



JustJobs Index 2014

Fafo Institute for Applied International Studies
JustJobs Network

October 2014



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The JJI 2014 builds on previous collaborations between JJN and Fafo to construct a global metric for measuring the quantity and quality of employment worldwide. In 2013, the organizations released a "Version 0.1" of the JustJobs Index, which demonstrated the methodological possibility of a global index.

In 2014, a European JustJobs Index was constructed for the member states of the European Union. This report was supported by the Socialists & Democrats Group of the European Parliament, as part of its Progressive Economy initiative.

JUSTJOBS INDEX 2014

1. Executive Summary

Work is fundamental to quality of life. Whether salaried or self-employed, whether on family farms or in high-tech manufacturing facilities, people across cultural and political contexts rely on their work to earn a living, to establish their dignity, to fulfill family and social obligations, and to satisfy the aspirations that drive and motivate them on a daily basis.

But for too many people around the world, the prospect of a good job has grown dim, with the global employment crisis deepening. Over 200 million people around the globe are out of a job,¹ almost 40 percent of them youth.² Many more – approximately half the global workforce – labor in the informal sector, where they lack basic protections. And even formal sector workers increasingly find their wages stagnant and their benefits stripped away.

Work is fundamental to people's well being, and global leaders are increasingly realizing that it is fundamental to the well being of economies too. Those who once considered jobs more of a social

rather than economic concern have realized that a lack of employment constricts aggregate demand and hinders economic expansion; in other words, good jobs are the prerequisite for any economy to remain healthy in the long run. The consensus is growing that those who power the global economy – workers – must themselves be empowered, with “just jobs” – complete with appropriate remuneration, rights at work, social protections and opportunities for economic mobility.

Despite this recognition, jobs have yet to enjoy the same treatment as other indicators of economic health. The financial crisis unveiled the limitations of using metrics like Gross Domestic Product (GDP), or indices that measure competitiveness and the ease of doing business, as proxies for economic opportunity. But politicians, policymakers, and the private sector still look to these measures alone because they lack a more sophisticated tool for analyzing performance on the economic indicator that matters most to ordinary people: jobs.

It is within this context that JustJobs Network and Fafo Institute for Applied International Studies have developed the Global JustJobs Index (JJI) – a comprehensive, data-driven approach to measuring the quantity and quality of jobs around the world. The 2014 JJI ranks countries on one of the most important metrics of economic success: just job creation. The first-ever index to measure both quantity and quality of jobs, the JJI broadens the discourse on employment beyond the incomplete metric of unemployment and delves into the political economy factors driving the rankings.

The Global JustJobs Index, which ranks 148 countries on quality and quantity of employment, is rooted in the principles of its core dimensions: employment, social security, and gender equality. In the Enhanced JJI – which includes 41 countries with more extensive available data – social dialogue is included as a fourth dimension of the index. The Global JustJobs Index includes 10 indicators, while the Enhanced JustJobs Index includes 17 indicators.

Rather than look only at the employment landscape as a static snapshot, the JustJobs Index includes several measures of equality, given the close linkages between equality and economic mobility. In other words, a country's score on the index demonstrates not only the conditions and opportunities in the labor market today, but also the extent to which working people are

empowered to create for themselves a better tomorrow.

The rankings and composite scores of the JustJobs Index highlight several interesting and important trends in the world of work:

1. Austerity measures, like those imposed in Europe as part of a fiscal consolidation effort, have negative effects on just jobs performance.
2. Emerging economies, due to gender and income inequalities, perform poorly on the Global JustJobs Index as well as the Enhanced JJI.
3. Non-diversified economies, due to their vulnerability to economic shocks, face large fluctuations in their performance on the index. Moreover, their rankings do not substantially improve during periods of economic boom, due to reliance on extractive, capital-intensive industries that are weak in employment creation.
4. Conflict-ridden countries consistently wind up at the bottom of the index, both because conflict hurts employment and economic activity, and because joblessness itself breeds conflict.

The findings of this report lend themselves to several recommendations to policymakers.

1. Just jobs must enjoy the same treatment as other indicators of economic health.

2. Additional indicators and more ambitious targets on employment must be included in the Post-2015 Millennium Development Goals.

3. More, and more updated, data on the quantity and quality of employment is necessary for effective policymaking on just job creation.

4. Further research on the political economy factors that drive countries' performance on the JJI indicators is necessary.

2. Joblessness and Inequality

The insidious scourge of inequality – evident in uneven wage distributions, a lack of parity between women and men, and youth unemployment rates far above those of the general population – has taken center stage in global policy debates in recent years. Inequality endangers democratic institutions, limits economic mobility, and – as recent research has shown³ – can be damaging to economic growth.

High inequality is a sign that a country's labor market is not producing enough good jobs for its people. Unemployment, especially the shortage of high-quality jobs, is a main driver of inequality. Moreover, long-term unemployment leads to an erosion of skills, diminishing wage prospects and economic mobility, especially among young people. This fuels inequality further.

These linkages between inequality and unemployment are the reason why the JustJobs Index includes indicators measuring

inequality along with the traditional measures of unemployment and labor force participation.

Income

To measure income inequality, the index uses the Gini coefficient, the most commonly used indicator of income distribution. In a country where everyone earns the same income, the value of the Gini coefficient would be zero. The higher the levels of income inequality, the closer the Gini coefficient is to one hundred.

Among countries included in the JJI, Namibia, Botswana and South Africa have the highest income inequality (highest Gini coefficients), while Norway, Iceland and Sweden have the lowest income inequality – with the lowest Gini coefficients.

Gender

In addition to income inequality, gender disparities in the labor market are also harmful to

economies. Given that they constitute over half of the world's working age population, factors that limit women's participation and realization of their productive potential impose serious macroeconomic costs on the global economy.⁴

This is why the JustJobs Index examines gender inequality as a separate dimension. The inclusion of this dimension increases the relevance of the index as it helps assess development goals such as the promotion of gender equality and women's empowerment, part of the United Nations Millennium Development Goals.

Youth

Inequities in the labor market are not just limited to income inequality or gender disparities; young people – defined as individuals between the ages of 15 and 24 — also face significant disadvantages. Since the financial crisis hit in 2008, youth unemployment has increased dramatically, especially in European countries such as Spain, Greece, Portugal and Ireland. The youth unemployment rate reached 54 percent in Greece and Spain in 2012.

Youth unemployment constrains many countries from realizing a demographic dividend and hinders national development. Moreover, the unprecedented levels of youth unemployment

around the world today also pose a threat to social and political stability – especially the gap between young people's education and aspirations, and the actual opportunities that await them in the labor market grows. Youth unemployment is therefore an important policy issue for governments in both the Global North and South.⁵

When comparing youth unemployment between countries, it is also important to explore how disenfranchised youth are in the labor market as compared to other age groups. This entails examining both the rate of youth unemployment and the ratio of youth unemployment to total unemployment. Taken together, these data indicate how difficult it is for youth to find work compared to the rest of the population. Countries can be divided into three categories to highlight the differences:

- i. The first category consists of countries with high ratio and high youth unemployment rate, such as Saudi Arabia, Bahrain and Sri Lanka. Youth unemployment is at 28, 27.5 and 20 percent respectively in the three countries and it is 4 to 5 times more difficult for young people to find work relative to the rest of the population. In such countries, youth face

“High inequality is a sign that a country's labor market is not producing enough good jobs for its people.”

greater difficulty in finding work compared to adults in the country, and the general labor market conditions are harsh.

- ii. The second category consists of countries with a high ratio and moderate youth unemployment rate, such as Thailand and Malaysia. Youth in Thailand have a much harder time finding work compared to adults in the country. Yet, youth unemployment is only 3 percent due to the overall low unemployment rate in the country.
- iii. The third category consists of countries with a moderate ratio and high youth unemployment, such as Greece, Armenia and Spain. Youth in these countries are in an extremely difficult situation due to the generally high total unemployment in the country. In Greece, the youth unemployment rate was only two times that of the unemployment rate in 2012, yet the youth unemployment rate was 54 percent, which indicates the extent of the challenge for young people to find jobs.

Equality brings economic mobility

The most reliable approach to stemming high levels of inequality is promoting the creation of high-quality jobs. When economic growth is job-led, it is far more likely to reduce inequality and create sustained aggregate demand that keeps economies dynamic and expanding, reinforcing a virtuous circle of opportunity and growth.

Moreover, equality can be considered a proxy for measuring another principle of critical importance: economic mobility. In highly unequal societies, those from lower socio-economic backgrounds often face a glass ceiling in the labor market; their mobility is severely circumscribed.

3. Methodology and Construction of the Index

The Global JustJobs Index (JJI 2014) is grounded in three dimensions: employment, social security,

and equality. Taken together, these three areas offer insight into the experience of workers

in different countries around the world. By incorporating the aspect of equality – in terms of income, gender, and age – the index illustrates not only the environment workers face today, but also their ability to create a better tomorrow. The level of equality illustrates the degree to which a society makes upward mobility possible.

To balance the need for a comprehensive composite index and the desire to include as many countries as possible, the researchers have built two different versions of the index. The first includes three dimensions – employment, social security and gender equality – and covers 148 countries. The second version adds another dimension – social dialogue – for which reliable data is available in far fewer countries, and therefore this version has 41 countries.

The researchers consider social dialogue as a foundational element of a just job. In fact, collective bargaining lies at the root of ensuring fair wages and safe working conditions. Future iterations of the four-dimension index will include additional countries, as better data becomes available.

3.1 Global JustJobs Index 2014

The following section discusses the three core dimensions of the Global JustJobs Index. **Table 1** shows the indicators that make up these three dimensions, while **Appendix 1** explains these indicators in more detail.

Dimension 1: Employment

The first dimension, employment, mainly refers to employment opportunities. Five indicators are used to capture aspects of employment opportunities: labor force participation rate; total unemployment rate; youth unemployment rate; GDP per capita; and Gini coefficient.

The employment dimension is the heart of the index. Jobs are the vehicle through which people participate productively in their national economies. High-quality employment produces economic growth and at the same time distributes the gains from that growth in a fair and sustainable way that promotes human dignity.

Dimension 2: Social Security

The social security dimension refers to government measures that provide social benefits, in cash or in kind. This dimension is comprised of three indicators: contribution to pension scheme; total public social protection and health expenditures; and total health care expenditure not financed by private households.

A strong social safety net is absolutely critical to ensuring that economic growth is inclusive and that its benefits are widely shared. Research demonstrates that the poverty elasticity of growth – that is, how effective growth is in reducing poverty – is directly correlated to the strength of social institutions, since they enable people to participate productively in the economy. A social security floor also helps to prevent a “race to the

bottom” – where countries exploit the low cost of labor to invite investment and, in turn, working conditions suffer.

Dimension 3: Gender equality

The third dimension of the Global JJI 2014

is gender equality in the labor market. It includes two indicators: ratio of female-to-male employment-to-population ratio and ratio of female-to-male labor force participation rate.

Table 01

**Global JustJobs Index :
Dimensions and Indicators**

Employment	Social security	Gender equality
1. Labor force participation rate	6. Active contributors to pension scheme in working age population	9. Ratio of female-to-male employment rates
2. Unemployment rate	7. Total public expenditure on social protection and health	10. Ratio of female-to-male labor force participation rate
3. Youth unemployment rate	8. Total health care expenditure not financed by out-of-pocket payments	
4. GDP per capita		
5. Gini coefficient		

3.2 Enhanced JustJobs Index 2014

The Global JJI 2014 captures relevant dimensions and enables comparisons among a large number of countries in the world across employment, social security and gender equality issues. However, it lacks one of the important aspects of a just job – social dialogue. For this reason, the researchers developed the Enhanced JustJobs Index. In addition to including social dialogue, this version of the index also enriches the first

three dimensions by adding additional and relevant indicators. But due to lack of data for a large number of countries, this version covers only 41 countries.

Social dialogue is captured by using two indicators, the Civil Liberty Index and bargaining (or union) coverage. The Civil Liberty Index, developed by Freedom House,⁶ is included as it measures freedom of assembly and association along with expression and religion. The overall

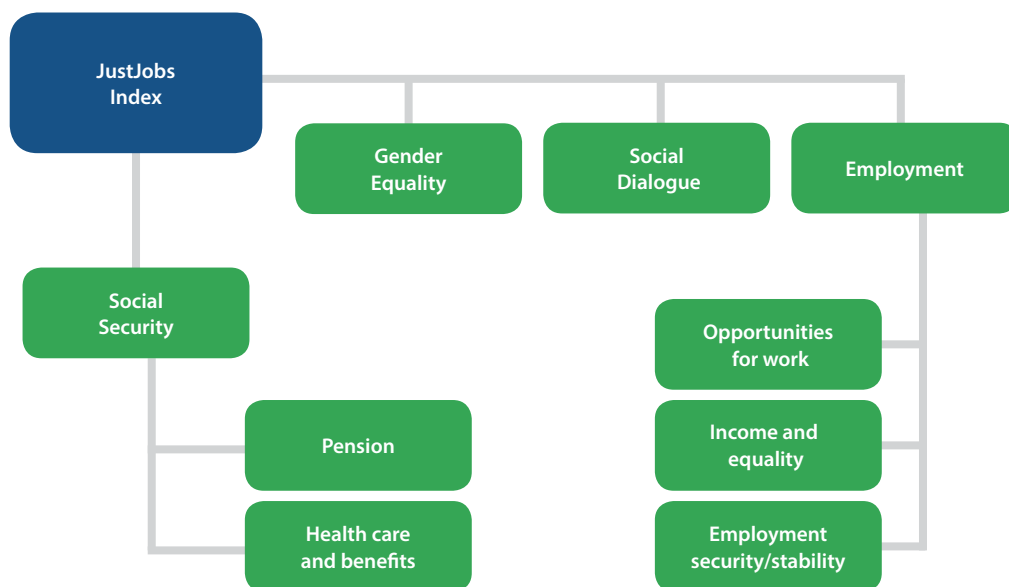
civil liberties environment determines, in a broad sense, the degree to which workers are able to assemble themselves and build representative bodies.

Figure 1 illustrates the construction of the enhanced version. **Appendix 1** explains the indicators that make up the social dialogue dimension. The enhanced version of the JustJobs Index does not include rights and safety at work. This is due to lack of data for a number of

indicators that would be useful to capture rights and safety. In the construction of a European JustJobs Index, released earlier this year by Fafo and JustJobs Network,⁷ the index included this dimension, as data were available.

The Enhanced JustJobs Index is constructed using five dimensions and 17 indicators. The list of indicators is provided in **Table 2** and their definitions in **Appendix 1**.

Figure 01
Dimensions of Global JustJobs Index: Enhanced version



Both the Global JustJobs Index and the Enhanced JustJobs Index represent an improvement upon the 2013 JustJobs Index (version 0.1), an initial exercise undertaken by JustJobs Network and Fafo.⁸ This section presents technical aspects of the index construction including data sources.

3.3 Construction of indices

Having established the conceptual framework of the two JustJobs Indices (Section 3.1), the development of the index included the following steps:

Step one: Identification of indicators

The quality of an indicator is determined by the quality of the underlying data. The choice of indicators was based on the JustJobs conceptual framework and the cross-country quality of the data upon which these indicators depend. The list of dimensions and indicators included in the Global JustJobs Index – covering 148 countries – is shown in **Table 1**.

The list of dimensions and indicators included in the Enhanced JustJobs Index – covering 41 countries – is shown in **Table 2**.

Table 02

Enhanced JustJobs Index: Dimensions and Indicators

Employment	Social security	Gender equality
Opportunities for work <ul style="list-style-type: none"> 1. Labor force participation rate 2. Unemployment rate 3. Youth unemployment rate 	Pension <ul style="list-style-type: none"> 9. Share of active contributors to pension scheme in the labor force 	<ul style="list-style-type: none"> 13. Ratio of female-to-male employment rates 14. Ratio of female-to-male labor force participation rate 15. Share of women in wage employment in non-agricultural sector
Income and equality <ul style="list-style-type: none"> 4. GDP per capita 5. Gini coefficient 6. Average monthly wages 	Health care and benefits <ul style="list-style-type: none"> 10. Total public expenditures on social protection and health (percent of GDP) 11. Health care expenditure not financed by out-of pocket payments (as percentage of total health care expenditure) 12. Percentage of the unemployed receiving unemployment benefits 	
Employment security/stability <ul style="list-style-type: none"> 7. Share of own-account workers in total employment 8. Share of contributing family workers in total employment 		Social dialogue <ul style="list-style-type: none"> 16. Civil liberties Index 17. Bargaining (or union) coverage

Step two: Imputation of missing data

Missing data are the biggest challenge in the construction of the index. Many countries are missing data on specific indicators while in other cases data is missing in particular years. We carried out imputation of the missing data using Loess regressionⁱ with varying specifications for the time span used in data smoothing. A complete data set without missing values was in this way obtained. Imputation is explained in **Section 3.5**.

Step three: Normalization of data

Normalization is required prior to any data aggregation when indicators are measured with different measurement units. The indicators used in constructing the JustJobs Index are expressed in different units and scales, such as scores, indices, currency units, ratios, percentages, etc. Before the composite index can be constructed, the raw data collected have to be prepared in a standardized way so as to be combined into one index. The normalization process is described in **Section 3.4**.

Step four: Aggregation and construction of composite index

To construct the Global JustJobs Index, the authors have employed simple arithmetic using an additive average of all the normalized indicators within each of the JustJobs dimensions: employment, social security and gender equality. A composite index is then calculated by a simple average of the resulting values of the three dimensions.

ⁱ A Loess regression is a form of regression analysis that takes into account non-linear trends

The Enhanced JustJobs Index has four dimensions, from which employment and social security have three and two sub-dimensions, respectively. A simple average of the normalized indicators is calculated in each sub-dimension, and then the mean of sub-dimension averages forms the dimension average. A composite index is then calculated by taking the average of the four dimensions included in the expanded version: employment, social security, gender equality and social dialogue.

Step five: Sensitivity analysis and selection of final index

Sensitivity analysis helps in evaluating the robustness of 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. Based on the results of the sensitivity tests, one normalization technique was selected and the final indices were constructed. The process is explained in **Section 3.6**.

3.4 Normalization of data

The following four normalization techniques have been employed to standardize the various indicators included in the construction of the two indices presented in this report.

1. 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:

$$\begin{aligned} \text{High: } I_t^i &= \text{rank}^i(x_t^i) \\ \text{Low: } I_t^i &= \text{rank}^i(-x_t^i) \\ \text{Equal to a: } I_t^i &= \text{rank}^i(-|x_t^i - a|) \end{aligned}$$

High refers to an indicator whose preferred value is high (e.g. GDP); low refers to an indicator whose preferred value is low (e.g. unemployment) ; “Equal to a” refers to an indicator whose preferred value is a specific one (e.g. ratio of female to male employment=1).

2. 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:

$$\begin{aligned} \text{High: } I_t^i &= \frac{x_t^i - \bar{x}^i}{\sigma^i} \\ \text{Low: } I_t^i &= \frac{\bar{x}^i - x_t^i}{\sigma^i} \\ \text{Equal to a: } I_t^i &= \frac{|x_t^i - a| - |\bar{x}^i - a|}{\sigma^i} \end{aligned}$$

3. 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:

$$\begin{aligned} \text{High: } I_t^i &= \frac{x_t^i - \min^i(x_t^i)}{\max^i(x_t^i) - \min^i(x_t^i)} \\ \text{Low: } I_t^i &= \frac{\max^i(x_t^i) - x_t^i}{\max^i(x_t^i) - \min^i(x_t^i)} \\ \text{Equal to a: } I_t^i &= \frac{\max^i(|x_t^i - a|) - |x_t^i - a|}{\max^i(|x_t^i - a|) - \min^i(|x_t^i - a|)} \end{aligned}$$

4. 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 point is given by:

$$\begin{aligned} \text{High: } I_t^i &= \frac{x_t^i}{x_0^i} \\ \text{Low: } I_t^i &= \frac{-x_t^i}{x_0^i} \\ \text{Equal to a: } I_t^i &= \frac{-|x_t^i - a|}{|x_0^i - a|} \end{aligned}$$

3.5 Imputation technique for missing values

In the construction of the Global and Enhanced versions of the index, data for 10 and 17 indicators are used, respectively, covering the years 2000 to 2012. However, for only five indicators was it possible to obtain complete data for all the countries of Global JustJobs Index. Data for many

indicators was not available for each year of the study period, with some countries having only data for a single year. Hence, missing data had to be filled using imputation techniques.

Different methods were applied for the imputation of missing data, depending on the nature of the data.

1. Most missing data were imputed by conducting Loess regression with varying specifications of the time span used in smoothing.
2. Some missing data were imputed by assuming that the data followed a linear trend, when data were only available for few years in some countries.
3. When only data for one year were collected, the data were then copied to the rest of years where data were missing.
4. In some cases, when only data for very few years were available for a country and the imputed data based on the linear trend was out of reasonable range, the missing data was imputed based on a combination of linear trend imputation and copying from the closest year.

It is important to note that when fewer original data are available, the imputation of missing

data becomes less accurate. Hence the results presented in this report are dependent on data availability, and improvements are expected when better quality data are available.

3.6 Sensitivity tests

Sensitivity tests were conducted to assess the extent to which the index was sensitive to changes in each individual indicator. The sensitivity test explored the effect of deleting each of the indicators on the two JustJobs Indices, one at a time. The aim of the sensitivity test was mainly to capture the relative shift in the position of countries in the ranking, expressed by one single number.

The formula used for the sensitivity test was:

$$\bar{R} = \frac{1}{n} \sum_{c=1}^c |Rank_{one\ indicator\ deleted}(CI_c) - Rank_{complete\ set}(CI_c)|$$

Moreover, a sensitivity test was also conducted to explore how the countries' rankings change when one normalization method is used over another. The rank and rescale methods were found to be less sensitive and behave more similarly to each other than the distance and z-score methods. The sensitivity tests show that the composite score based on the distance method is most sensitive to the individual indicators and therefore is most unstable.

While the results of the sensitivity tests for composite scores based on the rank and rescale methods are similar, the composite indices based on the rank method have larger value range than those based on the rescale method. Furthermore, the indices based on rank method did not take into account the value of each score – that is, ranking only shows relative performance. Therefore, the rescale method was selected as a better normalization method and the indices presented in this report are constructed using this approach.

3.7 Data sources

The authors considered inclusion of more than 100 JustJobs indicators across the time period

2000 to 2012. These indicators are based on publicly available data sources. Indicators were ultimately chosen based on efficacy and data availability. Data were gathered from the following secondary sources:

- International Labour Organization KILM database⁹
- World Bank database of indicators¹⁰
- IMF¹¹
- The OECD¹²
- Eurostat¹³
- Amsterdam Institute for Advanced Labour Studies¹⁴

4. Results

This section shows the performance of countries on both the Global JustJobs Index and the Enhanced JustJobs Index. Following a display of the rankings themselves, the authors outline some of the trends that emerge in analyzing the findings, all of which have implications for policymakers.

Table 3 shows the rankings of the Global JustJobs Index, including 148 countries, from the year 2000 to 2012. **Table 4** shows the rankings for the Enhanced JustJobs Index, including 41 countries over the same time span.

Rather than rankings, **Figures 2** and **3** show the trends over time in absolute composite score. In this way, they demonstrate how the just jobs landscape has evolved globally over the last twelve years.

Finally, **Figure 4** shows how the rankings of countries in the Expanded JustJobs Index have evolved over time – tracking the trajectory of each country over the 12-year period.

Table 03

Global JustJobs Index Rankings (148 countries)

Rank	Year												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
1	Iceland 77	Sweden 78	Sweden 78	Sweden 78	Sweden 78	Denmark 79	Denmark 80	Denmark 80	Denmark 82	Denmark 82	Denmark 82	Norway 83	Norway 84
2	Sweden 77	Iceland 78	Iceland 77	Iceland 78	Denmark 78	Iceland 78	Sweden 79	Norway 80	Norway 82	Norway 82	Norway 82	Denmark 83	Denmark 83
3	Denmark 76	Denmark 76	Denmark 77	Denmark 77	Iceland 77	Sweden 78	Norway 78	Sweden 80	Sweden 81	Sweden 81	Sweden 80	Sweden 81	Sweden 81
4	Norway 74	Norway 75	Norway 75	Norway 76	Norway 77	Norway 77	Iceland 77	Iceland 78	Netherlands 79	Netherlands 80	Netherlands 80	Netherlands 81	Netherlands 81
5	UK 73	UK 74	UK 74	UK 74	UK 75	UK 75	Netherlands 76	Netherlands 77	Iceland 78	Finland 79	Finland 78	Finland 79	Finland 81
6	Slovenia 73	Slovenia 72	Finland 73	Finland 73	Finland 74	Finland 75	Finland 76	Finland 76	Finland 78	Austria 78	France 78	France 78	Iceland 79
7	Canada 71	Finland 71	Austria 72	Austria 72	Slovenia 73	Netherlands 74	UK 75	France 76	France 77	France 78	Austria 78	Austria 78	France 78
8	Austria 71	Austria 71	Slovenia 72	Netherlands 72	Netherlands 73	Slovenia 74	Austria 74	Luxembourg 75	Austria 77	Iceland 77	Iceland 77	Iceland 78	Austria 78
9	Finland 70	Canada 71	Canada 72	France 72	Austria 73	France 73	Luxembourg 74	Canada 75	UK 76	Canada 76	Luxembourg 77	Luxembourg 77	Luxembourg 78
10	Germany 70	Netherlands 71	Netherlands 72	Canada 72	Canada 72	Luxembourg 73	France 74	UK 75	Canada 76	UK 76	Germany 76	Germany 77	Germany 78
11	Netherlands 70	Germany 71	Germany 71	Germany 72	France 72	Austria 73	Canada 74	Austria 75	Slovenia 76	Luxembourg 76	Canada 76	Canada 76	Belgium 76
12	Luxembourg 69	Luxembourg 70	Luxembourg 71	Slovenia 71	Luxembourg 72	Canada 73	Slovenia 74	Slovenia 74	Switzerland 75	Germany 76	UK 76	Belgium 76	Canada 76
13	France 69	France 70	France 71	Luxembourg 71	Germany 72	Switzerland 72	Switzerland 73	Australia 73	Luxembourg 75	Switzerland 75	Belgium 75	UK 76	Switzerland 76
14	Switzerland 69	Switzerland 70	Switzerland 71	Switzerland 71	Switzerland 71	Germany 72	Germany 73	Germany 73	Germany 75	Slovenia 75	Switzerland 75	Switzerland 76	UK 76
15	Australia 68	Australia 68	Australia 69	Australia 69	Australia 69	USA 70	Australia 72	Switzerland 73	Australia 74	Belgium 74	Slovenia 75	Slovenia 75	Slovenia 75
16	USA 68	USA 68	USA 68	USA 69	USA 69	Australia 70	USA 71	USA 72	USA 73	Australia 74	USA 74	Australia 74	USA 74
17	Czech Rep. 68	Czech Rep. 68	Portugal 68	Portugal 68	Portugal 68	Portugal 69	Portugal 69	Belgium 71	Belgium 73	Ireland 73	Australia 74	USA 74	Australia 74
18	Portugal 67	Portugal 68	Czech Rep. 68	Czech Rep. 67	Belarus 68	Belgium 68	Belgium 69	Ireland 70	Ireland 72	USA 73	Ireland 73	Ireland 73	Ireland 73
19	Belarus 67	Belarus 67	Belarus 67	Belarus 67	Czech Rep. 67	Czech Rep. 68	Czech Rep. 69	Czech Rep. 70	Israel 71	Israel 72	Israel 72	Israel 72	Japan 73
20	Mongolia 67	New Zealand 66	New Zealand 66	New Zealand 67	Belgium 67	New Zealand 68	Ireland 69	Portugal 70	Estonia 71	Portugal 71	Japan 72	Japan 72	Israel 73
21	Israel 66	Israel 65	Belgium 65	Belgium 66	New Zealand 67	Estonia 67	New Zealand 68	New Zealand 69	Czech Rep. 70	Japan 71	Portugal 71	Czech Rep. 71	Czech Rep. 72
22	New Zealand 66	Mongolia 65	Bahamas 65	Cyprus 65	Japan 66	Belarus 67	Estonia 68	Israel 69	Portugal 70	Czech Rep. 71	Czech Rep. 71	Estonia 71	Estonia 72
23	Bahamas 65	Bahamas 65	Israel 65	Bahamas 65	Ukraine 65	Ireland 67	Japan 67	Estonia 68	New Zealand 70	Estonia 71	Estonia 70	Kazakhstan 70	Kazakhstan 70
24	Belgium 64	Belgium 64	Cyprus 65	Japan 65	Ireland 65	Japan 67	Belarus 67	Japan 68	Japan 70	New Zealand 70	New Zealand 69	New Zealand 70	New Zealand 70
25	Rwanda 64	Japan 64	Japan 64	Israel 65	Hungary 65	Hungary 66	Hungary 67	Hungary 68	Hungary 68	Hungary 69	Kazakhstan 69	Portugal 69	Portugal 68
26	Japan 63	Rwanda 64	Rwanda 64	Ireland 65	Cyprus 65	Ukraine 66	Ukraine 66	Tanzania 68	Kazakhstan 68	Kazakhstan 69	Hungary 69	Hungary 68	Hungary 68
27	Madagascar 63	Hungary 63	Moldova 64	Hungary 65	Israel 65	Israel 66	Bahamas 66	Ukraine 66	Ukraine 68	Lithuania 68	Cyprus 68	Cyprus 68	Lithuania 68
28	Moldova 63	Cyprus 63	Ireland 64	Rwanda 64	Rwanda 65	Rwanda 65	Israel 66	Lithuania 67	Lithuania 68	Cyprus 68	Spain 68	Spain 67	Poland 67
29	Hungary 63	Ireland 64	Hungary 64	Ukraine 64	Bahamas 65	Kazakhstan 65	Cyprus 66	Belarus 67	Cyprus 67	Croatia 68	Poland 67	Poland 67	Rwanda 67
30	Papua N. G. 63	Moldova 63	Estonia 64	Bulgaria 64	Bulgaria 64	Bulgaria 65	Lithuania 66	Cyprus 67	Spain 67	Ukraine 67	Lithuania 67	Lithuania 67	Spain 67

Rank	Year												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
31	Estonia 63	Mozambique 63	Mongolia 64	Russia 63	Russia 64	Moldova 65	Kazakhstan 65	Bulgaria 66	Tanzania 67	Spain 67	Belarus 67	Rwanda 66	Cyprus 67
32	Romania 63	Romania 63	Ukraine 63	Mongolia 63	Tanzania 64	Russia 65	Tanzania 65	Spain 66	Croatia 66	Tanzania 67	Croatia 66	Italy 66	Romania 66
33	Lithuania 63	Madagascar 63	Russia 63	Mozambique 63	Estonia 64	Cyprus 65	Spain 65	Barbados 66	Belarus 66	Poland 67	Ukraine 66	Uruguay 66	Italy 66
34	Mozambique 62	Papua N. G. 62	Bulgaria 63	Estonia 63	Moldova 63	Bahamas 65	Russia 65	Bahamas 65	Barbados 66	Russia 66	Italy 66	Belarus 65	Uruguay 66
35	Ireland 62	Estonia 62	Mozambique 63	Moldova 63	Mozambique 63	Barbados 64	Barbados 65	Kazakhstan 65	Poland 66	Belarus 66	Rwanda 66	Croatia 65	Barbados 66
36	Slovakia 62	Bulgaria 62	Madagascar 63	Kazakhstan 63	Kazakhstan 63	Tanzania 63	Rwanda 65	Croatia 65	Russia 66	Rwanda 66	Barbados 65	Barbados 65	Belarus 66
37	Uganda 62	Russia 62	Papua N. G. 62	Tanzania 63	Barbados 63	Mozambique 63	Bulgaria 65	Russia 65	Bahamas 66	Italy 66	Tanzania 65	Romania 65	Russia 66
38	Barbados 61	Ukraine 62	Malawi 62	Papua N. G. 62	Madagascar 63	Lithuania 63	Malawi 64	Rwanda 65	Slovakia 66	Slovakia 65	Russia 65	Russia 65	Slovakia 65
39	Russia 61	Malawi 61	Kazakhstan 62	Madagascar 62	Mongolia 62	Madagascar 63	Croatia 64	Malawi 64	Latvia 65	Barbados 65	Romania 64	Ukraine 65	Croatia 65
40	Malawi 61	Slovakia 61	Tanzania 62	Malawi 62	Zimbabwe 62	Spain 63	Latvia 64	Latvia 64	Italy 65	Latvia 64	Slovakia 64	Tanzania 65	Tanzania 65
41	Bulgaria 61	Barbados 61	Lithuania 62	Barbados 62	Papua N. G. 62	Ghana 62	Mozambique 63	Slovakia 64	Rwanda 65	Greece 64	Greece 64	Slovakia 65	Bahamas 65
42	Cyprus 60	Uganda 61	Barbados 62	Lithuania 62	Malawi 62	Croatia 62	Madagascar 63	Mozambique 64	Moldova 65	Moldova 64	Bahamas 64	Mozambique 64	Mozambique 64
43	Croatia 60	Lithuania 61	Slovakia 62	Slovakia 62	Croatia 61	Zimbabwe 62	Italy 62	Moldova 64	Bulgaria 64	Bahamas 64	Latvia 64	Bahamas 64	Moldova 64
44	Burundi 60	Kazakhstan 60	Uganda 61	Zimbabwe 61	Lithuania 61	Malawi 62	Slovakia 62	Poland 64	Mozambique 64	Mozambique 64	Mozambique 64	Zimbabwe 64	Zimbabwe 64
45	Ukraine 60	Tanzania 60	Croatia 60	Croatia 61	Slovakia 61	Papua N. G. 62	Papua N. G. 62	Italy 63	Mongolia 64	Laos 63	Uruguay 64	Latvia 64	Latvia 64
46	Tanzania 60	Burundi 60	Romania 60	Romania 61	Romania 61	Slovakia 62	Mongolia 62	Madagascar 63	Malawi 63	Mongolia 63	Moldova 64	Moldova 64	Ukraine 64
47	Laos 60	Latvia 60	Burundi 60	Latvia 61	Spain 61	Latvia 62	Zimbabwe 62	Mongolia 62	Romania 63	Romania 63	Zimbabwe 63	Malawi 63	Malawi 64
48	Serbia 59	Montenegro 59	Latvia 60	Uganda 61	Burundi 61	Mongolia 61	Moldova 62	Burundi 62	Madagascar 63	Malawi 63	Malawi 63	Madagascar 63	Korea (S) 63
49	Latvia 59	Laos 59	Zimbabwe 60	Burundi 60	Ghana 60	Romania 61	Ghana 61	Papua N. G. 62	Greece 63	Uruguay 63	Thailand 63	Mongolia 63	Madagascar 63
50	Kazakhstan 59	Serbia 59	Ghana 60	Ghana 60	Uganda 60	Italy 61	Poland 61	Thailand 62	Uruguay 63	Madagascar 63	Madagascar 63	Thailand 63	Togo 63
51	Ghana 58	Ghana 59	Montenegro 59	Uruguay 59	Latvia 60	Burundi 61	Romania 61	Romania 62	Thailand 62	Bulgaria 63	Korea (S) 62	Korea (S) 63	Thailand 63
52	Uruguay 58	Croatia 59	Laos 59	Spain 59	Italy 60	Uganda 60	Burundi 61	Zimbabwe 62	Papua N. G. 62	Zimbabwe 62	Mongolia 62	Papua N. G. 63	China 63
53	Poland 58	Uruguay 59	Uruguay 59	Laos 59	Uruguay 59	Uruguay 60	Thailand 61	Ghana 62	Burundi 62	Thailand 62	Burundi 62	China 63	Papua N. G. 62
54	Thailand 57	Zimbabwe 58	Serbia 59	Montenegro 59	Laos 59	Poland 59	Togo 60	Greece 61	Zimbabwe 62	Burundi 62	Papua N. G. 62	Greece 62	Laos 62
55	Zimbabwe 57	Poland 58	Spain 58	Italy 58	Thailand 59	Thailand 59	Laos 60	Uruguay 61	Montenegro 62	Korea (S) 62	Bulgaria 62	Togo 62	Bulgaria 62
56	China 56	Italy 57	Italy 58	Thailand 58	Poland 58	VietNam 59	Uganda 60	Bhutan 60	Ghana 61	Papua N. G. 62	Laos 61	Laos 62	Mongolia 62
57	Angola 56	Thailand 57	Thailand 58	Serbia 58	Togo 58	Togo 59	Greece 59	Korea (S) 60	Korea (S) 61	Montenegro 62	Ghana 61	Bulgaria 62	Bhutan 61
58	Togo 56	Spain 57	Poland 57	Poland 58	Burkina Faso 58	Laos 59	Korea (S) 59	Togo 60	Serbia 61	Ghana 61	Bhutan 61	Burundi 62	Ghana 61
59	VietNam 56	Togo 56	Togo 57	Togo 58	Nepal 57	Burkina Faso 59	Bhutan 59	Laos 60	Bhutan 61	Togo 61	China 61	Montenegro 61	Burundi 61
60	Montenegro 56	Burkina Faso 56	Burkina Faso 57	Burkina Faso 57	Serbia 57	Bhutan 57	Burkina Faso 59	Montenegro 59	Togo 60	Bhutan 60	Togo 61	Ghana 61	Trini. & Tob. 61

Rank	Year													
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
61	Italy 55	Angola 56	Nepal 56	Nepal 57	VietNam 57	Greece 57	Uruguay 58	VietNam 59	Congo (K) 59	Congo (K) 60	VietNam 60	Bhutan 61	Montenegro 61	
62	Zambia 55	China 56	VietNam 56	VietNam 56	Bhutan 56	Nepal 57	VietNam 58	Uganda 59	Laos 59	VietNam 60	Montenegro 60	VietNam 60	Malta 60	
63	Burkina Faso 55	Nepal 55	Zambia 56	Zambia 56	Korea (S) 56	Korea (S) 57	Nepal 58	Burkina Faso 59	Burkina Faso 59	Serbia 60	Burkina Faso 59	Brazil 60	Greece 60	
64	Spain 55	VietNam 55	China 55	Gambia 56	Greece 56	Congo (K) 56	Montenegro 57	Serbia 58	VietNam 59	China 59	Azerbaijan 59	Azerbaijan 60	VietNam 60	
65	Kuwait 55	Zambia 55	Sierra Leone 55	Congo (B) 56	Congo (B) 56	Congo (B) 56	Congo (K) 57	China 58	China 59	Azerbaijan 59	Trini. & Tob. 59	Bolivia 59	Bolivia 60	
66	Nepal 55	Cambodia 55	Angola 55	Sierra Leone 55	Gambia 56	Gambia 56	Botswana 57	Nepal 58	Nepal 58	Nepal 59	Brazil 59	Trini. & Tob. 59	Brazil 60	
67	Cambodia 54	Congo (B) 55	Korea (S) 55	China 55	Congo (K) 56	Sierra Leone 56	Congo (B) 57	Botswana 58	Uganda 58	Burkina Faso 59	Congo (K) 59	Congo (K) 59	Azerbaijan 60	
68	Malta 54	Kuwait 55	Congo (B) 55	Angola 55	China 55	Serbia 56	China 57	Congo (K) 58	Azerbaijan 58	Bolivia 58	Bolivia 59	Burkina Faso 59	Uganda 59	
69	Congo (B) 54	Gambia 55	Gambia 55	Bhutan 55	Sierra Leone 55	China 56	Gambia 56	Azerbaijan 57	Brazil 58	Brazil 58	Nepal 59	Nepal 59	Burkina Faso 59	
70	Gambia 54	Korea (S) 54	Cambodia 55	Korea (S) 55	Angola 55	Benin 56	Brazil 56	Brazil 57	Trini. & Tob. 58	Uganda 58	Uganda 58	Peru 59	Peru 59	
71	Korea (S) 53	Sierra Leone 54	Malta 55	Congo (K) 55	Montenegro 55	Montenegro 55	Serbia 56	Congo (B) 57	Malta 57	Malta 58	Malta 58	Malta 59	Nepal 59	
72	Congo (K) 53	Congo (K) 54	Congo (K) 55	Greece 55	Benin 55	Brazil 55	Benin 56	Malta 56	Bolivia 57	Trini. & Tob. 58	Peru 58	Uganda 58	Congo (B) 59	
73	Sierra Leone 53	Malta 53	Benin 54	Cambodia 55	Zambia 55	Botswana 55	Cambodia 56	Cambodia 56	Congo (B) 57	Peru 58	Serbia 58	Congo (B) 58	Congo (K) 59	
74	Kyrgyzstan 53	Benin 53	Kuwait 54	Benin 55	Cambodia 54	Cambodia 55	Angola 56	Benin 56	Cambodia 57	Botswana 57	Congo (B) 57	Benin 58	Benin 58	
75	Greece 52	Greece 53	Bhutan 54	Kuwait 54	Brazil 54	Zambia 55	Sierra Leone 55	Bolivia 56	Benin 57	Argentina 57	Cambodia 57	Cambodia 58	Gambia 58	
76	Azerbaijan 52	Bhutan 53	Greece 54	Malta 54	Botswana 54	Malta 55	Malta 55	Gambia 56	Peru 56	Benin 57	Benin 57	Serbia 57	Cambodia 58	
77	Bhutan 52	Fiji 53	Botswana 54	Botswana 53	Kuwait 54	Angola 54	Zambia 54	Peru 55	Argentina 56	Cambodia 57	Gambia 57	Gambia 57	Guinea-B. 57	
78	Benin 52	Botswana 52	Brazil 53	Brazil 53	Azerbaijan 53	Azerbaijan 54	Bolivia 54	Sierra Leone 55	Gambia 56	Gambia 57	Argentina 56	Argentina 57	Argentina 57	
79	Fiji 52	Peru 52	Fiji 53	Bolivia 53	Fiji 53	Kuwait 54	Azerbaijan 54	Guinea-B. 54	Botswana 55	Sierra Leone 56	Guinea-B. 56	Guinea-B. 56	Serbia 57	
80	Brazil 52	Azerbaijan 52	Guinea-B. 52	Azerbaijan 53	Bolivia 53	Fiji 53	Kuwait 54	Angola 54	Angola 55	Angola 56	Botswana 56	Botswana 56	Sierra Leone 56	
81	Cent. Africa R. 51	Kyrgyzstan 52	Bolivia 52	Guinea-B. 53	Malta 53	Guinea-B. 53	Guinea-B. 53	Argentina 54	Sierra Leone 55	Congo (B) 56	Sierra Leone 55	Sierra Leone 55	Kuwait 56	
82	Malaysia 51	Brazil 52	Azerbaijan 52	Cent. Africa R. 51	Guinea-B. 53	Bolivia 53	Fiji 53	Qatar 54	Qatar 54	Guinea-B. 55	Angola 55	Qatar 55	Costa Rica 56	
83	Kenya 51	Bolivia 52	Peru 52	Fiji 51	Peru 52	Trini. & Tob. 53	Trini. & Tob. 53	Zambia 53	Guinea-B. 54	Qatar 54	Qatar 55	Kyrgyzstan 55	Zambia 56	
84	Guinea-B. 51	Guinea-B. 51	Cent. Africa R. 51	Peru 51	Trini. & Tob. 52	Peru 53	Qatar 53	Kuwait 53	Zambia 54	Kuwait 54	Zambia 54	Angola 55	Kyrgyzstan 56	
85	Botswana 51	Cent. Africa R. 51	Kenya 51	Kenya 51	Cent. Africa R. 51	Albania 51	Peru 52	Kyrgyzstan 52	Kuwait 53	Zambia 54	Kyrgyzstan 54	Kuwait 55	Botswana 55	
86	Bolivia 51	Kenya 51	Malaysia 50	Albania 51	Kenya 51	Cent. Africa R. 51	Argentina 52	Fiji 52	Kyrgyzstan 53	Kyrgyzstan 53	Costa Rica 54	Costa Rica 55	Angola 55	
87	Chad 50	Malaysia 50	Chad 50	Malaysia 50	Albania 51	Kenya 51	Albania 52	Kenya 52	Costa Rica 52	Panama 53	Kuwait 53	Zambia 55	Qatar 55	
88	Peru 49	Chad 50	Kyrgyzstan 50	Kyrgyzstan 50	Kyrgyzstan 50	Argentina 51	Kenya 51	Albania 52	Kenya 52	Costa Rica 53	Guinea 53	Panama 54	Panama 55	
89	Guinea 49	Guinea 49	Albania 49	Colombia 50	Malaysia 50	Senegal 51	Jamaica 51	Trini. & Tob. 51	Fiji 52	Kenya 52	Panama 53	Chile 53	Guinea 54	
90	Albania 48	Philippines 48	Guinea 49	Chad 50	Senegal 50	Qatar 50	Senegal 51	Cent. Africa R. 51	Panama 51	Belize 52	Belize 53	Colombia 53	Colombia 54	

Rank	2000	Year											
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
91	Cameroon 47	Costa Rica 47	Senegal 48	Senegal 49	Chad 50	Malaysia 50	Cent. Africa R. 51	Costa Rica 51	Belize 51	Maldives 52	Colombia 52	Guinea 53	Chile 54
92	Singapore 46	Senegal 47	Namibia 48	Jamaica 49	Argentina 49	Jamaica 50	Kyrgyzstan 50	Senegal 51	Cent. Africa R. 51	Guinea 52	Kenya 52	Belize 52	Belize 53
93	Senegal 46	Colombia 47	Jamaica 48	Guinea 49	Jamaica 49	Chad 49	Guinea 50	Jamaica 51	Maldives 51	Colombia 52	Chile 52	Kenya 52	Kenya 52
94	Philippines 46	Qatar 47	Cameroon 48	Trini. & Tob. 49	Guinea 49	Costa Rica 49	Costa Rica 50	Belize 50	Senegal 51	Senegal 51	Senegal 51	Cent. Africa R. 52	Cameroon 52
95	Qatar 46	Cameroon 47	Colombia 48	Qatar 48	Colombia 49	Guinea 49	Maldives 49	Guinea 50	Guinea 51	Fiji 51	Cent. Africa R. 51	Senegal 52	Senegal 52
96	Costa Rica 46	Georgia 46	Qatar 47	Cameroon 48	Qatar 49	Kyrgyzstan 49	Cameroon 49	Namibia 50	Albania 51	Cent. Africa R. 50	Fiji 51	Cameroon 51	Singapore 52
97	Argentina 45	Trini. & Tob. 46	Costa Rica 47	Namibia 47	Cameroon 48	Colombia 49	Colombia 49	Panama 50	Jamaica 50	Jamaica 50	Cameroon 51	Fiji 51	Namibia 52
98	Namibia 45	Namibia 45	Philippines 47	Costa Rica 47	Namibia 47	Namibia 49	Malaysia 49	Maldives 50	Cameroon 49	Albania 50	Maldives 51	Singapore 51	Cent. Africa R. 51
99	Colombia 45	Singapore 45	Trini. & Tob. 47	El Salvador 46	Maldives 47	Cameroon 49	Belize 49	Cameroon 49	Malaysia 49	Cameroon 50	Singapore 50	Namibia 50	Fiji 51
100	South Africa 45	Argentina 45	El Salvador 45	Philippines 46	Costa Rica 47	Maldives 48	Namibia 49	Malaysia 49	Venezuela 49	Cape Verde 49	Jamaica 50	Cape Verde 50	Mauritius 50
101	Jamaica 44	Mauritius 45	Cape Verde 45	Georgia 46	Cape Verde 46	Panama 48	El Salvador 48	Venezuela 48	Cape Verde 49	Malaysia 49	Cape Verde 50	Albania 50	Cape Verde 50
102	Mauritius 44	Albania 45	Mauritius 46	Cape Verde 46	El Salvador 47	Cape Verde 47	Chad 48	Cape Verde 48	Singapore 49	Venezuela 49	Namibia 49	Jamaica 49	Jamaica 49
103	Cape Verde 44	Cape Verde 45	Georgia 45	Maldives 46	Belize 46	Belize 47	Panama 48	El Salvador 48	El Salvador 48	Chile 49	Albania 49	Lesotho 49	El Salvador 49
104	Georgia 44	South Africa 45	Argentina 45	Belize 45	Georgia 46	Philippines 47	Cape Verde 48	Colombia 48	Colombia 49	Singapore 48	Malaysia 49	El Salvador 49	Albania 49
105	Guyana 44	Jamaica 44	Maldives 45	Argentina 45	Panama 45	El Salvador 46	Georgia 47	Singapore 48	Chile 48	El Salvador 48	Lesotho 49	Malaysia 49	Lesotho 49
106	Trini. & Tob. 44	El Salvador 44	Belize 44	Bangladesh 44	Philippines 45	Georgia 46	Singapore 47	Georgia 47	Georgia 47	Armenia 48	El Salvador 49	Mauritius 48	Malaysia 49
107	Bangladesh 44	Bangladesh 44	Bangladesh 44	Mauritius 44	Nigeria 45	Singapore 46	Venezuela 47	Chad 47	Lesotho 47	Lesotho 48	Mauritius 48	Georgia 48	Georgia 48
108	Indonesia 44	Venezuela 44	Singapore 44	Panama 44	Singapore 45	Venezuela 45	Chile 45	Chile 46	Chad 47	Georgia 47	Venezuela 47	Maldives 48	Mexico 48
109	El Salvador 44	Belize 44	Panama 44	Nigeria 44	Bangladesh 44	Nigeria 45	Nigeria 45	Nigeria 45	Paraguay 46	Mauritius 47	Chad 47	Venezuela 48	Venezuela 48
110	Lesotho 43	Maldives 43	Venezuela 43	Singapore 44	Ecuador 44	Mauritius 44	Philippines 45	Lesotho 45	Mauritius 46	Paraguay 47	Georgia 47	Chad 47	Chad 47
111	Timor-Leste 43	Panama 42	South Africa 43	Venezuela 43	Venezuela 44	Chile 44	Ecuador 45	Nicaragua 45	Nicaragua 46	Nicaragua 46	Namibia 47	Armenia 47	Ecuador 47
112	Bosn. & Herz. 42	Ecuador 42	Nigeria 42	Swaziland 42	Mauritius 44	Bangladesh 44	Bangladesh 45	Paraguay 45	Mexico 45	Chad 46	Ecuador 46	Armenia 47	Ecuador 47
113	Maldives 42	Nigeria 42	Lesotho 43	South Africa 42	Chile 43	Paraguay 44	Mauritius 45	Ecuador 45	Bangladesh 45	Nicaragua 46	Bangladesh 46	Bangladesh 46	Maldives 47
114	Panama 42	Indonesia 42	Bosn. & Herz. 42	Chile 42	Paraguay 43	Nicaragua 44	Nicaragua 45	Bangladesh 45	Nigeria 45	Mexico 46	Mexico 46	Mexico 46	Bangladesh 46
115	Belize 42	Lesotho 42	Swaziland 42	Paraguay 42	Swaziland 42	Ecuador 43	Paraguay 44	Philippines 45	South Africa 45	Bangladesh 45	Nicaragua 46	Turkey 46	Armenia 46
116	Nigeria 42	Timor-Leste 42	Ecuador 42	Ecuador 41	Nicaragua 42	Mexico 43	Mexico 44	Mexico 44	Ecuador 44	Bosn. & Herz. 45	Dominican R. 45	Paraguay 46	Nicaragua 46
117	Venezuela 41	Swaziland 42	Dominican R. 42	Timor-Leste 41	Mexico 42	Swaziland 42	South Africa 43	South Africa 44	Philippines 44	Ecuador 45	Philippines 45	Nicaragua 46	Paraguay 46
118	Chile 41	Paraguay 41	Timor-Leste 41	Bosn. & Herz. 41	Lesotho 41	South Africa 42	Armenia 43	Mauritius 44	Dominican R. 44	Nigeria 45	Paraguay 45	Nigeria 45	Nigeria 45
119	Armenia 41	Bosn. & Herz. 41	Indonesia 41	Indonesia 41	South Africa 41	Timor-Leste 42	Swaziland 43	Swaziland 43	Bosn. & Herz. 44	South Africa 44	Nigeria 44	Philippines 45	Philippines 45
120	Honduras 41	Chile 41	Nicaragua 41	Nicaragua 41	Timor-Leste 41	Bosn. & Herz. 42	Lesotho 42	Indonesia 42	Indonesia 43	Philippines 44	Turkey 44	Dominican R. 45	Bosn. & Herz. 45
121	Paraguay 40	Guyana 40	Chile 41	Mexico 41	Indonesia 40	Lesotho 40	Timor-Leste 41	Dominican R. 42	Namibia 43	Guyana 44	Bosn. & Herz. 44	Bosn. & Herz. 45	Dominican R. 44
122	Ecuador 40	Dominican R. 40	Mexico 41	Guyana 41	Armenia 40	Guyana 40	Dominican R. 41	Guatemala 42	Swaziland 43	Indonesia 43	Mali 44	South Africa 44	Guyana 44

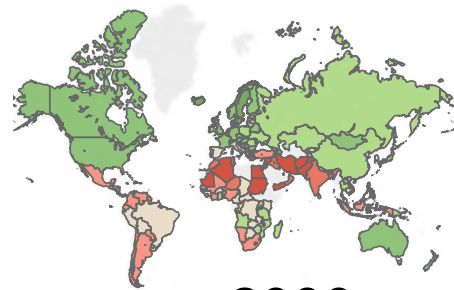
Rank	Year												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
123	Swaziland 40	Nicaragua 40	Paraguay 40	Lesotho 40	Guyana 40	Guatemala 40	Guatemala 41	Côte d'Ivoire 42	Côte d'Ivoire 42	Dominican R. 43	South Africa 43	Mali 44	Mali 44
124	Mexico 40	Mexico 40	Guyana 39	Armenia 39	Bosn. & Herz. 39	Côte d'Ivoire 40	Sri Lanka 41	Mali 41	Guyana 42	Mali 43	Indonesia 43	Côte d'Ivoire 44	South Africa 44
125	Dominican R. 39	Honduras 39	Turkey 40	Turkey 39	Côte d'Ivoire 40	Indonesia 39	Indonesia 41	Timor-Leste 41	Guatemala 42	Côte d'Ivoire 43	Guyana 43	Guyana 43	Côte d'Ivoire 44
126	Turkey 39	Turkey 39	Armenia 39	Côte d'Ivoire 39	Guatemala 39	Mali 39	Mali 40	Guyana 41	Turkey 42	Turkey 43	Côte d'Ivoire 43	Indonesia 43	Swaziland 43
127	Sri Lanka 39	Armenia 39	Côte d'Ivoire 39	Dominican R. 39	Dominican R. 39	Dominican R. 39	Côte d'Ivoire 40	Turkey 40	Armenia 42	Swaziland 43	Swaziland 43	Swaziland 43	Indonesia 43
128	Nicaragua 39	Guatemala 39	Guatemala 38	Guatemala 39	Mali 38	Armenia 39	Turkey 40	Armenia 39	Guatemala 42	Guatemala 42	Guatemala 42	Guatemala 42	Guatemala 42
129	Guatemala 39	Sri Lanka 39	Mali 38	Mali 38	Turkey 38	Turkey 38	Guyana 39	Sri Lanka 39	Timor-Leste 41	Timor-Leste 42	Timor-Leste 42	Timor-Leste 42	Tunisia 42
130	Côte d'Ivoire 38	Côte d'Ivoire 38	Sri Lanka 38	Sri Lanka 38	Sri Lanka 38	Oman 37	Bosn. & Herz. 39	Bosn. & Herz. 39	Tunisia 40	Honduras 40	Tunisia 40	Tunisia 40	Timor-Leste 42
131	Mali 37	Mali 37	Honduras 37	Niger 37	Oman 37	Sri Lanka 37	Honduras 38	Tunisia 39	Sri Lanka 39	Algeria 40	Algeria 40	Algeria 40	Honduras 40
132	Niger 36	Niger 37	Niger 37	Honduras 37	Niger 37	Honduras 37	Niger 38	Honduras 39	Niger 39	Tunisia 39	Honduras 39	Honduras 40	Oman 40
133	Oman 35	Oman 36	Oman 36	Oman 37	Honduras 36	Niger 37	Oman 37	Niger 38	Algeria 38	Sri Lanka 39	Oman 39	Oman 40	Algeria 40
134	India 33	India 33	Tunisia 34	Tunisia 35	India 35	Tunisia 35	Tunisia 35	Oman 38	Honduras 38	Niger 39	Niger 39	Niger 39	Niger 39
135	Morocco 32	Tunisia 32	India 34	India 34	Tunisia 35	India 35	Algeria 35	Algeria 37	Oman 38	Oman 39	Sri Lanka 38	Sri Lanka 38	Jordan 38
136	Iraq 32	Iraq 31	Iraq 31	Morocco 31	Morocco 32	Morocco 32	India 34	Egypt 35	Egypt 36	Egypt 37	Egypt 37	Jordan 36	Sri Lanka 37
137	Tunisia 30	Morocco 30	Morocco 30	Lebanon 30	Lebanon 30	Algeria 32	Morocco 33	India 34	India 34	Jordan 34	Jordan 35	Egypt 35	Egypt 34
138	Lebanon 28	Lebanon 29	Lebanon 29	Sudan 28	Iran 30	Iraq 31	Egypt 32	Morocco 33	Iraq 33	Jordan 34	Iraq 34	Iraq 34	Iraq 34
139	Sudan 27	Sudan 28	Sudan 28	Iran 28	Jordan 29	Lebanon 31	Iraq 31	Iraq 32	Morocco 33	India 33	Morocco 33	India 33	India 34
140	Egypt 27	Egypt 27	Jordan 27	Egypt 28	Algeria 29	Iran 30	Lebanon 31	Jordan 32	Jordan 32	Morocco 33	India 33	Morocco 33	Morocco 33
141	Jordan 26	Iran 26	Egypt 27	Iraq 28	Egypt 29	Jordan 29	Iran 31	Lebanon 31	Lebanon 31	Lebanon 31	Lebanon 30	Lebanon 30	Pakistan 30
142	Syria 26	Jordan 26	Iran 27	Jordan 27	Sudan 28	Egypt 29	Jordan 30	Iran 31	Iran 30	Iran 30	Iran 29	Iran 30	Iran 30
143	Yemen 25	Yemen 26	Mauritania 26	Syria 26	Iraq 28	Sudan 29	Sudan 29	Sudan 29	Sudan 29	Sudan 28	Pakistan 29	Pakistan 30	Lebanon 29
144	Mauritania 25	Mauritania 25	Yemen 25	Algeria 26	Syria 26	Mauritania 27	Pakistan 27	Pakistan 27	Pakistan 27	Pakistan 28	Mauritania 29	Mauritania 28	Mauritania 29
145	Iran 25	Syria 25	Syria 25	Mauritania 26	Mauritania 25	Syria 26	Mauritania 26	Mauritania 26	Mauritania 26	Mauritania 28	Sudan 28	Sudan 28	Sudan 28
146	Pakistan 23	Pakistan 23	Pakistan 23	Yemen 25	Pakistan 25	Pakistan 26	Syria 25	Syria 25	Syria 25	Syria 25	Syria 25	Syria 25	Syria 26
147	Algeria 21	Algeria 22	Algeria 23	Pakistan 24	Yemen 25	Yemen 24	Yemen 24	Yemen 24	Yemen 24	Yemen 24	Afghanistan 23	Yemen 23	Yemen 23
148	Afghanistan 19	Afghanistan 19	Afghanistan 19	Afghanistan 19	Afghanistan 19	Afghanistan 19	Afghanistan 20	Afghanistan 20	Afghanistan 22	Afghanistan 22	Yemen 22	Afghanistan 22	Afghanistan 22

Table 04

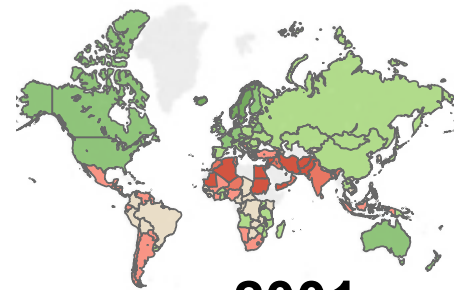
Enhanced JustJobs Index Rankings (41 countries)

Rank	Year													
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
1	Sweden 85	Sweden 86	Sweden 87	Sweden 87	Sweden 87	Denmark 88	Denmark 88	Denmark 88	Denmark 88	Denmark 89	Denmark 89	Denmark 89	Denmark 89	
2	Denmark 85	Denmark 86	Denmark 86	Denmark 86	Denmark 87	Sweden 87	Sweden 87	Sweden 87	Austria 87	Austria 88	Austria 88	Austria 88	Austria 88	
3	Norway 81	Norway 81	Norway 82	Austria 82	Austria 83	Austria 84	Austria 85	Austria 86	Sweden 86	Norway 87	Norway 87	Norway 87	Norway 87	
4	Austria 79	Austria 80	Austria 81	Norway 81	Norway 82	Finland 83	Finland 83	France 84	France 85	France 86	France 87	Finland 87	Finland 86	
5	Finland 79	Finland 80	Finland 81	Finland 81	Finland 82	Norway 83	Norway 83	Norway 84	Finland 85	France 85	Sweden 85	Netherlands 86	Netherlands 86	
6	Slovenia 78	France 79	France 80	France 81	France 81	France 82	France 83	Finland 84	Norway 84	Finland 85	Netherlands 85	France 86	Belgium 85	
7	France 78	Slovenia 78	Netherlands 78	Netherlands 79	Netherlands 80	Netherlands 81	Netherlands 82	Netherlands 83	Netherlands 84	Netherlands 85	Finland 85	Sweden 85	France 85	
8	Germany 76	Netherlands 77	Slovenia 78	Germany 78	Germany 79	Belgium 79	Belgium 80	Belgium 81	Belgium 83	Belgium 84	Belgium 84	Belgium 85	Sweden 85	
9	Netherlands 76	Germany 77	Germany 78	Slovenia 78	Belgium 78	Slovenia 79	Germany 79	Germany 80	Germany 81	Germany 82	Germany 82	Germany 83	Germany 83	
10	Belgium 75	Portugal 76	Belgium 76	Belgium 77	Slovenia 78	Germany 78	Slovenia 79	Slovenia 78	Slovenia 80	Slovenia 80	Switzerland 80	Switzerland 80	Luxembourg 80	
11	Portugal 75	Belgium 75	Portugal 76	Portugal 77	Portugal 77	Portugal 78	Portugal 78	Portugal 78	Switzerland 79	Portugal 79	Slovenia 79	Luxembourg 79	Slovenia 79	
12	UK 74	UK 75	Switzerland 76	Switzerland 76	Switzerland 76	Switzerland 77	Switzerland 77	Luxembourg 77	Portugal 78	Switzerland 78	Portugal 79	Switzerland 78	Switzerland 79	
13	Switzerland 73	Switzerland 74	UK 75	UK 75	UK 75	UK 76	Luxembourg 77	Switzerland 77	Luxembourg 78	Luxembourg 78	Luxembourg 78	Portugal 77	Ireland 77	
14	Luxembourg 71	Luxembourg 72	Luxembourg 73	Luxembourg 73	Luxembourg 74	Luxembourg 76	UK 75	UK 75	Ireland 76	Ireland 77	Ireland 77	Ireland 77	Portugal 77	
15	Canada 70	Canada 71	Canada 71	Canada 71	Canada 71	Canada 72	Canada 73	Ireland 75	UK 76	UK 77	UK 76	UK 76	UK 76	
16	Australia 70	Australia 70	Australia 70	Australia 71	Australia 71	Ireland 72	Ireland 73	Canada 74	Spain 75	Spain 76	Spain 75	Spain 76	Canada 75	
17	Ireland 67	Cyprus 68	Cyprus 69	Cyprus 70	Ireland 70	Australia 71	Spain 72	Spain 74	Canada 75	Canada 75	Canada 75	Canada 75	Spain 75	
18	Hungary 66	Ireland 67	Ireland 68	Ireland 68	Cyprus 70	Spain 71	Australia 71	Cyprus 73	Cyprus 73	Cyprus 73	Cyprus 73	Israel 73	Italy 75	
19	Slovakia 66	USA 67	USA 67	Hungary 68	Spain 69	Cyprus 70	Italy 69	Australia 71	Australia 72	Israel 73	Israel 73	Cyprus 72	Israel 73	
20	USA 66	Hungary 67	Hungary 67	Spain 67	USA 68	USA 68	Cyprus 69	Italy 70	Israel 72	Australia 72	Australia 71	Australia 72	Australia 71	
21	Israel 66	Israel 66	Spain 66	USA 67	Hungary 67	Italy 68	USA 69	Israel 70	Italy 72	USA 71	Italy 71	Italy 72	Cyprus 71	
22	Cyprus 66	Slovakia 65	Israel 66	Czech R. 66	Italy 67	Israel 67	Israel 68	USA 70	USA 71	Italy 71	USA 71	USA 71	USA 70	
23	Czech R. 65	Czech R. 65	Czech R. 66	Israel 66	Czech R. 67	Czech R. 67	Czech R. 68	Czech R. 68	Czech R. 70	Estonia 70	Czech R. 70	Estonia 70	Estonia 70	
24	Spain 63	Spain 65	Slovakia 64	Italy 65	Israel 66	Estonia 67	Estonia 67	Estonia 68	Estonia 70	Czech R. 70	Estonia 70	Czech R. 69	Czech R. 70	
25	Estonia 63	Estonia 63	Estonia 64	Slovakia 64	Estonia 65	Hungary 66	Hungary 67	Hungary 67	Hungary 68	Hungary 68	Hungary 68	Hungary 67	Lithuania 65	
26	Romania 63	Romania 63	Italy 64	Estonia 64	Slovakia 63	Slovakia 63	Latvia 64	Latvia 65	Latvia 65	Greece 66	Poland 65	Poland 64	Slovakia 64	
27	Bulgaria 62	Italy 63	Romania 62	Bulgaria 62	Romania 62	Romania 62	Slovakia 63	Lithuania 64	Slovakia 65	Lithuania 66	Slovakia 65	Slovakia 64	Hungary 64	
28	Italy 61	Bulgaria 62	Bulgaria 62	Romania 62	Bulgaria 62	Bulgaria 61	Romania 63	Slovakia 64	Lithuania 65	Slovakia 65	Greece 64	Lithuania 64	Japan 64	
29	Lithuania 60	Latvia 60	Latvia 60	Latvia 60	Latvia 60	Latvia 61	Bulgaria 62	Bulgaria 64	Greece 65	Poland 65	Lithuania 64	Japan 64	Poland 64	
30	Latvia 59	Lithuania 59	Poland 59	Poland 60	Poland 60	Russia 61	Lithuania 62	Romania 63	Poland 64	Latvia 65	Latvia 64	Greece 63	Greece 62	
31	Poland 59	Poland 59	Russia 59	Lithuania 59	Russia 60	Greece 61	Greece 62	Greece 63	Romania 64	Romania 63	Japan 64	Russia 62	Russia 61	
32	Japan 57	Japan 58	Lithuania 59	Russia 59	Greece 59	Poland 60	Poland 62	Poland 63	Bulgaria 63	Japan 61	Romania 61	Latvia 60	Romania 59	
33	Russia 57	Russia 57	Japan 58	Japan 58	Japan 59	Lithuania 60	Russia 61	Russia 62	Russia 62	Russia 62	Russia 61	Bulgaria 59	Latvia 59	

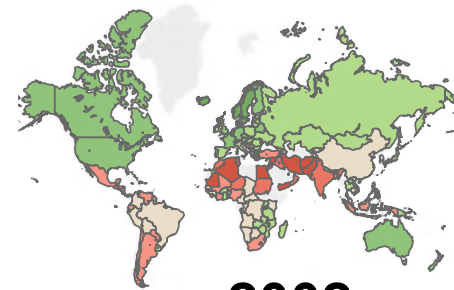
Rank	Year													
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
34	Greece 55	Greece 56	Greece 56	Greece 57	Lithuania 59	Japan 59	Japan 60	Japan 61	Japan 62	Bulgaria 62	Bulgaria 60	Romania 58	Brazil 58	
35	South Africa 52	South Africa 52	Brazil 52	Brazil 52	Brazil 53	Brazil 54	Brazil 55	Brazil 55	Brazil 56	Brazil 57	Brazil 57	Brazil 58	Korea (S) 58	
36	Brazil 52	Brazil 51	South Africa 51	South Africa 51	Korea (S) 51	Korea (S) 52	Korea (S) 54	Korea (S) 55	Korea (S) 56	Korea (S) 56	Korea (S) 57	Korea (S) 57	Bulgaria 58	
37	Korea (S) 48	Korea (S) 49	Korea (S) 50	Korea (S) 50	South Africa 50	South Africa 50	South Africa 50	South Africa 52	South Africa 53	South Africa 52	South Africa 52	South Africa 53	South Africa 53	
38	China 41	China 40	Chile 40	Chile 40	Chile 41	Chile 43	Chile 44	Chile 45	Chile 46	Chile 47	Chile 50	Chile 51	Chile 52	
39	Chile 40	Chile 40	China 40	China 39	China 39	China 40	China 40	China 41	China 42	China 44	China 45	China 47	China 49	
40	Turkey 27	Turkey 27	Turkey 28	Turkey 28	Turkey 27	Turkey 28	Turkey 30	Turkey 30	Turkey 32	Turkey 33	Turkey 34	Turkey 35	Turkey 36	
41	India 24	India 24	India 25	India 25	India 26	India 26	India 26	India 26	India 26	India 27	India 27	India 27	India 28	



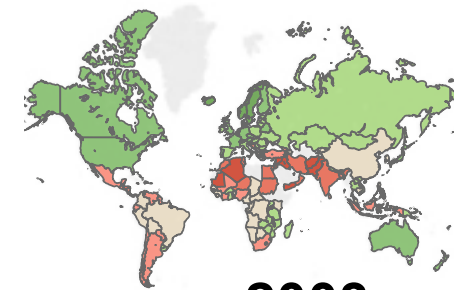
2000



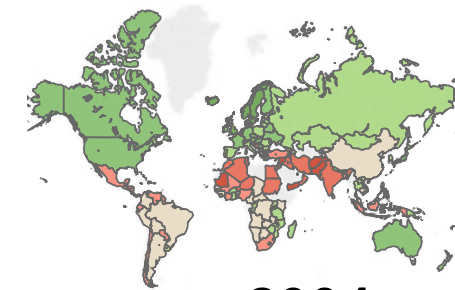
2001



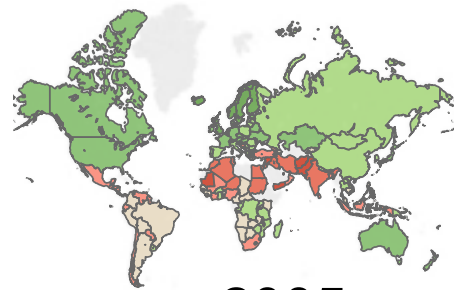
2002



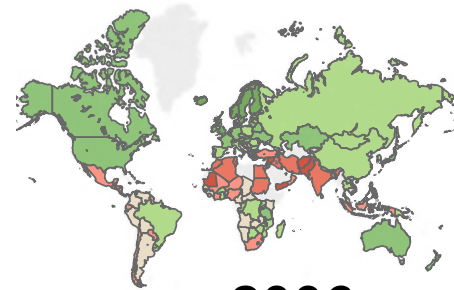
2003



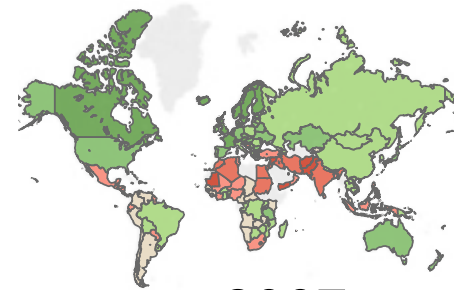
2004



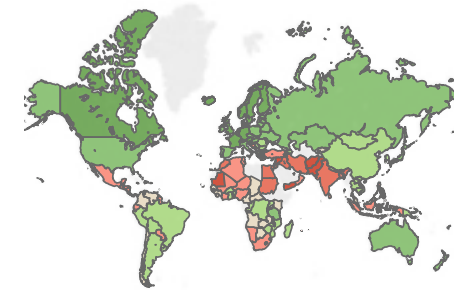
2005



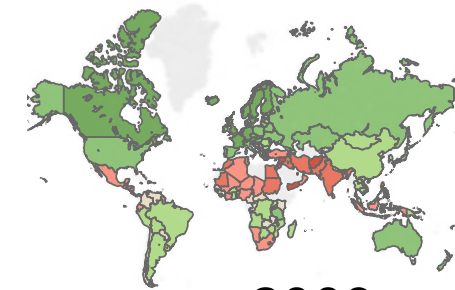
2006



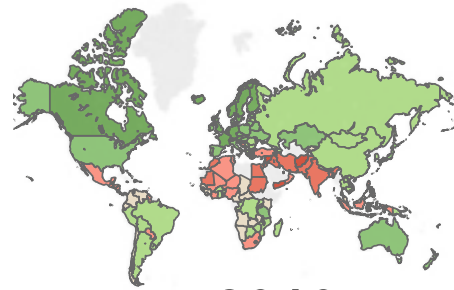
2007



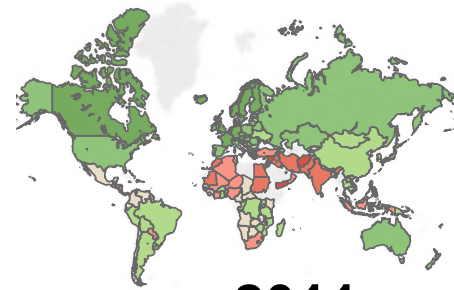
2008



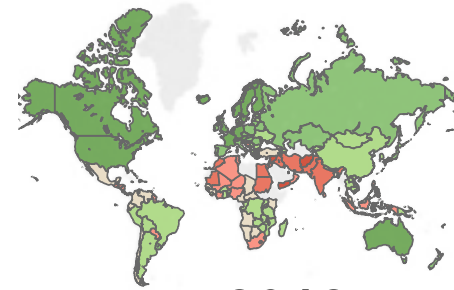
2009



2010



2011



2012

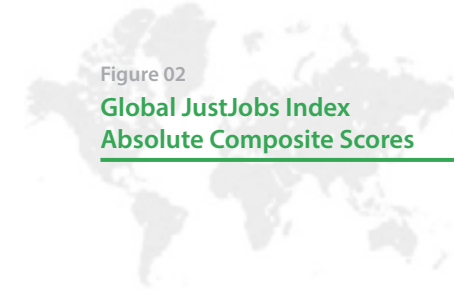
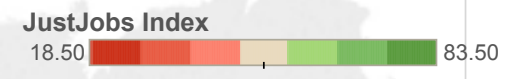


Figure 02
Global JustJobs Index
Absolute Composite Scores



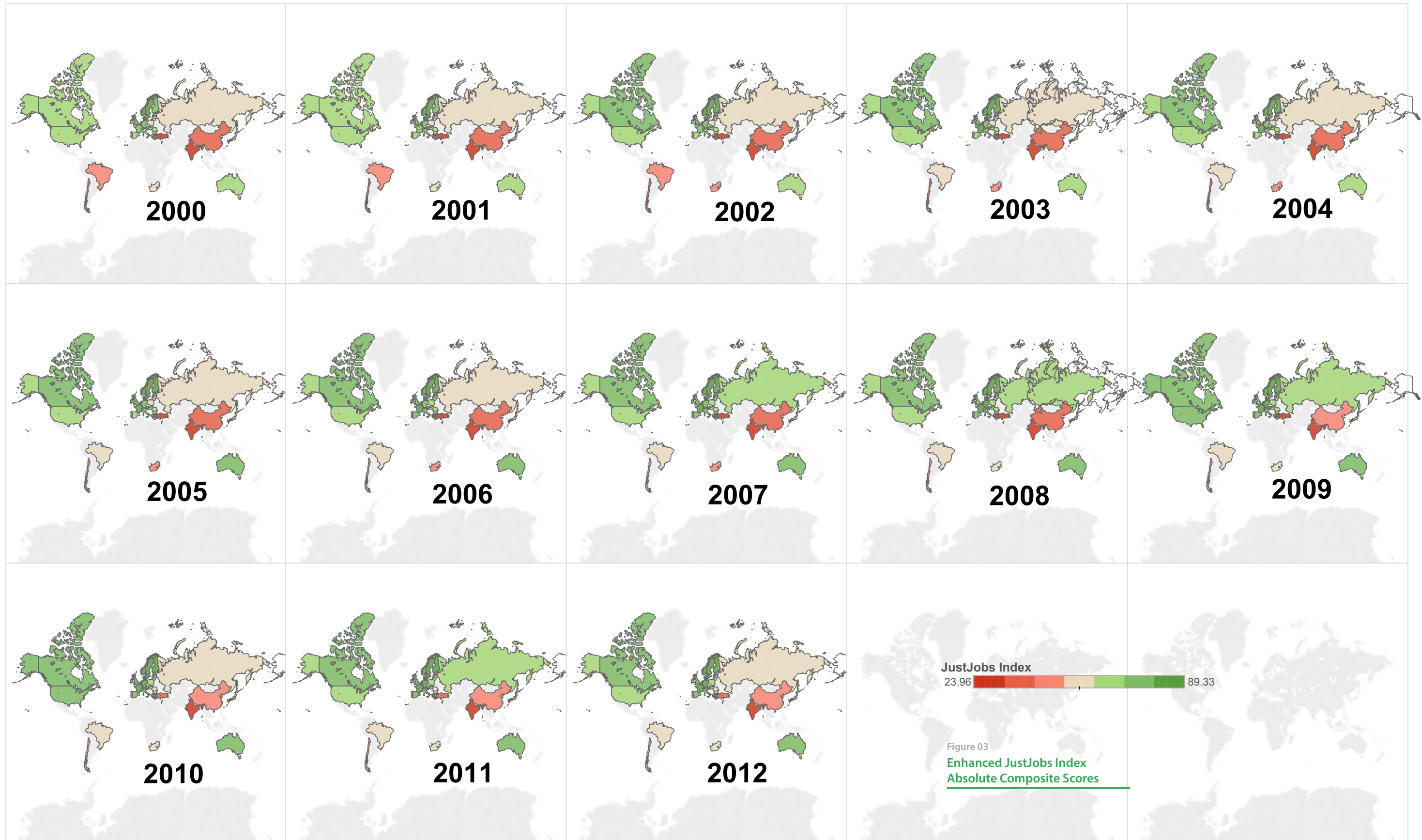
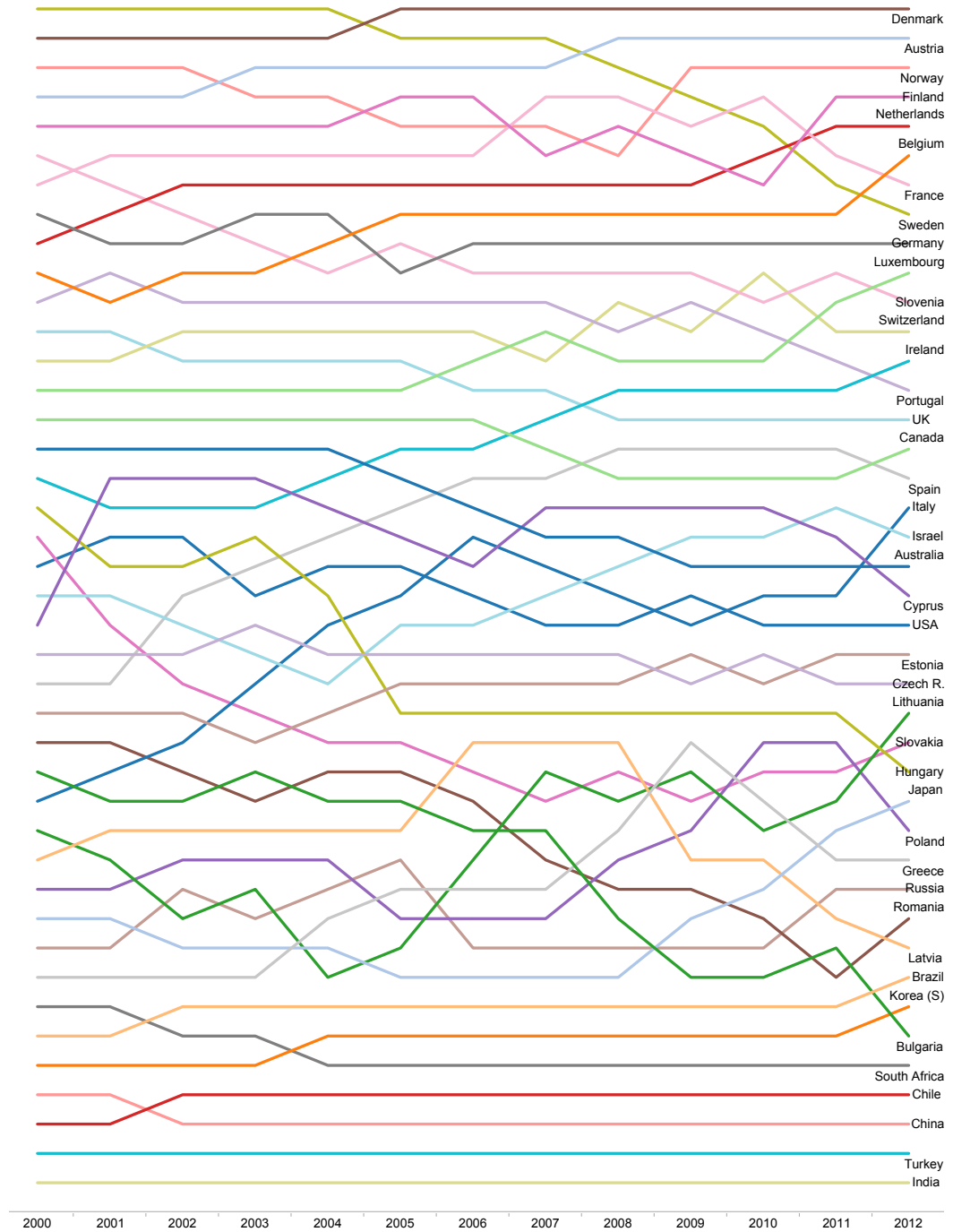


Figure 04

Enhanced JustJobs Index: Evolution in Country Rankings



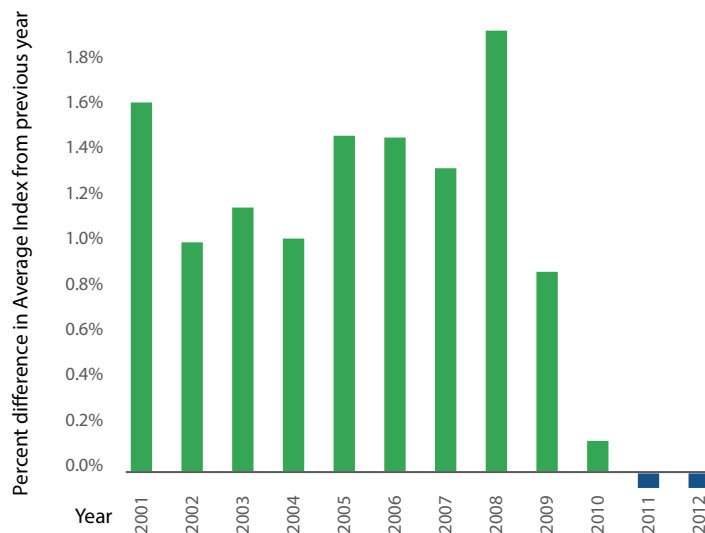
Austerity

If we analyze European Union countries where measures of austerity and fiscal consolidation have been implemented over the last five years, it becomes clear that these policies have had deleterious effects on employment. Among France, Germany, Greece, Ireland, Italy, Portugal, Spain, and the UK, every country but Germany has dropped in the rankings on the employment dimension. Spain and Greece, two of the countries where cuts to public expenditure have been most dramatic, each fell 50 positions on the employment dimension of the global ranking over the period 2008-2012. Contrary to the arguments of austerity's proponents, there is little indication that the employment situation in these countries is improving as growth rates begin to

slowly pick up. Italy, for instance, is maintaining a low position on the employment dimension, at number 97.

Figure 5 shows the trend over time on the average of JJI composite scores among these eight major European countries where austerity measures have been implemented. For each year, the graph shows the improvement in the composite JJI score. From 2000 to 2008, these countries were showing significant improvement in their overall performance on the index. But from 2009 to 2012, their improvement on the JustJobs Index tapered off for these countries. In 2012 the average composite score among austerity-saddled countries actually declined from the year before.

Figure 05
Percentage Change in Composite Index Score Year-on-Year – Austerity Affected Countries (2001-2012)



Emerging Economies

A more surprising trend is that emerging economies – countries in the Global South that are experiencing rapid economic growth and development – perform poorly on the index rankings. India, Indonesia, and Turkey – which as a group experienced an average annual growth rate of 6.1 percent over the last ten years¹⁵ – all fall in the bottom third in the index of 148 countries. They are joined by South Africa and other countries with positive growth trajectories, including Mexico, Nigeria and the Philippines.

One explanation for this trend is the inclusion of women’s labor force participation as an indicator in the index. Middle-income countries often experience low female labor force participation. As countries move from low-income to lower-middle and upper-middle-income status, women who once worked out of necessity – usually as home-based or agricultural workers – drop out of the labor force and work only in the care economy, which is not captured in labor market statistics.

Emerging economies, with a few exceptions like Brazil and China, are also experiencing a rise in income inequality, captured in the index through the inclusion of the Gini coefficient. Rapid growth in many emerging economies is often accompanied by highly uneven economic development – especially where state capacity to redistribute the gains of economic expansion through taxation and social protections is limited.

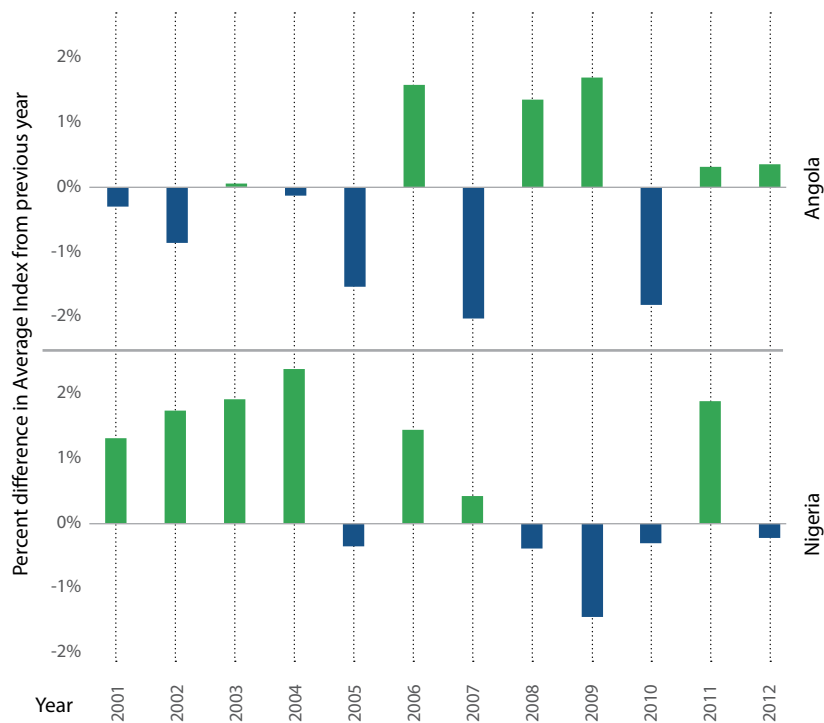
Non-diversified economies

The index also demonstrates that countries with diversified economies generally perform better on just jobs than those that are highly dependent on one sector. This is due to several factors: (1) countries with non-diversified economies are more vulnerable to global economic shocks, leaving workers and jobs vulnerable as well, and (2) non-diversified economies tend to rely on natural resources and extractive industries, such as petroleum, which are generally capital- as opposed to labor-intensive.

Nigeria is a clear example. Despite its booming economy, the country has been unable to transform petroleum industry profits into broad-based opportunity and employment for its citizens. Angola, where 85 percent of GDP depends on the oil industry,¹⁶ has experienced radical economic change with the discovery of oil reserves, but this economic boom has not translated into employment, as shown in Angola’s stagnant position in the rankings.

Figure 6 shows the high variability of the composite JJI scores of Nigeria and Angola. No clear trend upward or downward trend emerges in the change from one year to the next, but rather an erratic and unpredictable year-on-year change. This illustrates that these economies are vulnerable.

Figure 06
Percentage Change in Composite Index Score Year-on-Year – Non-Diversified Economies (2001-2012)



Conflict

Finally, one of the clearest messages these results transmit is that conflict severely constrains people’s ability to access quality employment. The rankings of the JustJobs Index and the Global Peace Index – a measure of conflict around the world – are directly correlated, especially when it comes to countries at the bottom. Afghanistan, Iraq, Pakistan, Sudan, Syria, and Yemen all rank near the bottom of both measures of global well being.

Insecurity and lack of economic opportunity work in a vicious cycle. Conflict affects both the supply and demand side of the labor market, to the detriment of both workers and employers.

In situations of severe violence, workforce development is curbed, as young adults are unable to attend schools and vocational programs. Businesses become risk-averse and unlikely to hire when the security situation is unpredictable, as they no longer find a reliable return on investment.

At the same time, lack of economic opportunity can itself be a driver of conflict. For instance, in the northern region of Nigeria, where the militant Boko Haram group operates, high unemployment sows the seeds of recruitment into the extremist group. It is important to recognize, therefore, that resolving conflicts must also center on creating livelihood opportunities.

5. Gaps and Limitations

A composite index is an important method measuring multi-dimensional concepts by combining a large number of indicators in a standardized way into one single measure. Indices have been increasingly recognized as useful tools in policy analysis because they help identify trends and enable comparisons across countries. The JJI is nonetheless susceptible to many of the same challenges that generally arise in the construction of such indices.

First, data availability and collection pose a significant challenge in such large-scale practices. Constructing a composite index requires a complete data set of indicators for all the included countries during the study period. Data imputation can be used selectively to fill in the gaps, but there are several limitations.

Imputation is only possible when there is at least one data point available for each indicator for the country during the study period. A number of countries, such as Ethiopia and Niger, were not included in the JJI as they lack data on the most basic indicators and conducting imputation was impossible.

Moreover, imputation is more accurate in the countries with relatively stable indicators, but less accurate in the countries with large fluctuations or evolution of indicators during the study period. For instance, in or countries in political crisis or

in emerging economies going through rapid development transitions, indicators can change dramatically over relatively short periods of time. It is therefore difficult to ensure the reliability of imputations unless one takes a closer look at each country and the unique political economy factors at play.

Second, the quality of data gathering can skew the results in misleading directions. The capacity to gather complete and reliable data is generally stronger in countries of the Global North and lower in the Global South. For example, the available data on the cases of occupational injury show high incidence in European countries, such as Denmark, Luxembourg, Norway, Spain and Sweden, but very low incidence in Asian and African countries. The ground reality tells a different story, and low incidence according to official statistics largely results from the fact that many countries lack an adequate system of collecting or reporting such cases. As a result, direct comparisons between countries based on reported incidents would lead to faulty conclusions. Although data is available on occupational injury, it is not included in the index construction.

In other cases, the poor quality of data is less obvious. Problems with methodology and data collection can lead to inaccuracies, but verifying each country's reported data is not possible.

Country rankings in the JustJobs Index may change when improved data becomes available. Third, the JustJobs Index needs to be interpreted carefully. The composite index is constructed by using numerous indicators in a standardized way with the main objective of comparing countries performance on just jobs. But the “score” for each country is not by itself meaningful. Rather the value of the index lies in the ranking of countries and in examining composite scores over several years. These analyses can illustrate trends and enable comparisons between countries pursuing different policies and paths to development.

Fourth, the current version of JustJobs Index is constructed based on equal weighting of all the dimensions included (see **Section 3.3** for a full explanation of weighting). Weighting is a subjective decision in the process of index construction, which is why equal weighting is generally preferred. One of the limitations in using equal weights, however, is the possibility of “double counting” when using two variables that are similar or highly correlated are both introduced in the index. Going forward, interested stakeholders – scholars, government, the private sector and civil society – seeking to emphasize or

“The value of the index lies in the ranking of countries and in examining composite scores over several years. These analyses can illustrate trends and enable comparisons between countries pursuing different policies and paths to development.”

give importance to some variables over others can choose their own weightings and see how rankings change as the weights for different indicators are adjusted. The authoring institutions are currently developing an interactive website where users can manipulate the weights of different indicators.

Fifth, limited data prevented the inclusion of an important aspect of just jobs – rights and safety at work. In the construction of a European JustJobs Index, released earlier this year, the index included this dimension.¹⁷ As better data become available,

the authors are keen to develop a global index that includes this critical dimension.

Finally, indicators such as those used in this report are intended to shed light on complex labor market

phenomena. Ignoring the limitations of these indicators can lead to inaccurate conclusions.

For instance, the unemployment rate is the most widely used indicator of labor market performance in a country. Yet unemployment tends to be a poor indicator of labor market

slack for developing economies. This is because in low-income countries, in the absence of unemployment insurance, the poor cannot “afford” to be unemployed. They are represented as being employed in labor force surveys, but in reality they may be employed in the informal sector characterized by low productivity and pay.¹⁸ In 2012, Rwanda and Cambodia had unemployment rates of 1 and 4 percent respectively. But these figures are poor indicators of the health of the labor markets in these nations. In such cases, the unemployment rate can disguise poverty and poor working conditions.

The ratio of female-to-male labor force participation rate is also imperfect in capturing important aspects of the female labor force participation rate. Some developing and developed countries have high levels of female labor force participation and employment. But the quality of the employment varies significantly between the nations – a fact that top-line data does not capture. In Rwanda, for example, men

and women participate in the labor market at roughly the same rate, and this might be interpreted as gender equality. But a high female labor force participation rate does not imply that women are employed in jobs of the same quality as their male counterparts.

It is important to look beyond the indicator itself. The ratio of men to women in the labor force, for example, provides information about women’s position in the world of work, but it cannot provide a full picture of the lived experiences of women in the workforce and the difficulties they face.

These limitations mean that the JustJobs Index scores must be combined with more detailed, textured research – quantitative and qualitative – in order to understand and appreciate the complexity of these issues. The JustJobs Network undertakes such analysis on a range of subjects across a range of countries.

6. Conclusions and Policy Recommendations

Indicators such as GDP and aggregate indices that measure the ease of doing business or competitiveness are incomplete barometers of the economic success of a given country. The JustJobs Index – the first international measure of

its kind – provides the missing piece of the puzzle to policymakers, offering critical insights on the economic indicator that matters most to ordinary people – employment.

The authors of this report offer the following recommendations to policymakers, scholars, the private sector, and civil society as they consider how to address the global employment crisis.

Just jobs must enjoy the same treatment as other indicators of economic health.

Policymakers, the private sector and civil society recognize the importance of just job creation, but they must actively use the aggregate measure of the quantity and quality of employment presented in this report to help inform their decision-making. The JJI sheds light on the variety of factors that determine the employment landscape throughout the world. Those stakeholders actively seeking to build environments of economic opportunity can use the index as a tool to track their performance.

Additional indicators and more ambitious targets on employment must be included in the Post-2015 Millennium Development Goals.

The post-2015 Millennium Development Goals must go beyond the current draft to include additional indicators and ambitious targets on employment and equality in the labor market. The JJI can provide a framework to guide the selection of additional indicators and targets.

More, and more updated, data on the quantity and quality of employment is necessary for effective policymaking on just job creation.

The challenges confronted in constructing the JJI, and its limitations, point to a critical need to gather more and better data on the quantity, but especially the quality, of jobs. This is particularly true for countries in the Global South that suffer from a chronic shortage of data. There is a need for international institutions and national governments to work together and make a concerted effort to gather the necessary data.

Further research on the political economy factors that drive countries' performance on the JJI indicators is needed.

The results of the JustJobs Index enable comparisons across countries, but also allow one to examine a particular country's performance over time. However, further research is needed to understand the political economy factors that drive a country's score on the index.

Appendix 1

	Indicator	Definition	Sources ⁱ	Included in basic version
1	Labour force participation rate (%)	The labor force participation rate is defined as the ratio of the labor force to the working age population (15-64), expressed as a percentage. The labor force is the sum of the number of persons employed and the number of persons unemployed – that is, those out of a job but actively seeking work.	ILO	Yes
2	Unemployment rate (%)	The proportion of people active in the labor force who are out of a job and actively looking, expressed as a percentage. Includes anyone 15 years of age and above.	ILO	Yes
3	Youth unemployment rate (%)	Defined in the same way as total unemployment but covering only those persons aged 15 to 24 years. The higher this percentage, the worse a country's performance on the index.	ILO	Yes
4	GDP per capita expressed on purchasing power parity	GDP PPP (purchasing power parity) is Gross Domestic Product converted to U.S. dollars using purchasing power parity rates. Purchasing power parity (PPP) is a way of comparing the relative value of currencies by looking at the cost of a standard basket of goods in different countries.	IMF	Yes
5	Gini coefficient (at disposable income, post taxes and transfers)	The Gini coefficient is a measure of statistical dispersion intended to represent the income distribution of a country's residents. It is the most common indicator for measuring income inequality. The higher the Gini coefficient, the more unequal income distribution and the worse a country's ranking on the index.	ILO/ OECD	Yes
6	Average wages, adjusted by PPP	Calculated based on the monthly, nominal mean wage of all employees in each country in local currency units, converted to international dollars using purchasing power parity.	ILO	No
7	Share of own-account workers in total employment (%)	The proportion of all employed workers who are own-account workers. One of the six groups used in the International Classification by Status in Employment, own-account workers are persons who operate their own economic enterprises, or engage independently in a profession or trade, and hire no employees. Own-account workers are generally vulnerable; therefore, the higher this percentage, the worse a country's performance on the index.	ILO	No

ⁱ Data sources listed the main sources used for data collection. Several additional data sources were used for individual countries in several indicators when the data was missing from the data sources listed.

	Indicator	Definition	Sources ⁱ	Included in basic version
8	Share of contributing family workers in total employment (%)	The proportion of all employed workers who are contributing family workers. These workers labor in an economic enterprise operated by a related person living in the same household, generally without pay. Where it is customary for young persons, in particular, to work without pay in an economic enterprise operated by a related person who does not live in the same household, the requirement of "living in the same household" may be eliminated. As these workers are considered vulnerable, the higher this percentage the worse a country's score on the index.	ILO	No
9	Share of active contributors to a pension scheme in the labor force, 15+ (%)	Total number of active contributors (without double counting) to national existing contributory retirement schemes as a percentage of the total working age population. Benefits covered are periodic cash retirement benefits. This includes both means-tested and non-means-tested schemes (both universal programs and those with income limits), provided through contributory, universal or targeted schemes.	ILO	Yes
10	Total public social protection expenditure and health expenditure as a share of GDP (%)	Total public social protection expenditure synthesizes the overall public redistributive effort and is closely correlated with overall coverage. It is a useful indicator for comparative purposes at the national level.	ILO	Yes
11	Share of total (public and private) health care expenditure not financed by private households' out-of-pocket payments (%)	The effective level of financial protection provided to the population by health care systems is measured here by a proxy indicator: percentage of total (public and private) health care expenditure in the country not financed by private households through out-of-pocket payments. ² The proxy is more or less equivalent to the percentage of total (public and private) health care expenditure in the country financed either by government or by pre-paid private insurance, employers or NGOs.	ILO	Yes

ⁱⁱ Out-of-pocket spending by private households (OOPs) is the direct outlay of households, including gratuities and payments in kind, made to health practitioners and suppliers of pharmaceuticals, therapeutic appliances and other goods and services, whose primary intent is to contribute to the restoration or to the enhancement of the health status of individuals or population groups. It includes household payments to public services, non-profit institutions and non-governmental organizations. It includes non-reimbursable cost-sharing, deductibles, co-payments and fee-for-service, but excludes payments made by companies that deliver medical and paramedical benefits, whether required by law or not, to their employees. It excludes payments for overseas treatment.

	Indicator	Definition	Sourcesⁱ	Included in basic version
12	Share of unemployed receiving unemployment benefits (%)	Proportion of those who are unemployed – not working and actively seeking work – who receive unemployment benefits. Unemployment benefit schemes provide income support, usually over a limited period, to those who face temporary unemployment.	ILO	No
13	Ratio of female to male employment-to-population ratio	Female employment-to-population ratio (ages 15+) divided by male employment-to-population ratio (ages 15+).	ILO	Yes
14	Ratio of female-to-male labor force participation rate	Female labor force participation rate (ages 15+) divided by male labor force participation rate (ages 15+)	ILO	Yes
15	The share of women in wage employment in the non-agricultural sector (%)	The share of all women in wage employment that work in the non-agricultural sector. For the purposes of the index, the higher this share, the better a country's performance.	ILO	No
16	Civil Liberties Index, scale of 1 to 7	The Civil Liberties Index measures freedom of expression, assembly, association, and religion. Freedom House rates civil liberties on a scale of 1 to 7, with 1 representing the most free and 7 representing the least free. This index is included as these basic freedoms play a role in workers' ability to lobby government and employers for protection of their rights.	Freedom House	No
17	Bargaining (or Union) Coverage, adjusted (%)	Employees covered by collective (wage) bargaining agreements as a percentage of all wage and salary earners in employment with the right to collective bargaining.	AIAS	No

Endnotes

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