.92	0.32	1.12
Demographics	0.01	-1.47	0.36	0.29	-0.81	-0.91	-1.74
All	-0.08	-0.49	1.84	1.76	3.03	-0.79	2.23
All w/o demographics	-0.09	0.98	1.47	1.48	3.83	0.12	3.97
Bulgaria							
Intensity	-0.58	0.44	0.88	2.46	3.19	3.24	6.80
Quality	-0.07	0.21	0.00	0.11	0.25	0.06	0.27
Demographics	0.02	0.23	0.12	0.04	0.42	0.60	0.70
All	-0.63	0.88	1.00	2.62	3.87	3.90	7.76
All w/o demographics	-0.65	0.65	0.88	2.58	3.45	3.30	7.06
Cyprus							
Intensity	-1.09	1.32	0.64	0.65	1.52	-3.15	-1.17
Quality	0.10	0.38	0.21	0.13	0.81	0.13	0.80
Demographics	-0.27	-0.80	0.01	0.33	-0.73	1.63	0.60
All	-1.26	0.90	0.86	1.10	1.61	-1.39	0.23
All w/o demographics	-0.99	1.70	0.85	0.77	2.33	-3.02	-0.37

Czech Republic							
Intensity	-0.97	-0.41	0.16	1.54	0.33	0.48	0.99
Quality	0.02	0.10	0.08	0.09	0.28	0.09	0.31
Demographics	-0.67	1.14	-1.71	0.37	-0.87	0.51	-0.49
All	-1.63	0.83	-1.47	2.00	-0.26	1.08	0.81
All w/o demographics	-0.95	-0.31	0.23	1.64	0.61	0.57	1.31
Denmark							
Intensity	0.01	-0.90	0.14	0.68	-0.06	-1.46	-1.47
Quality	0.02	0.25	0.05	0.17	0.50	0.16	0.59
Demographics	0.57	-1.70	0.07	0.33	-0.74	-1.11	-1.84
All	0.60	-2.35	0.26	1.18	-0.30	-2.40	-2.71
All w/o demographics	0.03	-0.64	0.19	0.85	0.44	-1.29	-0.88
Germany							
Intensity	-0.04	0.68	1.00	1.91	3.55	1.93	5.47
Quality	0.02	0.20	0.09	0.15	0.46	0.11	0.56
Demographics	0.26	-1.37	1.40	0.19	0.49	0.31	0.82
All	0.25	-0.49	2.49	2.25	4.50	2.35	6.85
All w/o demographics	-0.02	0.88	1.09	2.06	4.01	2.04	6.03
Estonia							
Intensity	0.47	0.25	0.34	1.23	2.28	-0.12	2.08
Quality	0.02	0.19	0.11	0.18	0.50	0.09	0.65
Demographics	0.23	-0.40	-0.12	0.57	0.28	1.29	1.56
All	0.72	0.04	0.32	1.97	3.06	1.26	4.28
All w/o demographics	0.49	0.45	0.44	1.40	2.79	-0.03	2.73
Finland							
Intensity	-0.26	0.01	-0.04	1.44	1.15	0.44	1.61
Quality	-0.04	0.12	0.22	0.21	0.51	0.22	0.70
Demographics	-0.07	-1.13	-1.00	0.93	-1.26	-1.18	-2.44
All	-0.37	-0.99	-0.82	2.58	0.41	-0.52	-0.12
All w/o demographics	-0.30	0.13	0.19	1.65	1.66	0.66	2.32
France							
Intensity	0.06	0.33	0.77	1.25	2.41	0.12	2.56
Quality	-0.01	0.53	0.06	0.08	0.65	0.28	0.88
Demographics	-0.03	-1.38	-0.20	0.72	-0.89	-1.41	-2.27
All	0.01	-0.52	0.62	2.06	2.18	-1.00	1.17
All w/o demographics	0.05	0.85	0.83	1.34	3.06	0.40	3.44

Greece							
Intensity	-0.64	0.02	0.76	0.26	0.40	-4.44	-3.64
Quality	0.07	0.53	0.31	0.10	1.01	0.20	1.07
Demographics	-0.59	-0.08	0.53	0.24	0.09	1.85	1.66
All	-1.17	0.47	1.59	0.60	1.49	-2.39	-0.90
All w/o demographics	-0.58	0.55	1.07	0.36	1.40	-4.24	-2.57
Hungary							
Intensity	-0.84	-1.04	0.29	1.84	0.24	-1.09	-0.61
Quality	0.06	0.50	0.14	0.16	0.85	0.33	1.03
Demographics	-0.47	0.64	-1.27	0.31	-0.80	0.23	-0.66
All	-1.25	0.09	-0.84	2.30	0.30	-0.53	-0.24
All w/o demographics	-0.78	-0.55	0.43	1.99	1.09	-0.76	0.42
Ireland							
Intensity	-1.05	-1.93	0.50	0.95	-1.54	-8.45	-9.89
Quality	0.03	1.31	0.36	0.20	1.90	0.97	2.72
Demographics	-1.48	1.40	0.36	0.34	0.61	0.55	1.22
All	-2.50	0.77	1.21	1.49	0.97	-6.93	-5.95
All w/o demographics	-1.02	-0.62	0.86	1.15	0.37	-7.48	-7.17
Italy							
Intensity	-0.44	0.38	1.18	1.04	2.16	-0.69	1.58
Quality	-0.01	0.38	0.08	0.19	0.65	0.06	0.54
Demographics	-0.27	-0.60	0.74	0.11	-0.02	0.25	0.28
All	-0.72	0.16	1.99	1.35	2.79	-0.38	2.41
All w/o demographics	-0.44	0.77	1.26	1.23	2.81	-0.63	2.12
Latvia							
Intensity	-0.62	-0.86	0.03	1.64	0.19	-0.87	-0.44
Quality	0.16	0.77	0.26	0.17	1.35	0.35	1.52
Demographics	0.26	-0.51	0.73	-0.01	0.47	1.59	2.03
All	-0.21	-0.60	1.03	1.79	2.01	1.07	3.11
All w/o demographics	-0.47	-0.09	0.29	1.80	1.54	-0.52	1.07
Spain							
Intensity	-0.36	1.24	1.45	0.99	3.32	-6.16	-2.67
Quality	0.00	0.58	0.40	0.22	1.20	0.46	1.56
Demographics	-0.80	-0.12	0.68	0.19	-0.05	1.20	1.08
All	-1.16	1.70	2.53	1.39	4.47	-4.50	-0.04
All w/o demographics	-0.36	1.83	1.85	1.20	4.52	-5.70	-1.11

Lithuania							
Intensity	-0.68	-0.48	0.06	0.98	-0.11	-0.24	-0.07
Quality	-0.07	0.89	0.35	0.44	1.60	0.69	2.17
Demographics	0.31	-1.99	1.60	0.13	0.04	0.60	0.51
All	-0.43	-1.58	2.01	1.55	1.54	1.04	2.61
All w/o demographics	-0.75	0.41	0.42	1.42	1.50	0.44	2.10
Luxemburg							
Intensity	-0.99	0.85	1.40	1.04	2.31	-1.48	0.67
Quality	0.04	0.72	0.32	0.24	1.31	0.69	2.19
Demographics	-0.03	-1.38	0.64	0.10	-0.66	-0.48	-1.14
All	-0.98	0.19	2.36	1.39	2.96	-1.27	1.72
All w/o demographics	-0.95	1.57	1.72	1.29	3.62	-0.79	2.85
Netherlands							
Intensity	-0.47	0.35	1.26	1.76	2.90	-0.35	2.44
Quality	0.04	0.39	0.12	0.16	0.71	0.25	0.93
Demographics	0.30	-2.25	0.40	0.56	-0.99	-1.72	-2.64
All	-0.13	-1.51	1.78	2.47	2.62	-1.83	0.73
All w/o demographics	-0.43	0.74	1.38	1.92	3.61	-0.10	3.37
Poland							
Intensity	-0.34	0.28	0.98	0.37	1.29	2.98	4.67
Quality	0.09	1.26	0.17	0.10	1.62	0.41	1.63
Demographics	-0.45	0.05	-1.02	0.88	-0.55	0.17	-0.39
All	-0.70	1.58	0.13	1.34	2.36	3.56	5.92
All w/o demographics	-0.25	1.54	1.15	0.47	2.91	3.39	6.31
Portugal							
Intensity	-0.92	-0.62	-0.07	0.09	-1.52	-5.14	-6.48
Quality	0.07	0.39	0.18	0.06	0.69	0.16	0.78
Demographics	-0.93	-0.12	0.75	0.42	0.11	1.03	1.03
All	-1.79	-0.36	0.86	0.56	-0.72	-3.95	-4.67
All w/o demographics	-0.86	-0.23	0.11	0.15	-0.83	-4.98	-5.70
Romania							
Intensity	-1.15	-1.75	-0.23	-1.34	-4.47	-3.02	-7.36
Quality	0.05	0.58	0.03	0.02	0.67	0.20	0.79
Demographics	-0.45	0.93	-0.82	0.75	0.41	1.30	1.66
All	-1.55	-0.25	-1.03	-0.56	-3.39	-1.52	-4.91
All w/o demographics	-1.10	-1.17	-0.21	-1.32	-3.80	-2.82	-6.57

Slovenia							
Intensity	-0.06	-1.13	0.94	0.61	0.36	-0.79	-0.25
Quality	0.05	0.54	0.23	0.15	0.97	0.40	1.26
Demographics	-0.56	-0.70	0.24	0.32	-0.70	0.57	-0.23
All	-0.57	-1.29	1.40	1.08	0.63	0.18	0.79
All w/o demographics	-0.01	-0.59	1.17	0.76	1.33	-0.39	1.02
Slovakia							
Intensity	-1.19	-1.04	0.57	1.81	0.14	1.68	2.11
Quality	-0.01	0.42	0.13	0.16	0.71	0.22	0.76
Demographics	-0.61	-0.03	-0.40	0.25	-0.79	0.69	-0.22
All	-1.82	-0.65	0.30	2.22	0.06	2.59	2.65
All w/o demographics	-1.20	-0.62	0.70	1.97	0.86	1.90	2.87
Sweden							
Intensity	-0.64	-0.38	0.07	0.61	-0.34	0.71	0.53
Quality	0.01	0.40	0.06	0.18	0.64	0.12	0.63
Demographics	0.59	-0.91	-0.43	0.04	-0.71	-0.75	-1.47
All	-0.04	-0.88	-0.29	0.82	-0.40	0.08	-0.31
All w/o demographics	-0.64	0.03	0.13	0.78	0.31	0.83	1.16
United Kingdom							
Intensity	-0.86	-0.71	0.23	0.58	-0.76	-1.67	-2.21
Quality	0.05	0.58	0.10	0.14	0.87	0.27	1.03
Demographics	0.28	-1.47	0.46	0.23	-0.49	-0.13	-0.68
All	-0.53	-1.59	0.79	0.95	-0.38	-1.53	-1.86
All w/o demographics	-0.81	-0.13	0.33	0.72	0.11	-1.40	-1.18

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ABOUT NEUJOBS

“Creating and adapting jobs in Europe in the context of a socio-ecological transition”

NEUJOBS is a research project financed by the European Commission under the 7th Framework Programme. Its objective is to analyse likely future developments in the European labour market(s), in view of four major transitions that will impact employment - particularly certain sectors of the labour force and the economy - and European societies in general. What are these transitions? The first is the **socio-ecological transition**: a comprehensive change in the patterns of social organisation and culture, production and consumption that will drive humanity beyond the current industrial model towards a more sustainable future. The second is the **societal transition**, produced by a combination of population ageing, low fertility rates, changing family structures, urbanisation and growing female employment. The third transition concerns **new territorial dynamics** and the balance between agglomeration and dispersion forces. The fourth is a **skills (upgrading)** transition and its likely consequences for employment and (in)equality.

Research Areas

NEUJOBS consists of 23 work packages organised in six groups:

- **Group 1** provides a conceptualisation of the **socio-ecological transition** that constitutes the basis for the other work-packages.
- **Group 2** considers in detail the main drivers for change and the resulting relevant policies. Regarding the drivers we analyse the discourse on **job quality**, **educational** needs, changes in the organisation of production and in the employment structure. Regarding relevant policies, research in this group assesses the impact of changes in **family composition**, the effect of **labour relations** and the issue of financing transition in an era of budget constraints. The regional dimension is taken into account, also in relation to **migration** flows.
- **Group 3** models economic and employment development on the basis of the inputs provided in the previous work packages.
- **Group 4** examines possible employment trends in key sectors of the economy in the light of the transition processes: energy, health care and goods/services for the **ageing** population, **care services**, housing and transport.
- **Group 5** focuses on impact groups, namely those vital for employment growth in the EU: **women**, the **elderly**, immigrants and **Roma**.
- **Group 6** is composed of transversal work packages: implications NEUJOBS findings for EU policy-making, dissemination, management and coordination.

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