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European JustJobs Index

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Fafo

JustJobs NETWORK

PROGRESSIVE ECONOMY

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Introduction

Jobs have taken center stage since the wake of the financial crisis of 2008. Countries such as Spain and Greece experienced high levels of unemployment and were among the European countries that implemented austerity measures aimed at addressing the economic crisis. As a result, expenditure on social protection has declined in a number of countries across the European Union. The various policy measures applied since the onset of the financial crisis is debated across the political spectrum. At the core, high-quality jobs remain important for a knowledge intensive economy.

Which countries are succeeding in creating good new jobs for their labor markets? Where are job creation policies effectively producing not only employment bur just jobs-- complete with fair remuneration, social protections, labor rights and opportunities for economic mobility? The issue of creating quality jobs is complex and the question of whether conditions for JustJobs are improving or getting worse—both in the long term and in this time of economic crisis—must be addressed urgently. Due to the lack of a comprehensive measure that captures relevant and interrelated concepts around JustJobs, the debate about jobs is often limited to addressing specific issues such as unemployment or an increase in minimum wage.

The JustJobs Index, a new international measure of fair jobs, seeks to answer these pressing questions, broadening the global discourse on employment beyond common metric of unemployment to address job quality. An ongoing flagship research project of the JustJobs Network and Fafo Institute for Applied International Studies, the JustJobs Index is the first international measure of its kind the first version 0.1 was released in 2013. Beyond an international ranking, the index reveals interconnections among the various dimensions of job creating and how working conditions can be improved. This enables policymakers to target resource and design policies more effectively.

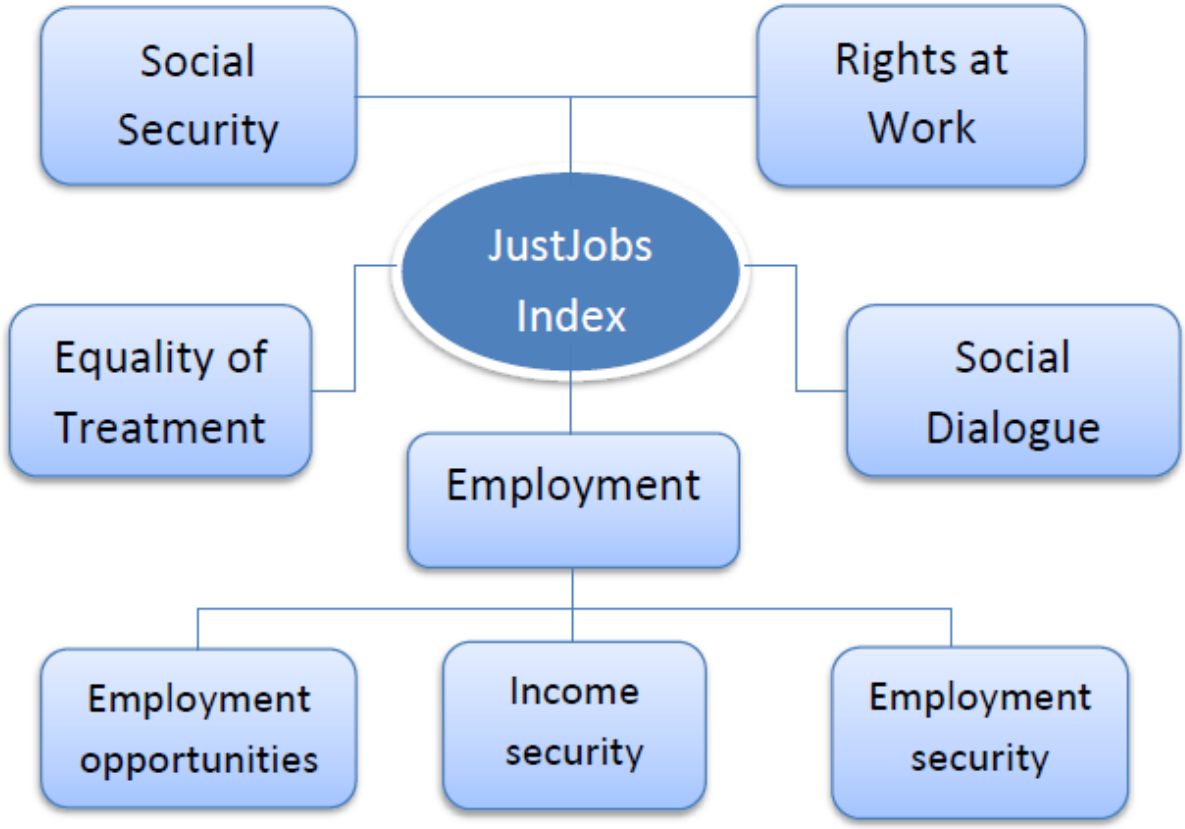
Fafo and the JustJobs Network, are commissioned by Progressive Economy to develop a regional JustJobs Index for the European Union with financing from S&D Group in the European Parliament. The European Union JustJobs Index is intended as a starting point to initiate a discussion and attract interest on policy issues related to jobs and creation of quality jobs in a European context. The availability of data in the European Union allows for the inclusion of more relevant indicators than in the global index, and provides an opportunity for exploring rich and valid insights into JustJobs performance using the EU JustJobs Index. By combining the index with specific country knowledge, the index provides an opportunity for European policymakers to better identify appropriate measures of creating JustJobs.

Fafo and the JustJobs Network have now developed the European Union JustJobs Index and this brief presents the index, its major findings, and offers some initial analysis of JustJobs trends as a basis for broader discussion. Based on availability of data, two versions of the EU JustJobs Indices are constructed that are labeled as EU28 JJI and EU21 JJI. The EU28 JJI version covers the 28 member countries with three JustJobs dimensions: employment, social security and equality of treatment and opportunity. The EU21 JJI features 21 European Union countries with two additional JustJobs dimensions: rights at work and social dialogue. The report provides details on conceptual design and the construction of the index as well as identifying indicators that are useful for future data collection at a national level.

Overview of the European JustJobs Index

The JJI is conceptually anchored with the International Labour Organization's decent work dimensions: employment, social security, rights at work, and social dialogue. In order to emphasize the role of inequality, equality of treatment and opportunities is classified as a fifth dimension. The employment dimension has three sub-dimensions: employment opportunities, income security, and employment security. The dimensions are shown in Figure 1 and each of them are defined below.

Figure 1 JustJobs Index and Dimensions



Dimension 1: Employment

The first dimension, employment, is divided into three sub-dimensions in order to fully operationalize the concept. The three sub-dimensions are employment opportunities, income security and employment security.

Sub-dimension 1: Employment opportunities

Employment opportunities are defined both positively and negatively. In a positive sense, the sub-dimension refers to for instance labour force participation rate, employment to population rate and employment by status in employment. In a negative sense, the sub-dimension refers to for instance unemployment and youth unemployment. The following indicators are used to measure the employment opportunities sub-dimension:

	Indicator	Definition
1	Labour force participation rate, 15-64	The labour force participation rate is defined as the ratio of the labour force to the working-age population (15-64), expressed as a percentage. The labour force is the sum of the number of persons employed and the number of persons unemployed.
2	Employment to population rate, 15-64	The employment-to-population ratio is defined as the proportion of a country's working-age population that is employed.
3	Unemployment rate, 15-74	Unemployment rates represent unemployed persons as a percentage of the labour force. The labour force is the total number of people employed and unemployed. Unemployed persons comprise persons aged 15 to 74 who were: a. without work during the reference week, b. currently available for work, i.e. were available for paid employment or self-employment before the end of the two weeks following the reference week, c. actively seeking work, i.e. had taken specific steps in the four weeks period ending with the reference week to seek paid employment or self-employment or who found a job to start later, i.e. within a period of, at most, three months.
4	Youth unemployment rate, 15-24	"Youth" covers persons aged 15 to 24 years. The indicator consists of four distinct measurements, each representing a different aspect of the youth unemployment problem. The four measurements are: (a) youth unemployment rate (youth unemployment as a percentage of the youth labour force);(b) ratio of the youth unemployment rate to the adult unemployment rate; (c) youth unemployment as a proportion of total unemployment; and (d) youth unemployment as a proportion of the youth population.
5	Youth not in education and not in employment, 15-24	"Percentage of youth who are not in employment and not in education or training." This indicator captures two groups: (i) youth who are economically inactive for reasons other than participation in education; and (ii) unemployed youth. Compared to the youth inactivity rate, it is a better indicator for the proportion of youth that remains "idle", and better proxies denied access to employment opportunities.
	Employment by status in employment	Employment by status in employment: The indicator of status in employment distinguishes between two categories of the total employed. These are: (a) wage and salaried workers (also known as employees); and (b) self-employed workers. These two groups of workers are presented as percentages of the total employed for both sexes and for males and females separately.
6	Wage and salaried workers (employees)	See above.
7	Self-employed workers	See above.

	Indicator	Definition
8	Wage and salaried workers (% of total employed)	Wage and salaried workers (employees) are those workers who hold the type of jobs defined as "paid employment jobs," where the incumbents hold explicit (written or oral) or implicit employment contracts that give them a basic remuneration that is not directly dependent upon the revenue of the unit for which they work.

Sub-dimension 2: Income security

Income security refers to the notion of an "adequate living wage" and can be measured using indicators of rate of pay and GDP per capita. The following indicators are used to measure the income security sub-dimension:

	Indicator	Definition
9	Average real wages in PPP	"Real wages" have been defined in the ILO resolution adopted by the Eighth International Conference of Labour Statisticians (ICLS) in 1954, as "the goods and services which can be purchased with wages or are provided as wages". This definition establishes a useful basis for the computation of real wages and their comparison from one period of time to another, or between one country and another. Average monthly wages are therefore not only presented in nominal terms, but also in real terms by adjusting for changes in consumer prices.
10	GDP per capita expressed on purchasing power parity	GDP PPP (purchasing power parity) is gross domestic product converted to euros (Fafo's conversion) using purchasing power parity rates. Purchasing power parities (PPPs) are the rates of currency conversion that eliminate the differences in price levels between countries.

Sub-dimension 3: Employment security

Employment security refers to the stability and security of work and is operationalized using the following indicators:

	Indicator	Definition
11	Own-account workers	The status-in-employment indicator presents all six groups used in the ICSE definitions. The two major groups - self-employed and employees - cover the two broad types of status in employment. The remaining four – employers (group ii); own-account workers (group iii); members of producers' cooperatives (group iv); and contributing family workers (group v) – are sub-categories of total self-employed. The number in each status category is divided by total employment to arrive at the percentages shown in table 3. The "vulnerable employment rate" is calculated as the sum of contributing family workers and own-account workers as a percentage of total employment. Own-account workers are those workers who, working on their own account or with one or more partners, hold the type of jobs defined as a "self-employment jobs" [see ii above], and have not engaged on a continuous basis any employees to work for them.
12	Contributing family workers	Share of contributing family workers in total employment. See above.
13	Vulnerable employment	Sum of contributing family workers and own-account workers in total employment. See above.

Dimension 2: Social Security

The dimension social security refers to measures that provide social benefits, in cash or in kind.The definition is operationalized using the following indicators:

	Indicator	Definition
14	Expenditure on pension	The 'Pensions' aggregate comprises part of periodic cash benefits under the disability, old-age, survivors and unemployment functions. It is defined as the sum of the following social benefits: disability pension, early-retirement due to reduced capacity to work, old-age pension, anticipated old-age pension, partial pension, survivors' pension, early-retirement benefit for labour market reasons.
15	Total expenditure on social protection per head of population	Expenditure on social protection contain: social benefits, which consist of transfers, in cash or in kind, to households and individuals to relieve them of the burden of a defined set of risks or needs; administration costs, which represent the costs charged to the scheme for its management and administration; other expenditure, which consists of miscellaneous expenditure by social protection schemes (payment of property income and other).
16	Total expenditure on social benefits - percentage of total expenditure on social protection	Social benefits consist of transfers, in cash or in kind, to households and individuals to relieve them of the burden of a defined set of risks or needs. Expenditure on social protection contain: social benefits, administration costs, which represent the costs charged to the scheme for its management and administration, other expenditure, which consists of miscellaneous expenditure (payment of property income and other).
17	Total expenditure on social benefits - percentage of total benefits – family/ children	Social benefits consist of transfers, in cash or in kind, by social protection schemes to households and individuals to relieve them of the burden of a defined set of risks or needs. The functions (or risks) are: sickness/healthcare, disability, old age, survivors, family/ children, unemployment, housing, social exclusion not elsewhere classified (n.e.c).
18	Total expenditure on social benefits - percentage of total benefits - disability	See above.
19	Total expenditure on social benefits - percentage of total benefits - unemployment	See above.
20	Total expenditure on social benefits - percentage of total benefits – sickness and health care	See above.

Dimension 3: Rights at work

Dimension three – rights at work – refers to occupational safety and health. This dimension is operationalized using the following indicators:

	Indicator	Definition
21	Average annual hours actually worked per worker	"Average annual hours actually worked per worker": The concept used is the total number of hours worked over the year divided by the average number of people in employment. This measure includes time spent at the workplace on productive activities ("direct hours" in the resolution) and on other activities that are part of the tasks and duties of the job concerned ("related hours"). The latter can include, for example, cleaning and preparing working tools, and certain on-call duties. The concept also includes time spent at the place of work when the person is inactive for reasons linked to the production process or work organization ("down time"), as during these periods paid workers, for example, still remain at the disposal of their employer while self-employed will continue working on other tasks and duties. "Hours actually worked" also includes short rest periods ("resting time") spent at the place of work as they are necessary for human beings and because they are difficult to distinguish separately, even if paid workers, for example, are not "at the disposal" of their employer during those periods. Explicitly excluded are lunch breaks if no work is performed, as they are normally sufficiently long to be easily distinguished from work periods. The international definition relates to all types of workers - whether in salaried or self-employment, paid or unpaid, and carried out in any location, including the street, field, home, etc.
22	Share of persons working between 40 and 48 hours	The "hours usually worked" per week identifies the most common weekly working schedule of a person in employment over a selected period. The internationally-agreed statistical definition of "usual hours of work", recently adopted, refers to the hours worked in any job during a typical short period such as one week, over a longer period of time, or more technically, as the modal value of the "hours actually worked" per week over a longer observation period. The definition is applicable to all types of jobs, even those where the worker does not possess a working contract – for example, in small-scale or family enterprises and self-employed workers. Hours usually worked includes overtime that occurs systematically every day or week and excludes time not worked on a usual basis. This measure is not affected by unusual absence or by irregular or unusual overtime, whether worked for premium pay, regular pay, or without compensation. The following hour bands are applied in table 7a: less than 25 hours worked per week, between 25 and 34 hours, between 35 and 39 hours, between 40 and 48 hours, between 49 and 59 hours, 40 hours and over, 50 hours and over and 60 hours and over, as available
23	Share of persons working between 49 and 59 hours	See above.
24	Share of persons working 60 or more hours	See above.

	Indicator	Definition
25	Number of fatal accidents at work	An accident at work is “a discrete occurrence in the course of work which leads to physical or mental harm”. The data include only accidents involving more than 3 calendar days of absence from work, also called ‘serious accidents’. A fatal accident at work is defined as an accident which leads to the death of a victim within one year of the accident.

Dimension 4: Equality of Treatment and Opportunity

Dimension four – equality of treatment and opportunity - is a sub-dimension in the ILO decent work framework. However, in the JustJobs Index of the European Union, the sub-dimension of equality of treatment and opportunity has been lifted to an additional dimension as it is particularly interesting in the current European setting and since we have available data on equality and gender equity.

The equality of treatment and opportunity dimension is operationalized using the following indicators:

	Indicator	Definition
26	Gini coefficient	The Gini coefficient is defined as the relationship of cumulative shares of the population arranged according to the level of equivalised disposable income, to the cumulative share of the equivalised total disposable income received by them.
27	Income inequality	The ratio of total income received by the 20 % of the population with the highest income (top quintile) to that received by the 20 % of the population with the lowest income (lowest quintile). Income must be understood as equivalised disposable income.
28	Ratio of female to male employment rates	Definition not found.
29	Ratio of female to male unemployment rates	Definition not found.
30	Ratio of female to male wage employment rates in the non-agricultural sector	The share of women in wage employment in the non-agricultural sector is the share of female workers in wage employment in the non-agricultural sector expressed as a percentage of total wage employment in that same sector.
31	Ratio of female to male professional employment	Ratio of the percentage of professional women in total female employment to the percentage of professional men in total male employment

Dimension 5: Social Dialogue

Because of the availability of data from the Amsterdam Institute for Advanced Labour Studies, we were able to introduce the social dialogue dimension in the JustJobs Index for the European Union 21. Social dialogue refers to the interaction between different social and economic groups and the authorities on economic and labour related issues. In this version of the index, social dialogue is operationalized through the following indicators:

	Indicator	Definition
32	Trade Union Density	Trade union density corresponds to the ratio of wage and salary earners that are trade union members, divided by the total number of wage and salary earners (OECD *Labour Force Statistics).* Density is calculated using survey data, wherever possible, and administrative data adjusted for non-active and self-employed members otherwise
33	Bargaining (or Union) Coverage, adjusted	Bargaining (or Union) Coverage, adjusted: (0-100) = employees covered by collective (wage) bargaining agreements as a proportion of all wage and salary earners in employment with the right to bargaining, expressed as percentage, adjusted for the possibility that some sectors or occupations are excluded from the right to bargain (removing such groups from the employment count before dividing the number of covered employees over the total number of dependent workers in employment WSEE; see Traxler, 1994)

Data and Methods

The European JustJobs Index is an improved version of the global JJI (version 0.1) developed by Fafo and JustJobs Network. The theoretical framework of the index is anchored with the ILO's decent work dimensions: employment, basic rights, social security and social dialogue. The JustJobs Index gives emphasis on the issue of inequality by classifying the sub dimension, equality of treatment and opportunity, as a fifth dimension.

Having established the conceptual framework of JustJobs Index, the development of the index followed the following steps:

Step one: Selection of Indicators and Data Collection

The quality of a good indicator is measured by the quality of the underlying indicators. The choice of indicators was based on the JustJobs conceptual framework and covers the five dimensions. A list of JustJobs indicators was constructed.

We have constructed a database of more than 100 JustJobs indicators spanning the years 2000 up to 2012 from various public data sources. The EU JJI is constructed using data on 33 indicators selected based on efficacy and data availability; the list of included indicators is shown in Table 1. As has been the challenge during the construction of the global JustJobs Index (version 0.1), there continue to be challenges in terms of obtaining complete data on indicators of interest. However, data availability has been better in the context of European Union and has enabled us to construct the index with additional indicators and dimensions that were not available for the JJI version 0.1.

Data was gathered from the following publicly available secondary sources[1]:

- International Labour Organization KILM database http://www.ilo.org/empelm/what/WCMS_114240/lang--en/index.htm
- World Bank database of indicators http://databank.worldbank.org
- IMF http://www.gfmag.com/component/content/article/119-economic-data/12529-the-worlds-richest-and-poorest-countries.html#axzz1pkbsmP3D
- The OECD http://stats.oecd.org/Index.aspx?DataSetCode=ANHRS
- Eurostat http://epp.eurostat.ec.europa.eu/portal/page/portal/employment_unemployment_lfs/introduction
- Amsterdam Institute for Advanced Labour Studies http://www.uva-aias.net/uploaded_files/regular/ICTWSScodebook40.pdf

For reasons of data availability, we constructed two versions of the index. The first index, labeled EU28 JJI is a complete index for all the European countries with three dimensions. These dimensions are: employment; social security; and equality of treatment and opportunity. The second version is the EU21 JJI covering 21 countries with the five dimensions outlined earlier. The indicators in each of these two versions were selected on the basis of their analytical representation of the JustJobs concept and data availability.

[1] All website sources accessed in January 2014

Table 1 JustJobs Index: Dimensions and Indicators

Employment (EU21 and EU28)	Social security (EU21 and EU28)	Rights at work (EU21)	Equality of treatment and opportunity (EU21 and EU28)	Social dialogue (EU21)
Sub-dimension 1: Opportunities for work 1. Labour force participation rate 2. Employment to population rate 3. Unemployment rate 4. Youth unemployment rate 5. Youth not in education and not in employment 6. Wage and salaried workers 7. Self-employed workers 8. Wage and salaried workers (% of total employed) **Sub-dimension 2: Income security** 9. Average real wages 10. Gross Domestic Product (GDP) **Sub-dimension 3: Employment security/stability** 11. Own-account workers (share of own-account workers in total employment): 12. Contributing family workers (share of contributing family workers in total employment) 13. Vulnerable employment (sum of contributing family workers and own-account workers in total employment	14 Expenditure on pension 15 Total expenditure on social protection per head of population 16 Total expenditure on social benefits - percentage of total expenditure on social protection 17 Total expenditure on social benefits - family/children 18 Total expenditure on social benefits - disability 19 Total expenditure on social benefits - unemployment 20 Total expenditure on social benefits - sickness and health care	21 Average annual hours actually worked per worker 22 Share of persons working between 40 and 48 hours 23 Share of persons working between 49 and 59 hours 24 Share of persons working 60 or more hours 25 Number of accidents at work	26 Gini coefficient 27 Income inequality 28 Ratio of female to male employment rates 29 Ratio of female to male unemployment rates 30 Ratio of female to male wage employment rates 31 Ratio of female to male professional employment	32 Trade Union Density 33 Bargaining (or union) coverage, adjusted

Step two: Imputation of missing data

Missing data is the major challenge in the construction of the index. Many indicators have missing data for a number of countries while incomplete data is available for some countries and a specific year. We carried out imputation of the missing data using loess regression with varying specification of the span used for smoothing. A complete data without missing values was obtained.

Step three: Normalization of data

Normalization is required prior to data any data aggregation when indicators are measured with different measurement units. The indicators identified as relevant for the construction of the JustJobs Index have different types of measurement units. Hence we have conducted the following normalization techniques.

Ranking

This method of standardization measures the performance of the countries over time in terms of relative positions, which constitute the rankings. The formula used for the ranking method is given by:

High: $I_t^i = rank^i(x_t^i)$

Low: $I_t^i = rank^i(-x_t^i)$

Equal to a: $I_t^i = rank^i(-|x_t^i - a|)$

Standardization (z-scores)

The indicators are converted into a scale with a mean of zero and standard deviation of one. Extreme values have a greater effect on the index, and hence this method highlights outlier behavior. The formula used for the standardization method is given by:

High: $I_t^i = \frac{x_t^i - \overline{x^i}}{\sigma^i}$

Low: $I_t^i = \frac{\overline{x^i} - x_t^i}{\sigma^i}$

Equal to a: $I_t^i = \frac{\overline{|x_t^i - a|} - |x_t^i - a|}{\sigma^i}$

Min-max rescale

With this method, the indicators are given an identical range, from 0 to 1. The formula used for the min-max rescale method is given by:

High: $I_t^i = \frac{x_t^i - min^i(x_t^i)}{max^i(x_t^i) - min^i(x_t^i)}$

Low: $I_t^i = \frac{max^i(x_t^i) - x_t^i}{max^i(x_t^i) - min^i(x_t^i)}$

Equal to a: $I_t^i = \frac{max^i(|x_t^i - a|) - x_t^i}{max^i(|x_t^i - a|) - min^i(|x_t^i - a|)}$

Distance to a reference (base year 2000)

This method measures the position of an indicator relative to a reference point. The formula used for the distance to a reference method is given by:

High: $I_t^i = \frac{x_t^i}{x_0^i}$

Low: $I_t^i = \frac{-x_t^i}{x_0^i}$

Equal to a: $I_t^i = \frac{-|x_t^i - a|}{|x_0^i - a|}$

Step four: Aggregation and construction of composite index

We have employed a simple arithmetic using an additive average of all the normalized indicators associated with each of the JustJobs Index dimensions and constructed an additive index. All the indicators are given equal weights.

Step five: Sensitivity analysis and selection of final index

Sensitivity analysis helps in evaluating the robustness an index by assessing the contribution of each indicator to the index variance. Sensitivity analysis is carried out to assess the relevance of each included indicator as well as selection of the appropriate normalization technique.

The formula used for the sensitivity test is:

$$\overline{R} = \frac{1}{T}\sum_{t=1}^{T} |Rank_{one\ indicator\ deleted}(CI_t) - Rank_{complete\ set}(CI_t)|$$

After conducting a series of sensitivity analysis on the results, the rescale normalization method was selected and the EU28 JJI and EU21 JJI are established.

Findings using EU28 JustJobs Index

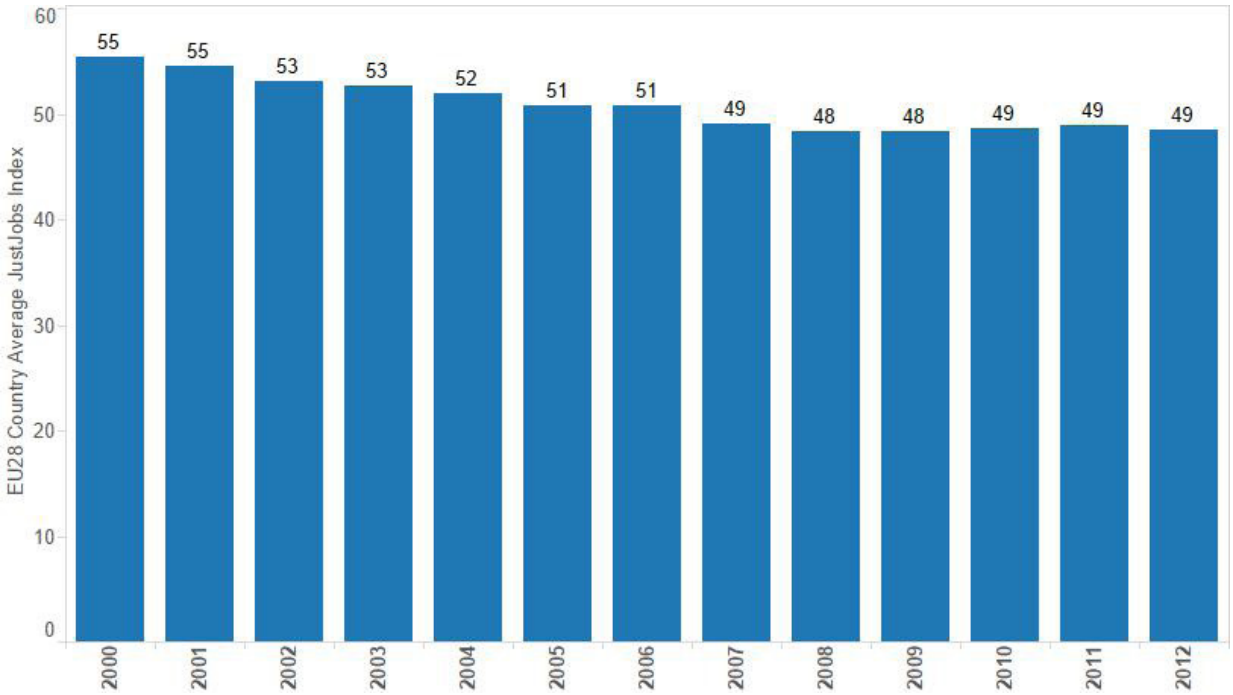
A just job index that covers all the 28 European Union countries (EU28 JJI) is constructed using three JustJobs dimensions: employment, social security, and equality of treatment and opportunity. The value of the EU28 JustJobs Index and the ranks of countries based in it are shown in Table 2 for selected years. The highest performers on the JustJobs Index are Luxembourg, Sweden, and Estonia during 2012. The lowest performers are found to be Italy, Greece and Romania.

Table 2 EU28 JustJobs Index and rank

	Year								
Rank	2000	2002	2004	2006	2008	2009	2010	2011	2012
1	Denmark 71	Luxembourg 68	Luxembourg 68	Denmark 67	Sweden 62	Luxembourg 62	Luxembourg 64	Luxembourg 65	Luxembourg 62
2	Sweden 68	Denmark 68	Sweden 67	Luxembourg 66	Luxembourg 62	Sweden 61	Sweden 62	Sweden 63	Sweden 61
3	Finland 67	Sweden 67	Denmark 67	Sweden 65	Denmark 60	Estonia 58	Finland 59	Finland 59	Estonia 59
4	Luxembourg 66	Finland 63	Finland 63	Finland 61	Estonia 59	Finland 58	Denmark 59	Estonia 58	Finland 58
5	Austria 63	Austria 60	Slovenia 60	Estonia 59	Finland 58	Denmark 57	Estonia 59	Denmark 58	Denmark 57
6	Slovenia 62	Slovenia 60	Austria 59	Austria 58	Austria 55	Austria 55	Austria 57	Austria 56	Belgium 56
7	Germany 62	Germany 59	Germany 57	Slovenia 57	Slovenia 55	Slovenia 54	Belgium 55	Belgium 56	Austria 55
8	Netherlands 61	Netherlands 58	Belgium 57	Netherlands 56	Netherlands 54	Netherlands 53	Netherlands 54	Netherlands 55	Netherlands 55
9	Hungary 59	Hungary 57	Netherlands 56	Germany 55	Belgium 52	Belgium 53	Slovenia 54	Germany 54	Germany 54
10	Belgium 59	Estonia 57	Estonia 55	France 55	Slovakia 51	Germany 52	Germany 53	Slovenia 54	France 52
11	Czech Republic 58	Czech Republic 56	Hungary 55	Belgium 54	Hungary 51	Ireland 51	Ireland 52	France 52	Slovenia 51
12	Estonia 58	France 56	France 55	Ireland 52	Ireland 51	Hungary 50	Hungary 51	Hungary 51	Ireland 51
13	France 58	Belgium 56	Czech Republic 54	Czech Republic 52	France 51	France 50	France 51	Slovakia 50	Slovakia 50
14	Ireland 58	Ireland 55	Ireland 53	United Kingdom 50	Czech Republic 50	Slovakia 49	Slovakia 49	Ireland 50	Hungary 50
15	Cyprus 57	Slovakia 53	Slovakia 52	Cyprus 50	Germany 50	Croatia 49	Czech Republic 48	Czech Republic 48	Lithuania 49
16	Bulgaria 53	Cyprus 53	United Kingdom 51	Spain 49	Croatia 47	Czech Republic 49	Cyprus 47	Cyprus 48	Czech Republic 47
17	Lithuania 53	United Kingdom 51	Cyprus 51	Hungary 49	Lithuania 47	United Kingdom 46	United Kingdom 45	Lithuania 46	Latvia 45
18	United Kingdom 53	Spain 51	Spain 50	Slovakia 49	Spain 46	Lithuania 45	Bulgaria 44	Croatia 45	Cyprus 45
19	Slovakia 52	Bulgaria 51	Bulgaria 50	Bulgaria 47	United Kingdom 44	Cyprus 45	Croatia 44	United Kingdom 44	United Kingdom 44
20	Spain 51	Lithuania 49	Lithuania 46	Croatia 46	Cyprus 44	Spain 44	Latvia 44	Poland 44	Bulgaria 44
21	Italy 50	Italy 47	Malta 45	Lithuania 45	Latvia 43	Bulgaria 44	Spain 43	Latvia 43	Poland 43
22	Poland 49	Latvia 45	Latvia 45	Latvia 44	Bulgaria 42	Latvia 43	Lithuania 42	Bulgaria 42	Croatia 43
23	Latvia 49	Malta 44	Croatia 42	Malta 42	Poland 41	Poland 41	Portugal 42	Spain 42	Portugal 42
24	Malta 45	Poland 43	Portugal 41	Portugal 41	Malta 40	Malta 41	Poland 42	Malta 42	Spain 41
25	Portugal 45	Portugal 43	Italy 40	Poland 40	Portugal 39	Portugal 40	Malta 40	Portugal 41	Malta 41
26	Greece 42	Croatia 41	Greece 40	Italy 40	Italy 37	Greece 38	Italy 38	Italy 39	Italy 39
27	Romania 41	Greece 41	Poland 39	Greece 39	Greece 36	Italy 37	Greece 38	Greece 34	Greece 32
28	Croatia 39	Romania 38	Romania 36	Romania 32	Romania 26	Romania 28	Romania 30	Romania 29	Romania 30

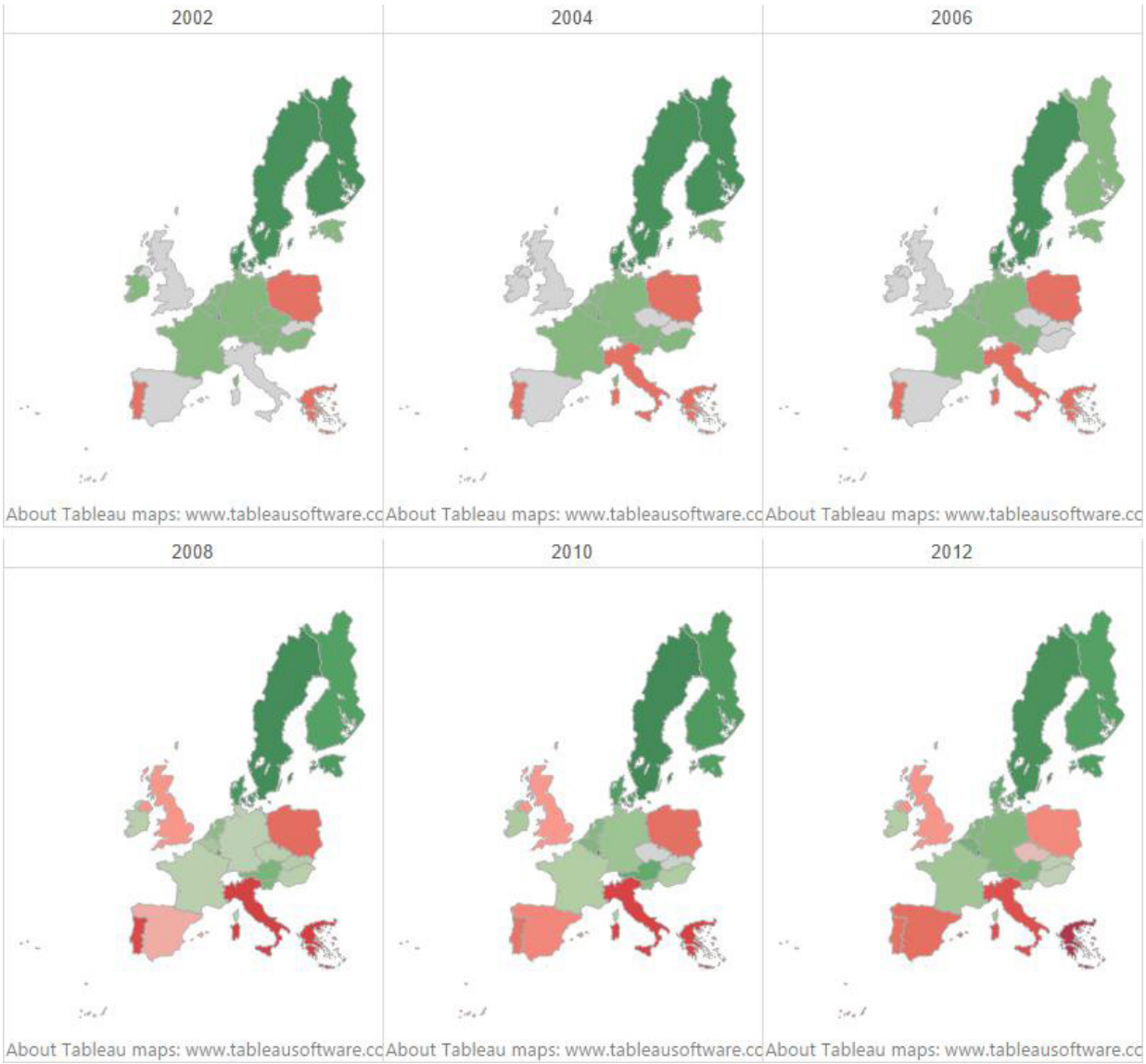
The average JustJobs Index for the 28 countries is 49 for the year 2012 (Figure 2). JustJobs Index has declined during 2000-2012 by an average of six points. The lowest JustJobs Index occurred during the onset of the economic crisis in 2008 and 2009.

Figure 2 EU28 JJI country averages



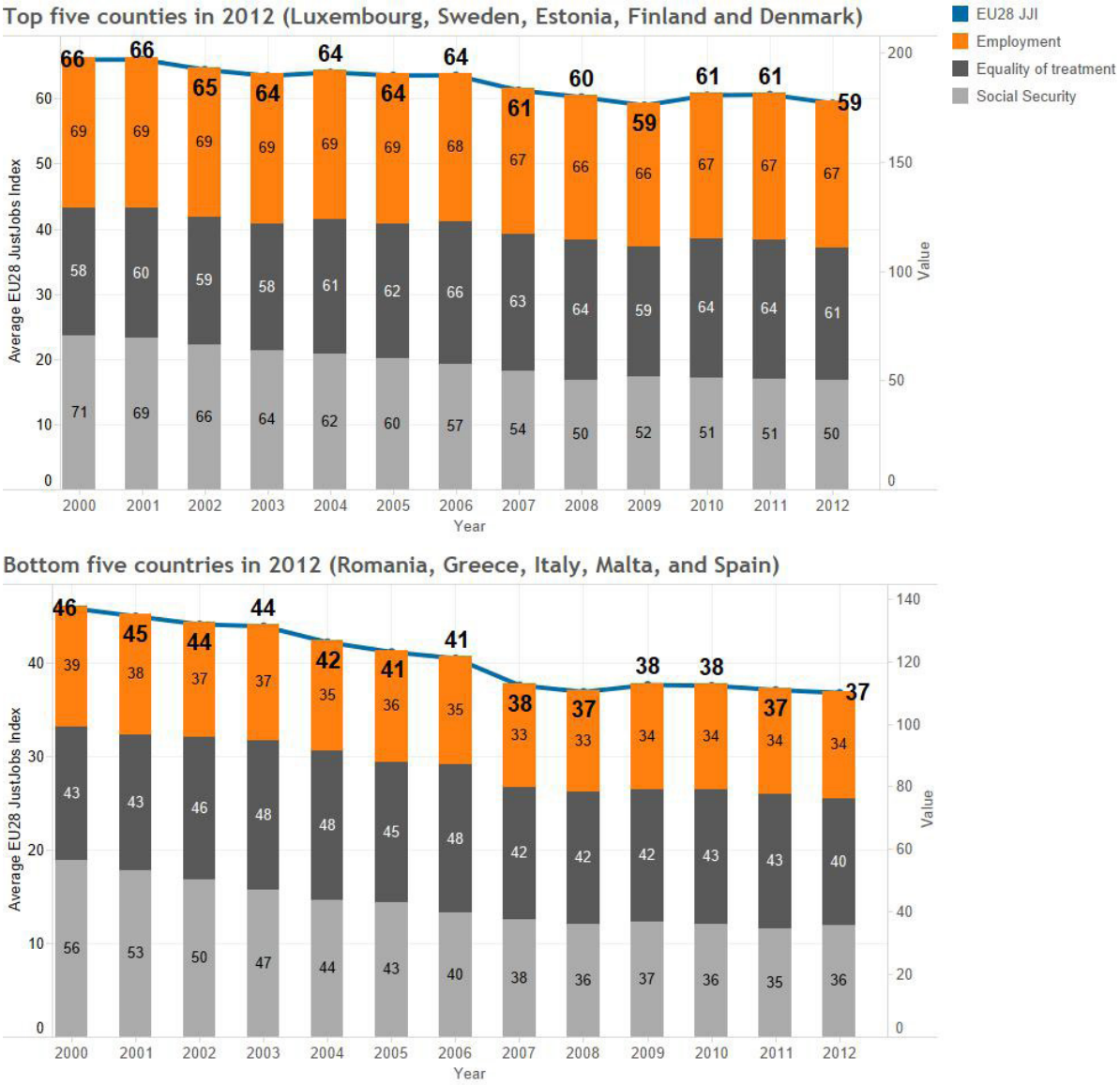
The decline in JustJobs Index started prior to the economic crisis of 2008 and reached its lowest level during the crisis years as shown in the trend map depicted in Figure 3. Countries with lowest JustJobs Index in 2012, such as Romania and Greece, experienced the largest decline (16 and 14 percent decline) during the economic crisis compared to the year 2000. The decline in JustJobs Index during 2000-2012 is not only limited to countries with low index value but also experienced by countries such as Denmark and Sweden. Denmark and Sweden has lost nine and seven points on the index in 2012 compared to the year 2000. Estonia has small fluctuations on JustJobs Index during 2000-2012 by only one point over the period. However, due to the overall and relative decline of other countries, the rank of Estonia on JustJobs Index has improved to top three in 2012.

Figure 3 EU28 JustJobs trend map



The average JustJobs Index for the top and bottom five countries is shows in Figure 4. Each of the three JustJobs dimensions has been declining in both groups of countries. Equality of treatment and opportunities was increasing prior to the economic crisis in both groups but reached its lowest level after the onset of the crisis and remained low in the bottom five countries. Employment dimension of the JustJobs Index reached its lowest decline in 2008 and recovered by only one point in 2012 for both groups of countries. The extent of decline is worse in social security measures with both groups of countries experiencing 20 points decline in social security measures such as unemployment benefits during 2000-2012. Such big decline in social security measures contributed to the decline in the overall JustJobs Index over the last five years.

Figure 4 EU28 JJI- Top and bottom five countries



Findings using EU21 JustJobs Index

In this section, we present the results using the EU21 JustJobs Index. This index is comprehensive in terms of its conceptual coverage and includes all the five dimensions of JustJobs. The EU28 JJI presented earlier is a conceptually limited version and it does not take into account all of the dimensions of JustJobs due to lack of available data on social dialogue and rights at work. Therefore, the results in the EU21 JJI and the EU28 JJI are not the same, and hence the implications of the index are also different. The top three performers in the EU21 JJI are Sweden, Denmark and Finland while the least performers are Poland, Greece and the United Kingdom.

Table 3 EU21 JustJobs Index and rank

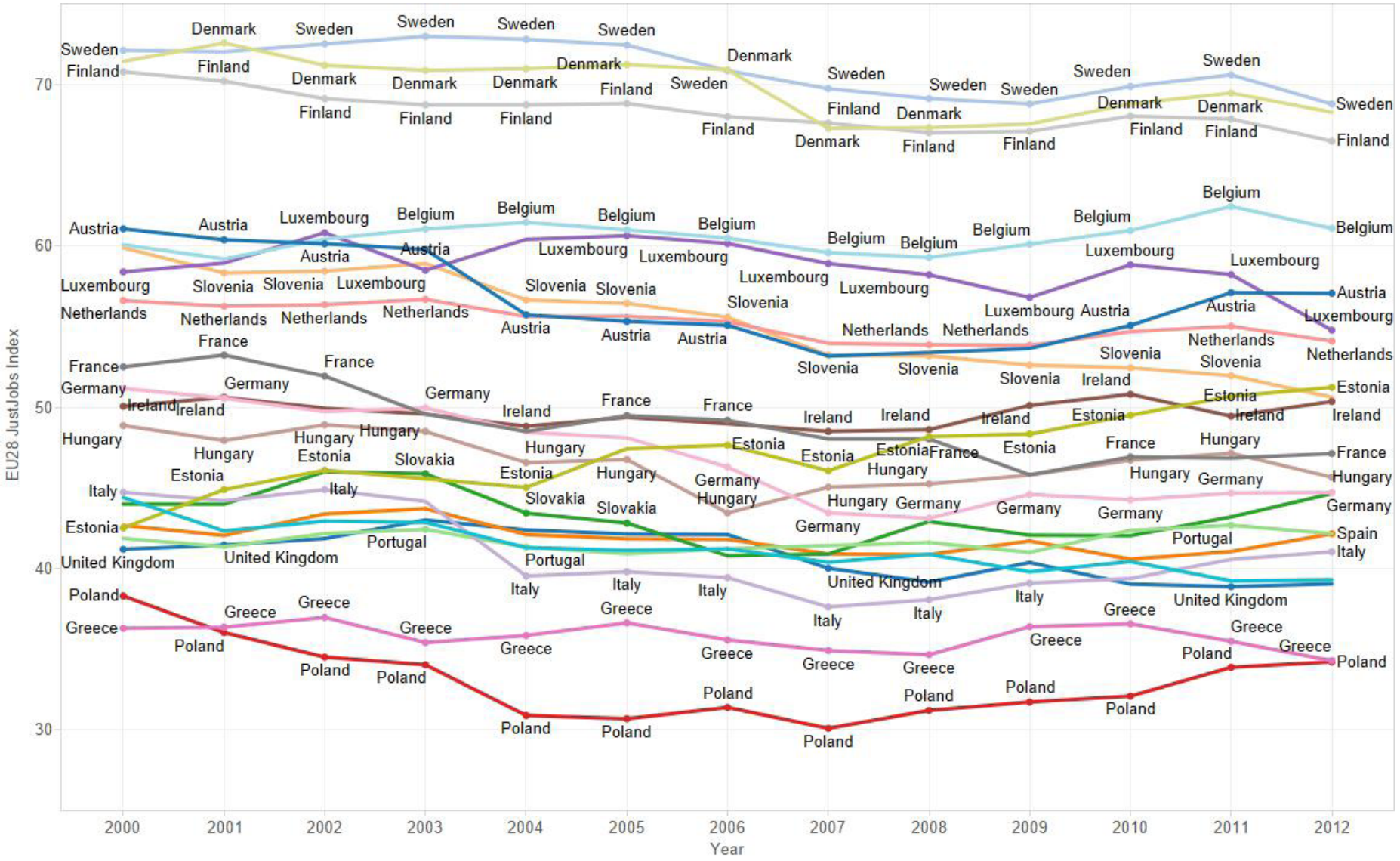
	Year								
Rank	2000	2002	2004	2006	2008	2009	2010	2011	2012
1	Sweden 72	Sweden 73	Sweden 73	Denmark 71	Sweden 69	Sweden 69	Sweden 70	Sweden 71	Sweden 69
2	Denmark 71	Denmark 71	Denmark 71	Sweden 71	Denmark 67	Denmark 68	Denmark 69	Denmark 69	Denmark 68
3	Finland 71	Finland 69	Finland 69	Finland 68	Finland 67	Finland 67	Finland 68	Finland 68	Finland 66
4	Austria 61	Luxembourg 61	Belgium 61	Belgium 60	Belgium 59	Belgium 60	Belgium 61	Belgium 62	Belgium 61
5	Belgium 60	Belgium 60	Luxembourg 60	Luxembourg 60	Luxembourg 58	Luxembourg 57	Luxembourg 59	Luxembourg 58	Austria 57
6	Slovenia 60	Austria 60	Slovenia 57	Slovenia 56	Netherlands 54	Netherlands 54	Austria 55	Austria 57	Luxembourg 55
7	Luxembourg 58	Slovenia 58	Austria 56	Netherlands 55	Austria 53	Austria 54	Netherlands 55	Netherlands 55	Netherlands 54
8	Netherlands 57	Netherlands 56	Netherlands 56	Austria 55	Slovenia 53	Slovenia 53	Slovenia 52	Slovenia 52	Estonia 51
9	France 52	France 52	Ireland 49	France 49	Ireland 49	Ireland 50	Ireland 51	Estonia 51	Slovenia 51
10	Germany 51	Ireland 50	France 48	Ireland 49	Estonia 48	Estonia 48	Estonia 49	Ireland 49	Ireland 50
11	Ireland 50	Germany 50	Germany 48	Estonia 48	France 48	France 46	France 47	Hungary 47	France 47
12	Hungary 49	Hungary 49	Hungary 47	Germany 46	Hungary 45	Hungary 46	Hungary 47	France 47	Hungary 46
13	Italy 45	Estonia 46	Estonia 45	Hungary 43	Germany 43	Germany 45	Germany 44	Germany 45	Germany 45
14	Czech Republic 44	Slovakia 46	Slovakia 43	United Kingdom 42	Slovakia 43	Slovakia 42	Portugal 42	Slovakia 43	Slovakia 45
15	Slovakia 44	Italy 45	United Kingdom 42	Spain 42	Portugal 42	Spain 42	Slovakia 42	Portugal 43	Portugal 42
16	Spain 43	Spain 43	Spain 42	Portugal 41	Czech Republic 41	Portugal 41	Spain 41	Spain 41	Spain 42
17	Estonia 43	Czech Republic 43	Portugal 41	Czech Republic 41	Spain 41	United Kingdom 40	Czech Republic 40	Italy 41	Italy 41
18	Portugal 42	Portugal 42	Czech Republic 41	Slovakia 41	United Kingdom 39	Czech Republic 40	Italy 39	Czech Republic 39	Czech Republic 39
19	United Kingdom 41	United Kingdom 42	Italy 40	Italy 39	Italy 38	Italy 39	United Kingdom 39	United Kingdom 39	United Kingdom 39
20	Poland 38	Greece 37	Greece 36	Greece 36	Greece 35	Greece 36	Greece 37	Greece 35	Greece 34
21	Greece 36	Poland 35	Poland 31	Poland 31	Poland 31	Poland 32	Poland 32	Poland 34	Poland 34

The average of EU21 JustJobs Index has a value of 49 in the year 2012 and declined by 3 units after the 2008 economic crisis compared the average value of 52 in 2000. Using the EU21 JJI, countries can be classified in five different categories based on their status in 2000 and the trend on the index during 2000-2012. These categories are shown in Table 4. The first category includes Poland and Greece and they have the lowest EU21 JustJobs Index throughout 2000-2012. The second category includes countries that have a mixed trend on JustJobs Index. Estonia improved its JustJobs Index and managed to climb into the third category in 2012 while Italy has its JustJobs Index decline reaching its lowest level in during the onset of the crisis and slightly recovered in 2012. The third and fourth category of countries remained to have a higher JustJobs Index compared to category I and II but experienced a general decline on JustJobs Index with Slovenia experiencing the largest decline with 9 units lower than its 2000 level. The fifth category includes Finland, Denmark and Sweden and they maintained their highest JustJobs Index compared to the remaining countries.

Table 4 Five categories using EU21 JJI

Category I (Lowest EU21 JJI)	Category II	Category III	Category IV	Category V (Highest EU21 JJI)
Poland	Italy	France	Belgium	Finland
Greece	Estonia	Germany	Austria	Denmark
	Slovakia	Ireland	Luxembourg	Sweden
	United Kingdom	Hungary	Netherlands	
	Portugal		Slovenia	
	Czech Republic			
	Spain			

Figure 5 Trends in EU21 JustJobs Index

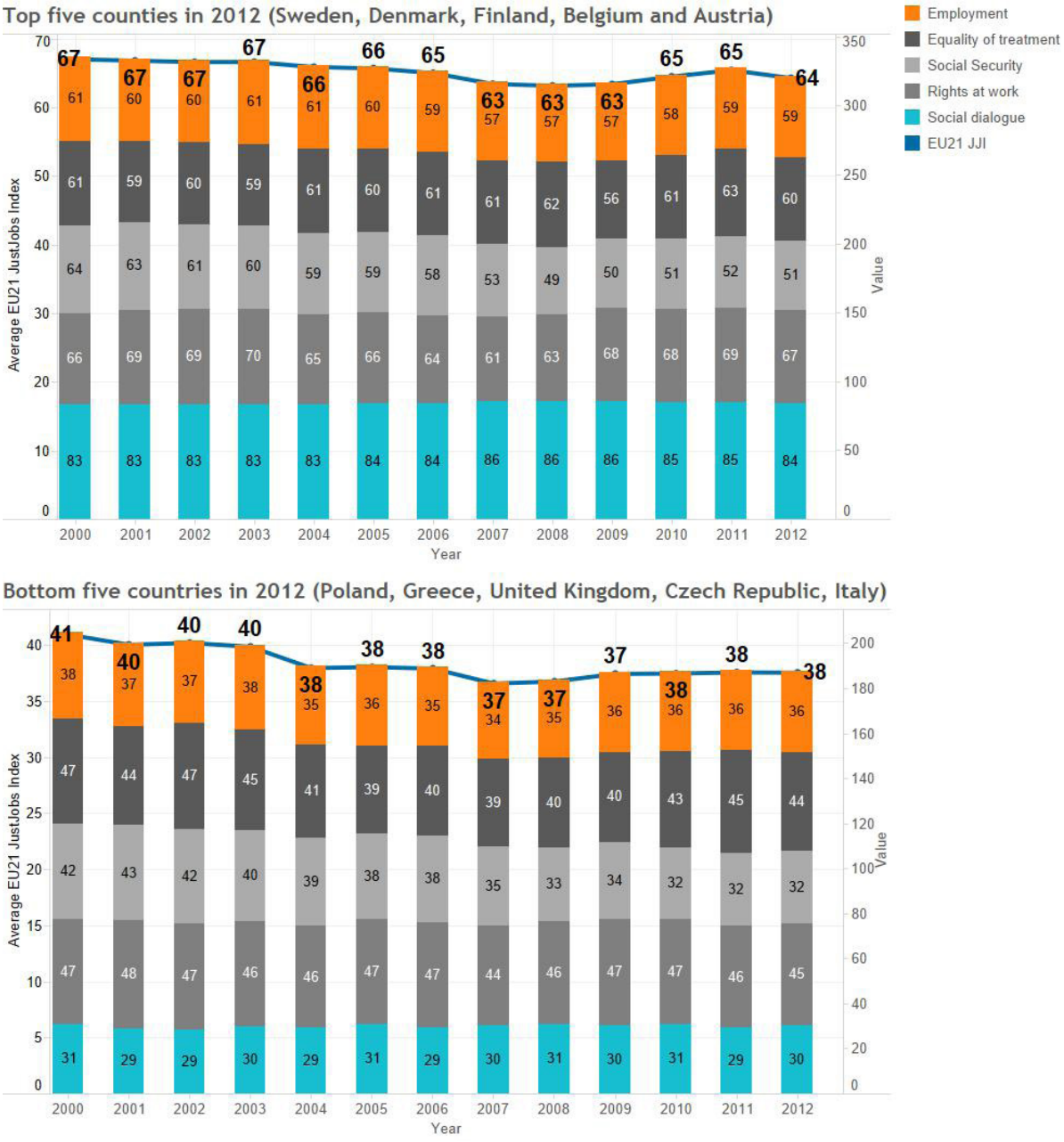


Most of the countries experienced a decline in JustJobs Index that started prior to or after the onset of the economic crisis. The trend in JustJobs Index for each of these countries is shown in Figure 5 and Figure 6.

Figure 6 EU21 JustJobs trend map

The relative contribution of each the JustJobs Index dimension is examined further among the top and bottom five countries (Figure 7). Both groups of countries experienced their lowest level of JustJobs Index during the economic crisis. Of the five JustJobs Index dimensions, social security and employment have declined in both groups. However, Equality of treatment and opportunities declined substantially in 2007 and 2008 in the bottom five countries and slightly recovered in 2011 and 2012.

Figure 7 EU21 JJI-Top and bottom five countries in 2012



Gaps and Future Direction

One of the main challenges in the process of constructing the JustJobs Index is the lack of data on relevant JustJobs indicators. The European JustJobs Index is a more complete version than the global measure because of greater availability of data in the region. For instance, the rights at work and the social dialogue dimensions are now included in the EU21 JJI and more indicators are included in the EU28 JJI.

Nevertheless, when constructing the index presented in this report, some indicators are omitted due to lack of data availability. Among indicators initially identified as essential for JustJobs, data were difficult to obtain on informal employment, child labor, occupational segregation by sex, female share of employment in senior and middle management and collective bargaining rate. Data on childcare facilities, labor force working abroad, posted workers, ethnic origin discrimination indicators were found to be limited in terms of country level coverage and available years.

One of the future steps for policymakers and statisticians is to improve data collection on a national level. Collective efforts on an international and regional level in improving data gathering will help enhancing international comparability of statistics.

Fafo and the JustJobs Network will continue developing the JustJobs Index further by refining methods as well as data collection efforts. As part of the JustJobs Index development plan, interactive web-based services and communication tools are currently under development. This enables politicians and policy makers to specify varying degree of focus and weights on JustJobs Index dimensions. For instance, one may be interested to emphasize the role of unemployment while others may give more weight for social security dimensions. In the index development plan, the main focus will continue to be improving the role of the index in providing sound empirical data relevant for dialogue, debate and policy formulations in the pursuit of improving JustJobs.

Summary

In this brief, we have presented the European JustJobs Index, a regional measure that broadens the discourse on employment and that addresses job quality. Based on data availability, two versions of the EU JustJobs Index were constructed that are labeled as EU28 JJI and EU21 JJI.

Romania, Greece, Italy, Malta and Spain are the bottom five countries in the EU28 JustJobs Index while Luxembourg, Sweden, Estonia, Finland and Denmark are in the top five during 2012. In the second version of the EU21 JustJobs Index that included social dialogue and rights at work, Poland, Greece and United Kingdom are in the bottom-three while Sweden, Denmark and Finland are the top-three countries.

The European JustJobs Index is aimed at providing a basis for a comprehensive discussion on JustJobs and some initial analysis of trends were provided. Both versions of the European JustJobs Index showed an overall downward decline in JustJobs with some countries dropping substantially over the last 13 years. The financial crisis of 2008 has led to steep decline in countries such as Spain, Greece and Italy. Examining the indices further, reductions in social security expenditures (such as unemployment benefits) and increased inequality contributed to the declining trend in JustJobs. The index illustrates that addressing inequality and social security are essential for JustJobs.

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JustJobs Network is a private, nonpartisan organization finding evidence-based solutions to one of the most pressing challenges of our time: How to create more and better jobs worldwide. We produce high-quality empirical research on good job creation, focusing our work on the critical knowledge gaps in the global employment landscape.

We convene a global network of diverse stakeholders—including policy shapers, academics, and grassroots leaders — to deepen the practical implications of our research and amplify its impact. Through the combination of cutting-edge research and global knowledge sharing, we aim to forge a fresh, dynamic channel for policy dialogue on employment at national, regional and international levels.

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