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Abstract

One of the objectives of the European Neighbourhood Policy (ENP) is to promote political and institutional changes towards democratic governance and market liberalisation, a process that at the same time can be understood as a tool for economic development and convergence in neighbouring countries.

The objective of this paper is to analyse the macroeconomic, social and institutional impact of the ENP in a comparative and multidimensional perspective. With this aim, we first elaborate a composite index (Institutional, Social & Economic Performance Index – ISEPI) that combines data related to different economic, social and institutional factors and, next, we analyse regional differences in the evolution of this index in order to provide an assessment of the impact of the ENP on different dimensions, but also to shed light on how the great recession has limited the impact of recent reforms. The obtained results show that ENP has had different effects according to the considered dimensions and that the evolution of neighbouring countries is quite heterogeneous taking into account their recent institutional, social and economic performance.

From a policy perspective, these results reinforce the validity of the bilateral action plans that have characterized ENP recognising the different starting point and particular characteristics of each neighbouring country.

Keywords: European neighbourhood policy, institutional quality, economic performance, social indicators.

JEL Classification: C43, F62, O43

1. INTRODUCTION AND OBJECTIVES

One of the objectives of the European Neighbourhood Policy (ENP) is to promote political and institutional changes towards democratic governance and market liberalisation, a process that at the same time can be understood as a tool for economic development and convergence in neighbouring countries.

The objective of this paper is to analyse the macroeconomic, social and institutional impact of the ENP on the European Union neighbouring countries (ENC) in a comparative perspective. With this aim, we first elaborate a composite index (Institutional, Social & Economic Performance Index – ISEPI) that combines data related to different economic and institutional factors and, next, we analyse regional differences in the evolution of this index in order to provide an assessment of the impact of the ENP on the different dimensions, but also to shed light on how the great recession has limited the impact of recent reforms.

As highlighted by Wesselink and Boschma (2012), after the fifth enlargement round of the European Union (EU) in 2004 its external borders shifted drastically. Suddenly a range of poorer, economically and politically less stable and less democratic countries bordered the EU. In response to these changing circumstances the need was felt to create a unified policy towards the countries bordering the EU. The goal of this new unified policy would be to create a ring of friendly, stable and prosperous countries around the European Union in order to guarantee stability along the outer borders of the EU. The new policy would not offer accession perspective for these countries, as had been done before in order to drive reform in neighbouring countries. However, the policy would promote close political cooperation, close economic integration and ultimately access to the unified market, as a reward for convergence towards the EU 'Acquis' on economic regulations and progress in the areas of border security, prevention of illegal migration, an improved human rights record and expanded efforts towards democracy.

Although the core focus of the ENP is on trade and economic reforms, migration policies, institutional reform and collaboration in research and higher education are also part of the ENP, and all these elements are meant to contribute to the ultimate goal of creating a ring of stable, friendly and prosperous countries around the EU (Com 393 final, 2003). The bulk of the ENP is bilateral. The ENP and the EU-Russia strategic partnership cover 17 countries. Apart of Russia, the ENP countries fall into two regional groups: The ENP-East countries (Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine) and the ENP-South countries (Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, the occupied Palestinian territory, Syria and Tunisia). The ENP is a differentiated policy in which each country is supported to reform in its own speed, and with its own priorities. Based on specific country reports, action plans were negotiated that describe key priority areas for policy reforms (see table 1). The first action plans were mutually recognized in February 2005. Based on these action plans, the EU has also drafted a strategy paper for almost each country for the 2007-2013 budget framework, and indicative programmes for the 2007-2010 and 2011-2013 period. Russia was also asked to participate in the ENP, but in subsequent negotiations it was decided that a separate policy instrument would be developed to guide Russian-European foreign policy (COM 393 final, 2003). This separate policy instrument, called the EU-Russia strategic partnership, has similar goals to the ENP and is funded through the same funding instrument.

Up to now, the EU does not yet have action plans for four of the ENC: Libya, Syria, Belarus and Algeria. In the first three countries the main reason is that a basic level of democracy and human rights is required before incorporation in the ENP can take place. Algeria and the EU are still in negotiations over the ratification of an action plan.

The evidence on the impact of the ENP on economic and institutional is scarce. Previous research produced within the SEARCH project[1] has found that the speed of the process of convergence of institutional quality

[1] http://www.ub.edu/searchproject/wp-content/uploads/2013/09/Deliverable-5-2.pdf

towards European norms and values is still slow, although some progresses have been registered. In fact, according to Ascani et al. (2013), the results of the ENP on the eve of its tenth anniversary are much less impressive and the initial high hopes for a comprehensive and systematic legislative and regulatory alignment have not been realized institutional, social and cultural factors are central elements to consider when analysing social and economic dynamics in ENC. These results are mainly based on three particular analyses. First, Bartlett et al. (2013) analyse the link between economic growth and institutional reform in the ENC. Their results show that the ENP countries have a weaker institutional convergence to the EU than candidate countries. For them, the main reason is that the EU has not yet played an important role as a "transformative power", shaping faster institutional convergence and there is a danger that the reform processes will either stagnate or "run out of steam" if the EU does not take a more decisive role in the process. Second, Hlepas (2013) have analysed whether or not institutional quality has converged across countries and the influence of this process on ENC's competitiveness. The obtained results are in line with the ones obtained by Bartlett et al. (2013) suggesting that the impacts of the ENP have been relatively modest. Last, Revilla-Diez et al (2013) argue that there are several reasons why the ENP post-communist economies lag behind as compared to the high performing Asian countries that outstrip competitors in terms of economic growth. The most relevant one seems to be that post-socialist states did not manage to effectively change the institutions of the old regime for the new efficient ones. Moreover, even the minor institutional changes incorporated failed to work due to the lost faith in the state and the absence of fit with the existing informal institutional environment.

Table 1. Overview of Eastern countries that are part of the ENP.

Country	Initial EU Contract (PCA* or AA**)	Ratification Action Plan	CFSP invitation***	FTA provisions****
Armenia	July 1999	November 2006	Yes	Yes
Azerbaijan	July 1999	November 2006	Yes	Yes
Belarus	No negotiations until human rights situation improves		No	No
Georgia	July 1999	November 2006	Yes	Yes
Moldova	July 1998	February 2005	Yes	Yes
Ukraine	March 1998	February 2005	Yes	Yes
Russia	December 1997	Roadmap adopted may 2005	No	No

Source: Wesselink and Boschma (2012).
*** PCA = Partnership and Cooperation Agreement**
**** AA = Association Agreement**
***** CFSP = Common Foreign Security Policy statement**
****** FTA = Free trade agreement**

Taking this background into account, our contribution is twofold: first, we analyse the impact of the ENP from a multidimensional perspective building a composite index related to different institutional, social and economic dimension, and second, we analyse the regional differences in the evolution of this index through the comparison with a wider sample of economies that will help us to disentangle the differential effect of this policy. In particular, apart of the ENC, we consider the most competitive economies according to the World Economic Forum, the 27 members of the European Union at the end of the analysed period, and several developing and emerging economies, that constitute the real "control" group for ENC.

The rest of the paper is structured as follows: first, in the second section the methodology used to elaborate the ISEPI index is described; next, in the third section, descriptive evidence on the institutional, social and economic performance of the selected economics is shown and, next, a conditional convergence analysis is carried out in order to analyse the effects of the ENP on ENC. Last, the paper concludes with some final remarks.

2. THE ISEPI INDEX: METHODOLOGICAL ISSUES.

As Booysen (2002) argues, one can classify and evaluate indicators according to a number of general dimensions of measurement. If we focus on the technique and method dimension, the first decision involves the selection of variables and components. This selection is generally based on theory, empirical analysis, pragmatism or intuitive appeal, or some combination thereof.

As we are obliged to work with a large set of data: not only in terms of countries, but also in terms of variables that differed widely in terms of units of measurement, and in statistical characteristics. We are therefore obliged to use a highly flexible method in order to account for all possible dimensions of the Institutional, Social & Economic Performance of the considered countries. Taking this into account, we will follow the proposal by Liu (1978). The main idea is to build a composite index using intermediate indexes computed using basic data or other indexes. Choosing the index structure and variable weights are decided a priori based on expert judgement.

Taking this into account, our approach to analyse the Institutional, Social and Economic performance of considered countries is to elaborate a composite index (ISEPI from now on). The ISEPI index is built from 51 variables comprising both hard and soft data (see figure 1) and it comprises the following seven main sub-indexes:

- *Macroeconomic environment (I1):* this first sub-index measures the economic environment of the country. It takes into account GDP, labour, public accounts, investment, international trade, and financial issues.
- *Costs and prices (I2)*: this sub-index considers different variables related to prices and costs: Consumer prices, labour costs, hourly wages, cost of live and exchanges rate.
- *Productivity and human capital (I3):* in this sub-index we summarise different aspects related to labour productivity and the level of human capital of every country: schooling levels, availability of qualified workers, among others.
- *Technological and innovative capacity (I4):* this sub-index covers the aspects related to the technological capacity of the country as well as the efforts to improve it. Therefore, we take into account the technological capacity as well as different measures of technological adoption.
- *Business-friendly environment (I5):* this sub-index covers aspects related to factors helping or hindering business activity in a country. So, we take into account the quality of infrastructures, different measures of investment risks, administrative burdens, barriers to international trade and taxes on firms.
- *Quality of life and labour market conditions (I6):* this sub-index captures life expectancy, quality of live, working conditions (workers motivation and hours of work), and security (personal security and private property protection).
- *Market potential (I7):* The last stub-index captures the economic potential of a country from an economic point of view covering demand in terms of population and growth potential.

In order to build the index, we apply the statistical method by Royuela *et al.* (2003) following the proposal by Liu (1978). This procedure was built taking into account several premises that we have adapted to the peculiarities of the ISEPI in the followingway:

1. The index has to be able to aggregate base indicators measured in different units.
2. The aggregation process has to be able to compare the indicators with a high level of different relative dispersion.

3. The index has to allow the construction of a scale that *lets the data talk,* i.e., that reflects the statistical characteristics of the data.
4. The final index has to allow for a comparison over time: when a system's basic variables rise, the final index has to increase.
5. If the relative size of the systems changes over time, the index has to condense this information without overvaluing (undervaluing) the result for a specific system.

These criteria are the basis for our index, *I*, as a linear function of several, *K*, Institutional, Social & Economic attributes (*X*). The final index is obtained as an arithmetic average of the different sub-index, so for example, in order to obtain the sub-index I3 (Productivity and human capital), we combine the following seven attributes (*K*=7): Labour productivity (GDP per worker, v18), Public expenses in education as a percentage of GDP (v19), Share of population between 25 and 34 years old with secondary studies (v20), Share of population between 25 and 34 years old with tertiary studies (v21), Researchers in firms /1000 inhabitants (v22), Qualified workforce available (v23) and Entrepreneurship (v24). Each attribute, X_f, is originally measured in its own units, but needs to be redefined and homogenised. We do so taking a relative measure, which converts the result into a percentage. If country *i* has a value in the *f* attribute equal to X^i_f, then we say that we can measure how far country *i* differs from the global average in terms of the attribute merely by computing:

$$Y_f^i = X_f^i / \bar{X}_f \quad (1)$$

Then, the final index, I''^i, is a linear function of the attributes' vector Y^i, $Y^i=(Y_1^i, ..., Y_K^i)$:

$$I''^{,i} = Y^i * W, \quad (2)$$

where $W=(w_1, ..., w_K)$ are the weights given to every attribute. Weights have been taken as equal (although taking into account the direction of the effect, positive or negative, on the considered dimension). The robustness of the results to this methodological decision has been checked using multivariate analysis. In particular, we have use principal component analysis to look at the proportion of the variance explained by the first component extracted from the variables related to each dimension and we have also checked that the weights and signs are in line with the theoretical predictions summarised in figure 1. The results, which are available from the authors on request, confirm the validity of our approach for the seven sub-index.

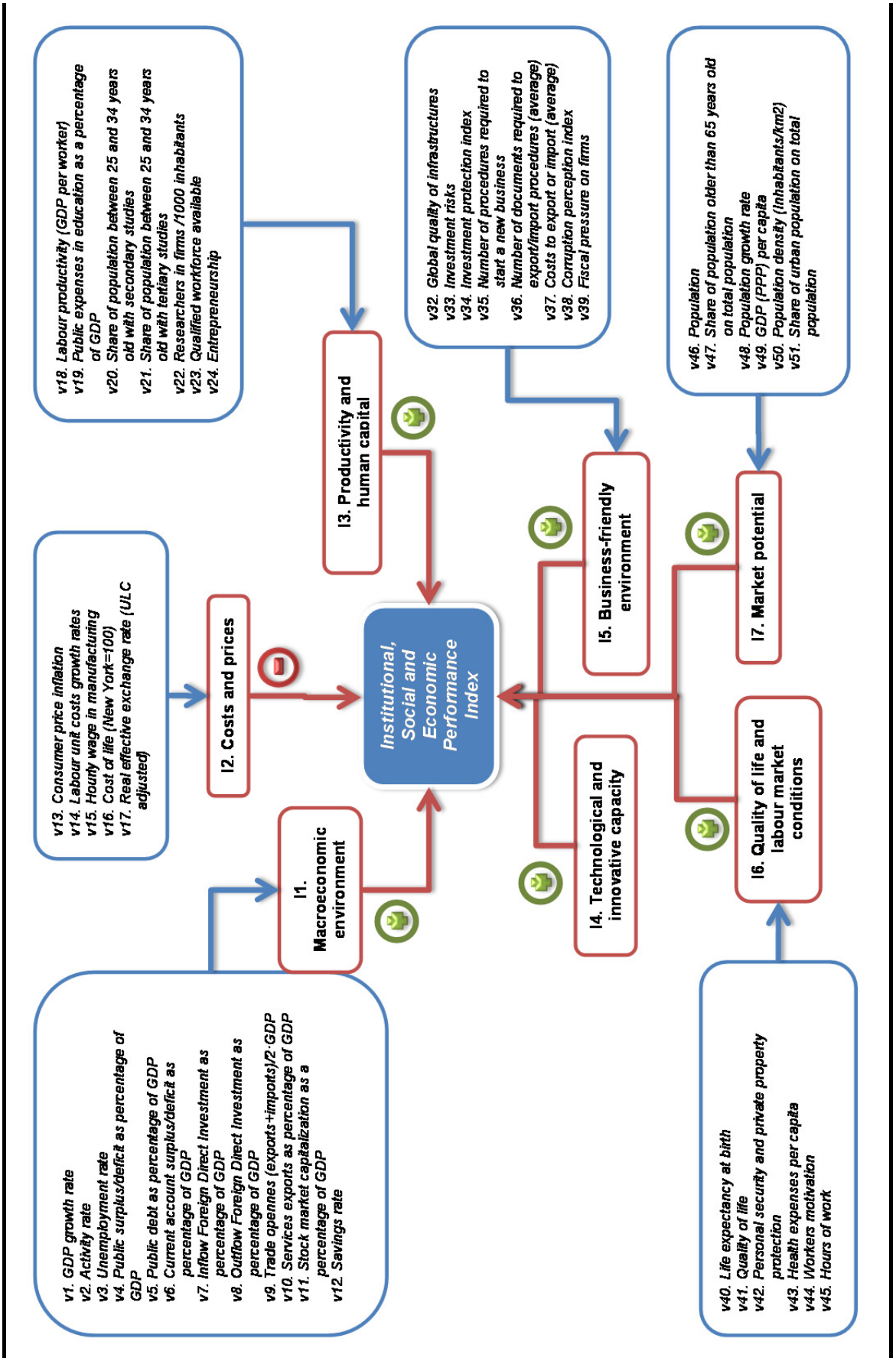
Once (2) has been calculated, differences between countries can be expressed in a dispersion measurement, for example the variance *VAR(I'')* from *i*=1 to N, where N is the total number of countries. We understand that this variance is useful information about attribute Y_f. If we only had *one* attribute for *Productivity and human capital*, then the measurement of this sub-index would be defined by this particular variance. But as there is more than one attribute in each index, a general measurement for each aggregate index needs to be defined. Following (2), the total amount of information considered in the sub-index is the following weighted variance and covariance matrix of the attributes:

$$var(I'') = var(Y * W) = W' * var(Y) * W \quad (3)$$

Nevertheless, if the sub-index is calculated just as *I''=YW*, then the attributes with greater variance are overweighted. This effect can be seen in one example. If in the *Productivity and human capital* subindex, a country has a good position in six of the seven attributes, but is badly placed in the other (perhaps due to the fact that this attribute has a much higher variance than the others) the final result will be poor. In order to avoid this, we should compute the index as:

$$I' = Z * W, \quad (4)$$

Figure 1. Institutional, Social and Economic Performance Index (ISEPI).



where Z_f are the standardised variables: $Z_f = \left(X_f - \bar{X}_f\right)/sd\left(X_f\right)$. We can expect the variance of that index to be equal to one. But if there is information common to these attributes, we have:

$$var(I') = W' * R * W, \tag{5}$$

where *R* is the correlation matrix between the standardised attributes. This is the reason for computing the final standardised positions (number of standard deviations away from the trend) of all countries as:

$$I = {(Z * W)}\Big/{(W' * R * W)} \tag{6}$$

Next, we add the variance-covariance matrix to the standardised positions of all countries defined in (6). So, the final index for the *Human capital and productivity* dimension is:

$$I3 = 100 * (1 + I * [W' * var(Y) * W]). \tag{7}$$

In order to make it more comprehensible we have included a level to the final measurement (100 in the base year). The methodology described, then, gives the relative position that a country has in the whole group of analysed countries. However, we have also considered the possibility of computing an increase or decrease in the sub-index over time. In this case, we have to take a base period. In this base period the country average will be equal to 100. In our study we have taken 1995 as our base year. So the temporal analysis will compare the relative position of a country in any variable in year *K,* with the 1995 average of all countries involved in the analysis:

$$Z_i^K = \frac{X_i^K - \bar{X}^{95}}{S_x^{95}} \tag{8}$$

Therefore we are measuring the relative position in terms of the base year standard deviation. The dispersion of all variables can also be higher or lower through time. As in any index number, the choice of the base year will be very important, but will also be completely *arbitrary*. And as we go further from the base year, the comparisons will lose some of their value. This is because the scale that we are using depends on the base year. Nevertheless, the base year can be changed without a great deal of work.

This procedure applied to this particular sub-index has been replicated for the other dimensions and the final index, the *ISEPI*, is calculated as an arithmetic average of the seven sub-indexes.

The final question that has to be addressed in the ISEPI deals with the changes of population size of all countries. These changes may affect both the basic measurements of the index structure (mean and variance) and the aggregation of countries in systems and subsystems. There are two common solutions: the Laspeyres and the Paasche indexes. The former does not use the change in size (change in population of each country) that we are considering, and simply computes the final result with the initial sizes of the base year (1995 population). This index is extensively used in the literature, due to the lack of information on component sizes. The second alternative, the Paasche index, does consider the change in sizes. As we have the relative sizes of all countries for each year (population from 1995 to 2011), this is the option we choose. Then we can technically define the ISEPI as a weighted (a priori) arithmetic average index of partial indicators that express the relative standardised position of every individual (country, subsystem or system) after combining the variability of all variables, with a Paasche type temporal aggregation. To sum up, the ISEPI is an aggregate index that is computed using partial information of every considered dimension. This index allows for comparisons between countries (or other major territorial aggregations) in each period and over time, taking the global average in 1995 as 100. As mentioned above, changing the base year would

cause a change in the definition of the measurement of economic performance. If we compute an index number with 2000 as our base year the comparison will be done using the ISEPI definition of 2000, and it will not be the same as it was in 1995. Taking this into account, and in order to facilitate time and cross-country comparisons, we did a last transformation to the different index built according to the procedure described above. In particular, we rescaled the index into a 0-7 scale where a 0 is assigned to the minimum value and 7 to the maximum value of the index across countries and time-periods. These are the values that are shown and described in the next sections of the paper.

As previously mentioned, our objective is to analyse the macroeconomic, social and institutional impact of the ENP on the ENC in a comparative perspective for the period 1995-2011. We start our analysis in 1995 for two reasons: first, data availability and second, due to the fact that most agreements between EU and ENC were signed in the last part of the nineties of the last century.

In order to test the effects of the policy, we do not only consider the ENC countries but a wider sample of economies that will help us to disentangle the differential effect of the ENP. In particular, we consider the most competitive economies according to the World Economic Forum, the 27 members of the European Union at the end of the analysed period, and several developing and emerging economies, that constitute the real "control" group for ENC. The final sample of countries is formed by a set of 75 countries listed in table A.1 in the annex. In order to facilitate the analysis, these countries have been grouped them into six categories: Developed, Developing, Emerging, European Union (EU04 plus EU04_07), ENC-EAST and ENC-SOUTH.

With respect to data sources regarding the 51 considered indicators, several databases have been used: the World Bank World Development Indicators, the World Investment Report by the United Nations Conference on Trade and Development, The International Institute for Management Development datasets and additional variables from the Conference Board and The World Economic Forum datasets. More details on the exact definition of the 51 indicators and the data sets used are shown in table A.2 in the annex.

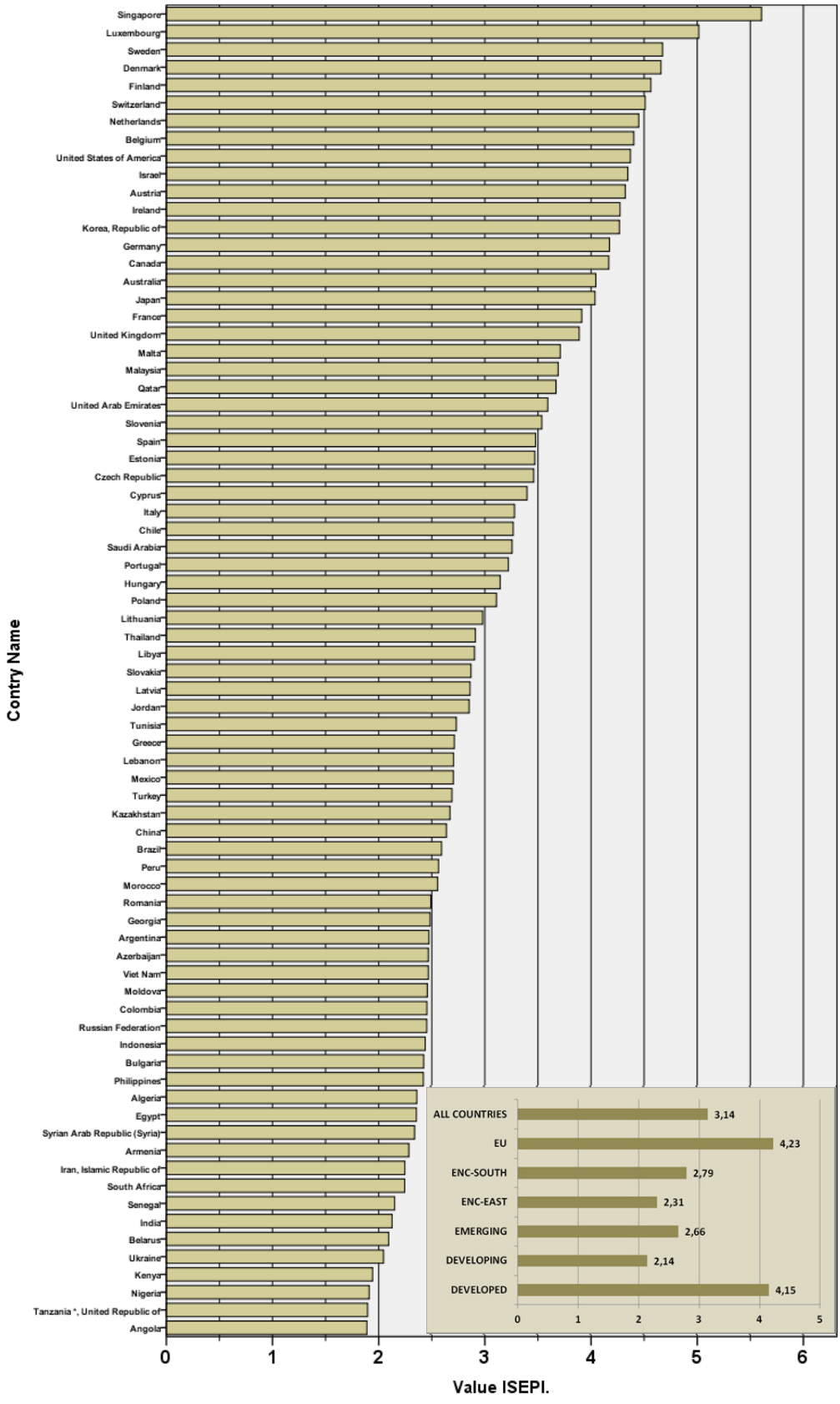
3. RESULTS

3.1. Descriptive analysis

Applying the methodology described in the previous section, the ranking obtained for the 75 considered countries for the year of 2011 is shown in Figure 2. First positions are taken by developed countries as Singapore (1st, 5.71), Luxembourg (2 nd, 5.06), Sweden (3 th, 4.67), Denmark (4 th, 4.66), Finland (5th, 4.56) and Switzerland (6 th, 4.51). The last positions of the ranking are covered by developing African countries as Kenya (72th, 1.94), Nigeria (73 th, 1.91), Tanzania (74 th, 1.90) and Angola (75 th, 1.89).

Regarding ENC, we find that, with the exception of Israel, they are at the bottom positions of the ranking. It has to be pointed out that there are some differences between ENC-South and ENC-East If we compare the positions of these countries between 1995 and 2011, and between 2005 and 2011 (two first pictures of Figure 3) we can see a positive relationship between their initial position and their final position. In fact, only Chile, Czech Republic, Estonia, Hungary, Poland, Portugal, Saudi Arabia and Slovenia were below the mean in 1995 and were over the mean of the whole sample in 2011. If we analyse the same information but after the fifth enlargement round of the European Union, only Poland and Saudi Arabia were below the mean in 2005 and have improved its position over the mean in 2011.

Figure 2. ISEPI Index (2011). 75 Countries Ranking.



From the box-plot descriptive analysis in figure 3, we can see that developed countries and European Union countries show the highest values of the global ISEPI index. With respect to developed countries, the best positions are for Singapore (5.61), Switzerland (4.51) and USA (4.37). In return, the worst positions are for Qatar (3.26), Japan (3.59) and Australia (3.67). It has to be noticed that this last worst score among developed countries it is only exceeded by the best register of the emerging country of Malaysia (3.69) and, in the case of ENC, by Israel (4.35). None of developing countries overcome that score. Moreover, EU countries show a great dispersion when compared to the rest of country groups. In fact, the dispersion is higher (0.72) in the EU than in the developed countries (0.64).This fact shows the great complexity among the European Union member states, where countries as Luxembourg (5.01), Sweden (4.67) and Denmark (4.66) duplicate the last values from Greece (2.71), Latvia (2.86) and Slovakia (2.87). Regarding the rest of countries, without taking into account Israel (4.35), Malaysia (3.69) and Chile (3.27), the countries of the rest of groups show lower scores than the ones observed for developed and EU countries. Last, if we look at the evolution between 1995 and 2011, it can be noticed that only in the case of Developed and EU countries there is an improvement in the ISEPI index. In mean, emerging countries and ENC suffer from stabilization and a decreasing path is followed by the developing countries group.

Figure 4 synthetises the main results for these groups of countries in relation with the different dimensions that composes the ISEPI global index for the year of 2011. Where I1 refers to *Macroeconomic Environment,* I2 to *Costs and prices*, I3 to *Productivity and human capital,* I4 to *Technological and innovative capacity,* I5 to *Business-friendly environment,* I6 to *Quality of live and labour market conditions* and, finally, I7 to *Market potential*[2]*.* Each of the pictures in Figure 4 focuses on one of those groups of countries defined before comparing their results with the group of countries of the fifth enlargement round of the European Union. The top left picture shows that the main differences between ENC-EAST countries and the EU04_07 countries is that the formers are in worst position in all sub-indexes except the first (Macroeconomic environment) and the seventh (Market potential) ones. This result is more intense in those sub-indexes related to social and institutional quality as I4 (Technological and innovative capacity), I5 (Business-friendly) and I6 (Quality of life and labour market conditions). In the same way, Russia (picture on the top right side) is at the same level of EU04_07 in all sub-indexes except for I5 (Business-friendly), one of the dimensions that capture more information about institutional quality. However, in the case of ENC-SOUTH (bottom left picture) the differences are not mainly related to institutional quality. In fact, I7 (Market potential) shows a better behaviour, I6 (Quality of live and labour market conditions) more or less in the same way and I3 (Productivity and human capital), I4 (Technological conditions) and I5 (Business-friendly) present mean scores below those for EU04_07 countries group. It has to be noticed that the observed difference in I4 is lower in the case of the ENC-SOUTH countries than in the case of the ENC-EAST countries. Finally, with respect to the EU countries (bottom right picture) it is worth mentioning that the enlargement countries are in better conditions than the EU in all sub-indexes but in I2 (Costs and prices), where the EU countries are better positioned than the fifth enlargement group of countries.

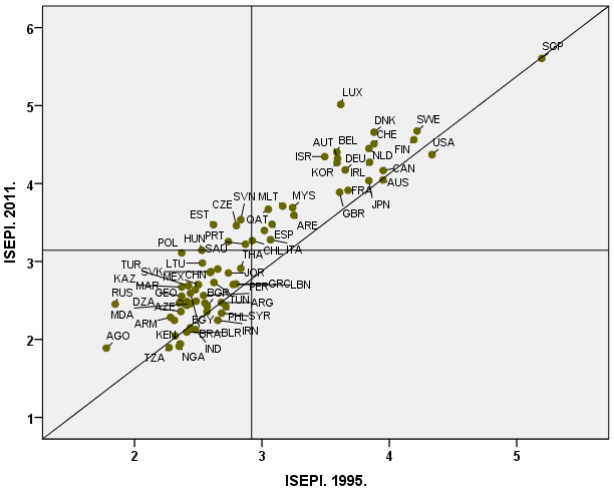
[2] A detailed analysis for each sub-index can be found in tables A.3 to A.9 in the annex.

Figure 3. ISEPI Index (2011). Regional Results.

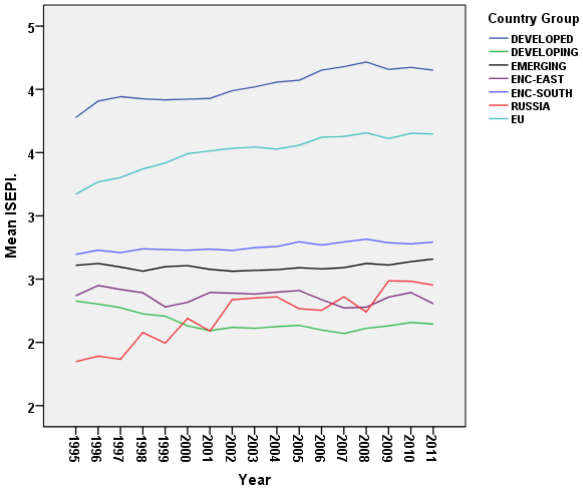
Descriptives 2011.

DEVELOPED	Mean	Std.Deviation	Range	Skewness
	4.15	0.64	2.35	1.13
	Highest		SGP	5.61
			CHE	4.51
			USA	4.37
	Lowest		SAU	3.26
			ARE	3.59
			QAT	3.67
DEVELOPING	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	2.14	0.29	0.78	0.92
	Highest		KAZ	2.67
			COL	2.45
			IRN	2.25
	Lowest		AGO	1.89
			TZA	1.90
			NGA	1.91
EMERGING	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	2,66	0,41	1,56	1.44
	Highest		MYS	3.69
			CHL	3.27
			THA	2.91
	Lowest		IND	2.13
			ZAF	2.25
			PHL	2.42
ENC-EAST	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	2.31	0.20	0.44	-0.53
	Highest		GEO	2.49
			AZE	2.47
			MDA	2.46
	Lowest		UKR	2.05
			BLR	2.09
			ARM	2.28
ENC-SOUTH	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	2.79	0.62	2.01	2.33
	Highest		ISR	4.35
			LBY	2.90
			JOR	2.85
	Lowest		SYR	2.34
			EGY	2.35
			DZA	2.36
RUSSIA	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	2.45	---	---	---
EU	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	3.65	0.72	2.59	0.13
	Highest		LUX	5.01
			SWE	4.67
			DNK	4.66
	Lowest		BGR	2.42
			ROU	2.49
			GRC	2.71

Comparison 1995-2011.



Evolution 1995-2011.



Box-plot 2011.

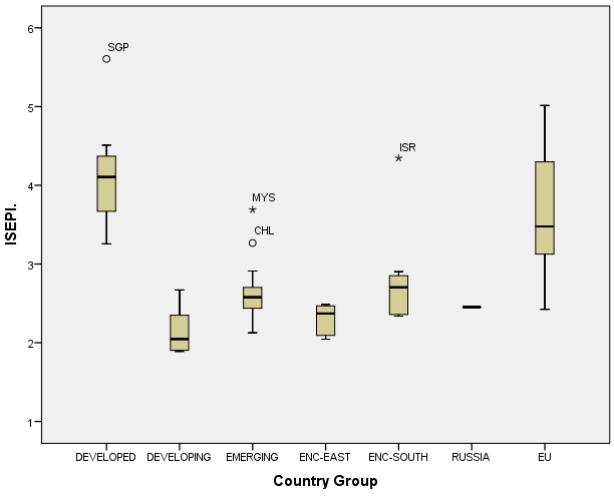
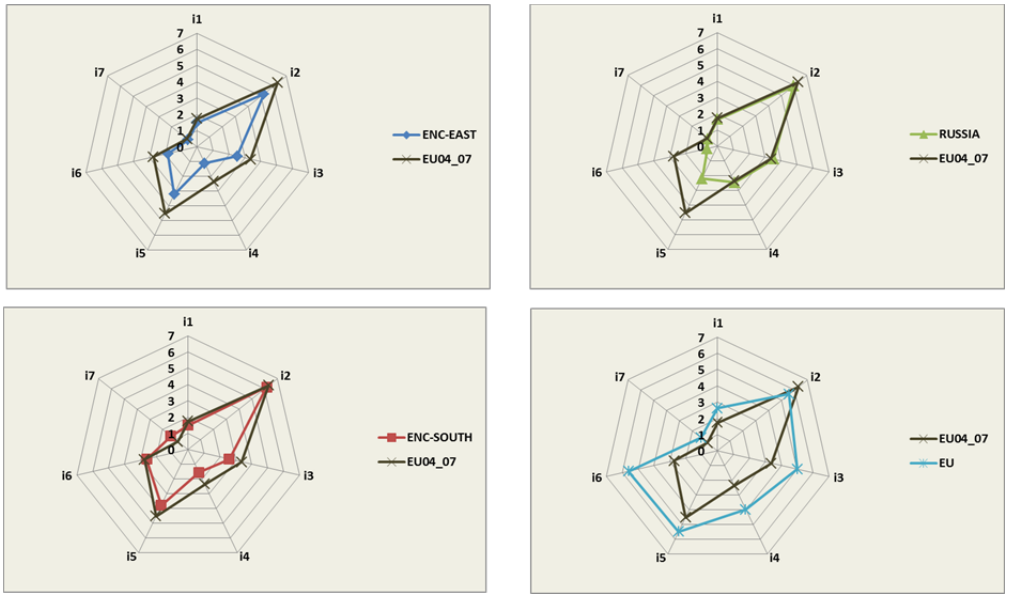


Figure 4. ISEPI Index (2011). Regional comparison of sub-indexes.



If we analyse with more attention the information of the ISEPI index for the ENC (figure 5), we can observe that there are some differences between South and East countries. After the last big enlargement of the European Union, a positive relationship between the initial position of the mean of each group of countries and its growth rate can be observed. However, there are two groups of countries that suffer from a decreasing trend during the period: ENC-SOUTH countries and ENC-EAST countries. The change in trend is stronger in the case of ENC-EAST group than in the case of the ENC-EAST countries. But inside each groups, results are not so homogeneous, as one could have had expected. So we can affirm that most of the ENC-EAST countries have worsened its positions when looking more recent data, especially Belarus (-18.4%) and Ukraine (-8.5%), although some of them, as Georgia (3.8%) and Moldova (1.2%), present positive growth rates. On the opposite, ENC-SOUTH countries have had a better behaviour than their east policy partners, In particular, Israel improved by 6.4% between 2005 and 2011, and Libya and Morocco growth by 4.7% and 4.5%, respectively. however, the worst results came from Jordan (-8.9%) and Egypt (-5.6%).

3.2. Convergence analysis

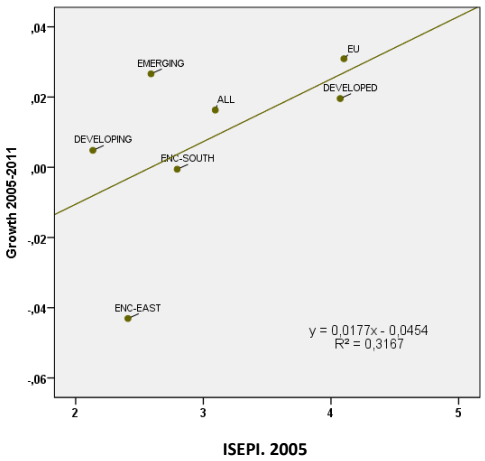
In this section we analyse whether a convergence process in the ISEPI and its seven sub-index has been observed since the fifth enlargement round of the European Union in 2004. We focus on this period instead of starting our analysis in mid-nineties because most financial instruments related to the policy also started to be effective after 2000 (see table 1). We start with an unconditional β-convergence analysis running the following *a la Barro and Sala-i-Martin* (2003) regression:

$$g_i = \alpha + \beta I_{0,i} + \epsilon_i \tag{9}$$

where g denotes the growth rate between 2005 and 2011 of the considered index, I_0 represents its intial value and ϵ_i is an error term capturing common transitional shocks for all countries. The parameter β captures the speed of convergence into a unique steady-state which is assumed to be common to all countries involved in the analysis.

Figure 5. ISEPI Index (2011). ENC detailed analysis.

		ISEPI 2005	ISEPI 2011	2005-2011
ENC-EAST	Armenia	2.32	2.28	-1.7%
	Azerbaijan	2.52	2.47	-2.0%
	Belarus	2.56	2.09	-18.4%
	Georgia	2.40	2.49	3.8%
	Moldova	2.43	2.46	1.2%
	Ukraine	2.24	2.05	-8.5%
		1.83	1.97	7.5%
ENC-SOUTH	Algeria	2.45	2.36	-3.7%
	Egypt	2.49	2.35	-5.6%
	Israel	4.09	4.35	6.4%
	Jordan	3.13	2.85	-8.9%
	Lebanon	2.67	2.70	1.1%
	Libya	2.77	2.90	4.7%
	Morocco	2.44	2.55	4.5%
	Syrian Arab Republic (Syria)	2.39	2.34	-2.1%
	Tunisia	2.71	2.73	0.7%
		2.35	2.60	10.5%
RUSSIA	Russian Federation	2.27	2.45	8.2%
	ENC	2.64	2.60	-1,6%
	DEVELOPING	2.13	2.14	0.5%
	EMERGING	2.59	2.66	2.7%
	EU	4.10	4.23	3.1%
	DEVELOPED	4.07	4.15	2.0%
	ALL COUNTRIES	3.09	3.14	1.6%



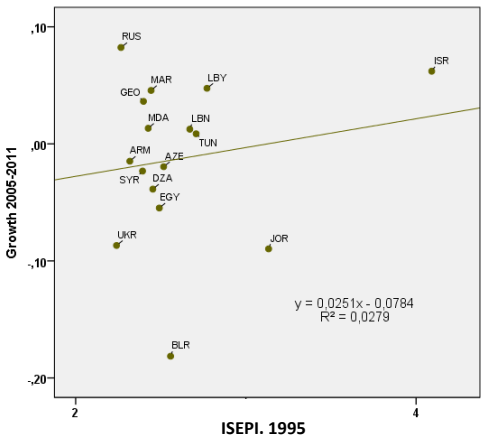


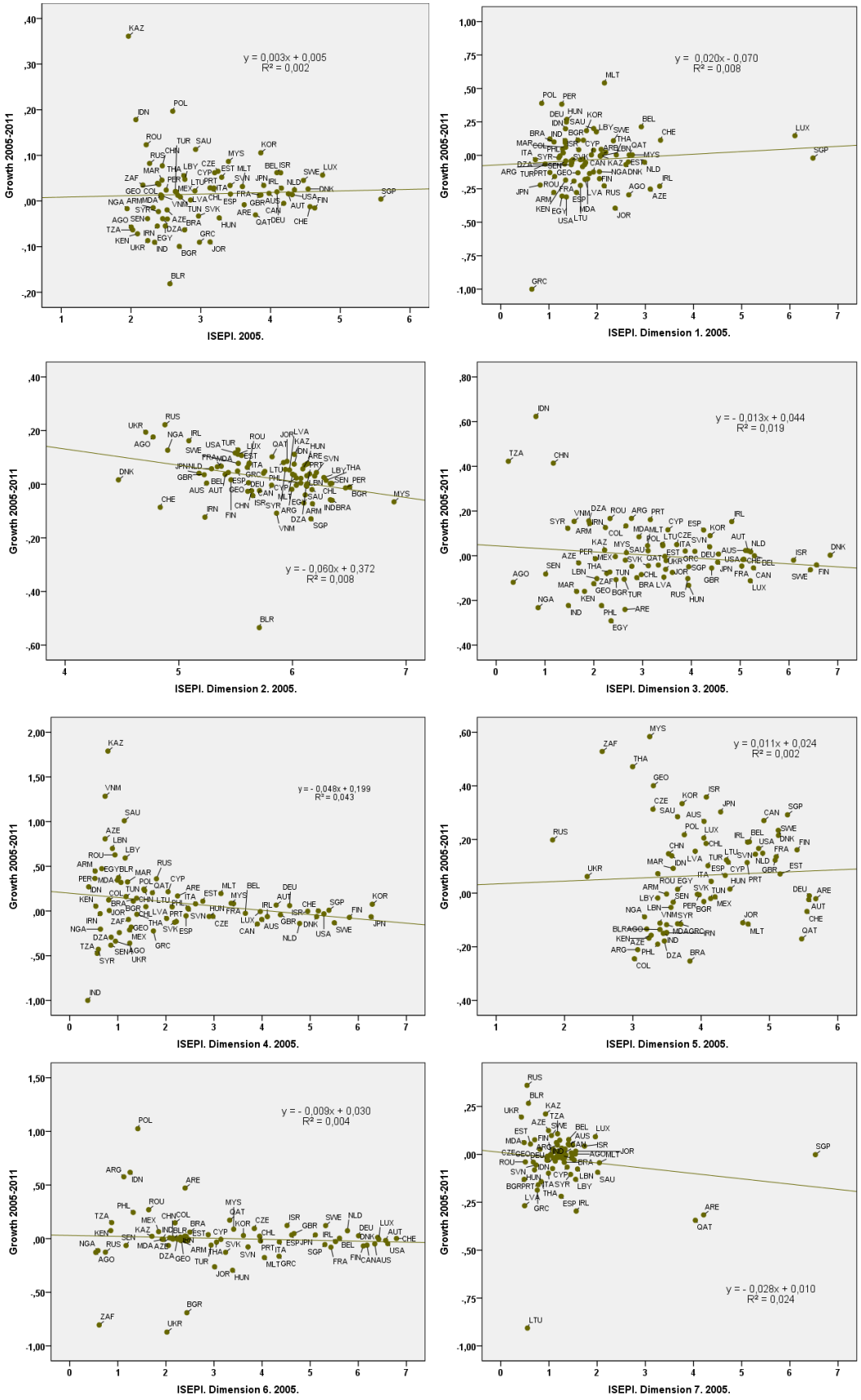
Figure 6 shows the results of this regression analysis for the ISEPI index and for its seven sub-index. It can be seen that the β parameter is only negative, showing convergence, in four sub-indexes: I2 -*Costs and prices*-, I3 -*Productivity and human capital*-, I4 -*Technological and innovative capacity*- and I7 -*Market potential*-. None of those key dimensions that include the majority of institutional information (as I5 -*Business-friendly environment*- and I6 -*Quality of live and labour market conditions*-) present a convergence process. Neither a convergence process ubto a unique steady-state is observed in the global ISEPI index. Summing up, it seems that there is not a common steady-state for all the 75 countries involved, but it could be a conditional β-convergence process for each economy into its own steady-state.

In order to evaluate if convergence to a country-specific steady-state is observed in the considered period, we have run the following conditional β-convergence regression for the ISEPI and the different sub-indexes:

$$g_{it} = I_{0,it}\beta + X_{0,it}\gamma + Z_i + T_t + \epsilon_{it} \quad (10)$$

where g_{it} represents the annual growth rate, $I_{0,it}$ the initial values of each index, $X_{0,it}$ is a matrix with the variables conditioning the convergence process (including two dummy variables that capture whether the ENP has been driven by a plan or a contract), Z_i and T_t denote, respectively country and time specific fixed effects and, last, ϵ_{it} is a random error term.

Figure 6. ENC Unconditional β-convergence. ISEPI and sub-indexes (2005-2011).



First of all, regressions (9) and (10) have been estimated omitting time fixed effects (top part of Table 4.1). As it can be seen, the β parameter is significant and negative in all cases, showing that, for the global index and for each of its dimensions, a convergence process have occurred during the period. With respect to conditioning variables, when the ENP has been adopted by means of a plan, only in the case of I1 -*Macroeconomic Environment*- and I6 -*Quality of live and labour market conditions*- the convergence speed has been improved. These improvements in convergence speed are, respectively, -0.08 and -0.04. But in case of dimension I4 -*Technological and innovative capacity*- a plan seems to worsen the convergence speed by 0.06. In case that ENP has been conducted by a contract, dimension I1 -*Macroeconomic Environment*- mildly worsens its convergence speed and none improvement is detected in the other sub-indexes as well as in the global ISEPI index.

If those common shocks that could have affected to all the economies are isolated by time fixed effects (bottom part of table 2), the results do not change in a significant way. β-parameter shows, more or less, the same convergence process. In this case, only dimension I2 -*Costs and prices*- improves its convergence speed by a -0.02, but the rest of results remain significantly unchanged.

In sum, the results obtained in this section show that ENP has had different effects according to the considered dimensions and that the evolution of neighbouring countries is quite heterogeneous taking into account their recent institutional and economic performance.

4. FINAL REMARKS

One of the objectives of the European Neighbourhood Policy (ENP) is to promote political and institutional changes towards democratic governance and market liberalisation, a process that at the same time can be understood as a tool for economic development and convergence in neighbouring countries.

The objective of this paper was to analyse the macroeconomic and institutional impact of the ENP on ENC in a comparative perspective. With this aim, we have first elaborated a composite index (Institutional, Social & Economic Performance Index – ISEPI) that combines seven dimensions: macroeconomic environment, costs and prices, productivity and human capital, technological and innovative capacity, business-friendly environment, quality of life and labour market conditions and, finally, market potential.

The index has been calculated for 75 countries from 1995 to 2011 combining data for 51 variables coming from several sources. In a second step, we have analysed the regional differences in the evolution of this index in order to provide an assessment of the impact of the ENP on the different dimensions and to shed light on how the great recession has limited the impact of recent reforms.

The obtained results have shown that ENP has had different effects according to the considered dimensions and that the evolution of neighbouring countries is quite heterogeneous taking into account their recent institutional and economic performance. From a policy perspective, these results reinforce the validity of the bilateral action plans that have characterized ENP recognising the different starting point and particular characteristics of each neighbouring country. These results are in line with previous findings, but, however, further research will be needed to understand the channels through which institutional change associated to the ENP could enhance economic growth in the area.

Table 2. ENC Conditional β-Convergence. ISEPI 2000-2011.

Without year-fixed effects

2000-2011	ISEPI	I1	I2	I3	I4	I5	I6	I7
Initial value	-0.350***	-0.298***	-0.407***	-0.242***	-0.202***	-0.362***	-0.292***	-0.198***
	[0.0272]	[0.0280]	[0.0291]	[0.0240]	[0.0277]	[0.0258]	[0.0275]	[0.0343]
ENP_plan	-0.00893	-0.0807***	-0.0164	-0.0158	0.0604**	0.0126	-0.0480*	0.0106
	[0.00574]	[0.0236]	[0.0112]	[0.0131]	[0.0250]	[0.0185]	[0.0262]	[0.0203]
ENP_contract	0.0143	0.0846*	0.0112	0.00276	0.0547	-0.0214	0.0302	-0.0184
	[0.0107]	[0.0461]	[0.0207]	[0.0243]	[0.0464]	[0.0344]	[0.0486]	[0.0374]
Constant	0.383***	0.144***	0.717***	0.252***	0.103***	0.501***	0.286***	0.0247***
	[0.0296]	[0.0143]	[0.0515]	[0.0250]	[0.0170]	[0.0359]	[0.0283]	[0.00785]
Country fixed effects	YES	YES	YES	YES	YES	YES	YES	YES
Year fixed effects	NO	NO	NO	NO	NO	NO	NO	NO
Observations	825	824	825	823	824	823	825	825
R-squared	0.183	0.149	0.207	0.126	0.074	0.209	0.133	0.043
Number of ctry	75	75	75	75	75	75	75	75

With year fixed effects

2000-2011	ISEPI	I1	I2	I3	I4	I5	I6	I7
Initial value	-0.379***	-0.290***	-0.404***	-0.238***	-0.194***	-0.396***	-0.292***	-0.198***
	[0.0282]	[0.0278]	[0.0292]	[0.0240]	[0.0284]	[0.0265]	[0.0277]	[0.0352]
ENP_plan	-0.0167***	-0.0729***	-0.0200*	-0.0116	0.0588**	-0.0214	-0.0366	0.0190
	[0.00604]	[0.0244]	[0.0117]	[0.0139]	[0.0263]	[0.0192]	[0.0277]	[0.0211]
ENP_contract	0.0104	0.0807*	0.0106	0.00648	0.0543	-0.0489	0.0382	-0.0203
	[0.0106]	[0.0454]	[0.0206]	[0.0245]	[0.0466]	[0.0339]	[0.0490]	[0.0374]
Constant	0.408***	0.138***	0.713***	0.249***	0.118***	0.502***	0.293***	0.0165
	[0.0305]	[0.0188]	[0.0517]	[0.0257]	[0.0211]	[0.0378]	[0.0317]	[0.0131]
Country fixed effects	YES	YES	YES	YES	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES	YES	YES	YES	YES
Observations	825	824	825	823	824	823	825	825
R-squared	0.211	0.196	0.237	0.140	0.089	0.253	0.141	0.074
Number of ctry	75	75	75	75	75	75	75	75

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ANNEX.

Table A.1. Countries included in the ISEPI Index.

	Countries	ISO	Group		Countries	ISO	Group
01	Angola	AGO	DEVELOPING	39	Kazakhstan	KAZ	DEVELOPING
02	United Arab Emirates	ARE	DEVELOPED	40	Kenya	KEN	DEVELOPING
03	Argentina	ARG	EMERGING	41	Korea, Republic of	KOR	DEVELOPED
04	Armenia	ARM	ENC-EAST	42	Lebanon	LBN	ENC-SOUTH
05	Australia	AUS	DEVELOPED	43	Libya	LBY	ENC-SOUTH
06	Austria	AUT	EU04	44	Lithuania	LTU	EU04_07
07	Azerbaijan	AZE	ENC-EAST	45	Luxembourg	LUX	EU04
08	Belgium	BEL	EU04	46	Latvia	LVA	EU04_07
09	Bulgaria	BGR	EU04_07	47	Morocco	MAR	ENC-SOUTH
10	Belarus	BLR	ENC-EAST	48	Moldova	MDA	ENC-EAST
11	Brazil	BRA	EMERGING	49	Mexico	MEX	EMERGING
12	Canada	CAN	DEVELOPED	50	Malta	MLT	EU04_07
13	Switzerland	CHE	DEVELOPED	51	Malaysia	MYS	EMERGING
14	Chile	CHL	EMERGING	52	Nigeria	NGA	DEVELOPING
15	China	CHN	EMERGING	53	Netherlands	NLD	EU04
16	Colombia	COL	DEVELOPING	54	Peru	PER	EMERGING
17	Cyprus	CYP	EU04_07	55	Philippines	PHL	EMERGING
18	Czech Republic	CZE	EU04_07	56	Poland	POL	EU04_07
19	Germany	DEU	EU04	57	Portugal	PRT	EU04
20	Denmark	DNK	EU04	58	Qatar	QAT	DEVELOPED
21	Algeria	DZA	ENC-SOUTH	59	Romania	ROU	EU04_07
22	Egypt	EGY	ENC-SOUTH	60	Russian Federation	RUS	RUSSIA
23	Spain	ESP	EU04	61	Saudi Arabia	SAU	DEVELOPED
24	Estonia	EST	EU04_07	62	Senegal	SEN	DEVELOPING
25	Finland	FIN	EU04	63	Singapore	SGP	DEVELOPED
26	France	FRA	EUOLD	64	Slovakia	SVK	EU04_07
27	United Kingdom	GBR	EUOLD	65	Slovenia	SVN	EU04_07
28	Georgia	GEO	ENC-EAST	66	Sweden	SWE	EU04
29	Greece	GRC	EU04	67	Syrian Arab Republic (Syria)	SYR	ENC-SOUTH
30	Hungary	HUN	EU04_07	68	Thailand	THA	ENC-SOUTH
31	Indonesia	IDN	EMERGING	69	Tunisia	TUN	ENC-SOUTH
32	India	IND	EMERGING	70	Turkey	TUR	EMERGING
33	Ireland	IRL	EU04	71	Tanzania, United Republic of	TZA	DEVELOPING
34	Iran, Islamic Republic of	IRN	DEVELOPING	72	Ukraine	UKR	ENC-EAST
35	Israel	ISR	ENC-SOUTH	73	United States of America	USA	DEVELOPED
36	Italy	ITA	EU04	74	Viet Nam	VNM	EMERGING
37	Jordan	JOR	ENC-SOUTH	75	South Africa	ZAF	EMERGING
38	Japan	JPN	DEVELOPED				

Note.
EU04. Countries added to the European Union until 2004.
EU04_07. Countries engaged to the European Union between 2004 and 2007.
EU is the sum up of these two groups.

Table A.2. Data Sources and Description.

	Definition	Sign	Source	Description	Period
I1. Macroeconomic environment		**(+)**			
v1	GDP growth rate	(+)	WDI	Annual percentage growth rate of GDP at market prices based on constant local currency. Aggregates are based on constant 2005 U.S. dollars. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources	1995-2011
v2	Activity rate	(+)	WDI	Labor force participation rate is the proportion of the population ages 15 and older that is economically active: all people who supply labor for the production of goods and services during a specified period.	1995-2010
v3	Unemployment rate	(-)	WDI	Unemployment refers to the share of the labor force that is without work but available for and seeking employment. Definitions of labor force and unemployment differ by country.	1995-2010
v4	Public surplus/deficit as percentage of GDP	(+)	WDI	Cash surplus or deficit is revenue (including grants) minus expense, minus net acquisition of nonfinancial assets. In the 1986 GFS manual nonfinancial assets were included under revenue and expenditure in gross terms. This cash surplus or deficit is closest to the earlier overall budget balance (still missing is lending minus repayments, which are now a financing item under net acquisition of financial assets).	1995-2011
v5	Public debt as percentage of GDP	(-)	WDI	Debt is the entire stock of direct government fixed-term contractual obligations to others outstanding on a particular date. It includes domestic and foreign liabilities such as currency and money deposits, securities other than shares, and loans. It is the gross amount of government liabilities reduced by the amount of equity and financial derivatives held by the government. Because debt is a stock rather than a flow, it is measured as of a given date, usually the last day of the fiscal year.	1995-2010
v6	Current account surplus/deficit as percentage of GDP	(+)	WDI	Current account balance is the sum of net exports of goods and services, net primary income, and net secondary income.	1995-2011
v7	Inflow Foreign Direct Investment as percentage of GDP	(+)	UNCTAD	**Inflow:** FDI stock is the value of the share of their capital and reserves (including retained profits) attributable to the parent enterprise, plus the net indebtedness of affiliates to the parent enterprises.	1995-2011
v8	Outflow Foreign Direct Investment as percentage of GDP	(+)	UNCTAD	**Outflow:** FDI stock is the value of the share of their capital and reserves (including retained profits) attributable to the parent enterprise, plus the net indebtedness of affiliates to the parent enterprises.	1995-2011
v9	Trade openness (exports+imports)/2·GDP	(+)	WDI	Trade is the sum of exports and imports of goods and services measured as a share of gross domestic product.	1995-2011
v10	Services exports as percentage of GDP	(+)	WDI	Trade in services is the sum of service exports and imports divided by the value of GDP, all in current U.S. dollars.	1995-2011
v11	Stock market capitalization as a percentage of GDP	(+)	IMD	Stock market capitalization as a percentage of GDP. Standard & Poor's. Global Stock Markets Factbook 2012.	1995-2010
v12	Savings rate	(+)	WDI	Gross savings are calculated as gross national income less total consumption, plus net transfers.	1995-2011
I2. Costs and prices		**(-)**			
v13	Consumer price inflation	(-)	WDI	Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used.	1995-2011
v14	Labour unit costs growth rates	(-)	IMD	Labour unit costs growth rates. OECD unit labor costs database April 2011. National sources.	1995-2011
v15	Hourly wage in manufacturing	(-)	IMD	Average number of working hours per year. UBS Prices and Earnings 2012. National sources	1995-2011
v16	Cost of life (New York=100)	(-)	IMD	Index of a basket of goods & services in major cities, including housing (New York City = 100). MERCER Cost of Living survey, March 2013. www.mercer.com	1995-2011
v17	Real effective exchange rate (ULC adjusted)	(-)	WDI	Real effective exchange rate is the nominal effective exchange rate (a measure of the value of a currency against a weighted average of several foreign currencies) divided by a price deflator or index of costs.	1995-2011
I3. Productivity and human capital		**(+)**			
v18	Labour productivity (GDP per worker)	(+)	TCB	GDP per person engaged is obtained by dividing GDP by employment. It is one of the measures of labor productivity.	1995-2011
v19	Public expenses in education as a percentage of GDP	(+)	WDI	Public expenditure on education as % of GDP is the total public expenditure (current and capital) on education expressed as a percentage of the Gross Domestic Product (GDP) in a given year. Public expenditure on education includes government spending on educational institutions (both public and private), education administration, and transfers/subsidies for private entities (students/households and other privates entities).	1995-2010
v20	Share of population between 25 and 34 years old with secondary studies	(+)	WDI	Gross enrolment ratio. Secondary. All programmes. Total is the total enrollment in secondary education, regardless of age, expressed as a percentage of the population of official secondary education age. GER can exceed 100% due to the inclusion of over-aged and under-aged students because of early or late school entrance and grade repetition.	1995-2011
v21	Share of population between 25 and 34 years old with tertiary studies	(+)	WDI	Gross enrolment ratio. Tertiary (ISCED 5 and 6). Total is the total enrollment in tertiary education (ISCED 5 and 6), regardless of age, expressed as a percentage of the total population of the five-year age group following on from secondary school leaving.	1995-2011
v22	Researchers in firms /1000 inhabitants	(+)	WDI	Researchers in R&D are professionals engaged in the conception or creation of new knowledge, products, processes, methods, or systems and in the management of the projects concerned. Postgraduate PhD students (ISCED97 level 6) engaged in R&D are included.	1995-2011
v23	Qualified workforce available	(+)	IMD	Skilled labor is readily available. IMD WCY Executive Opinion Survey based on an index from 0 to 10.	1995-2011
v24	Entrepreneurship	(+)	IMD	Entrepreneurship of managers is widespread in business. IMD WCY Executive Opinion Survey based on an index from 0 to 10.	1995-2011
I.4. Technological and innovative capacity		**Sign (+)**	**Source**	**Description**	**Period**
v25	Share of high technology exports on	(+)	WDI	High-technology exports are products with high R&D intensity, such as in aerospace,	1995-2010

	total exports			computers, pharmaceuticals, scientific instruments, and electrical machinery.	
v26	R+D private expenses as a percentage of GDP	(+)	IMD	R+D private expenses as a percentage of GDP. OECD Main Science and Technology Indicators 2/2012.UNESCO http://stats.uis.unesco.org.National sources.	1995-2011
v27	Patents awarded to residents / 1000 inhabitants	(+)	WDI	Patent applications are worldwide patent applications filed through the Patent Cooperation Treaty procedure or with a national patent office for exclusive rights for an invention--a product or process that provides a new way of doing something or offers a new technical solution to a problem. A patent provides protection for the invention to the owner of the patent for a limited period, generally 20 years.	1995-2010
v28	Transfer knowledge from university to firms	(+)	IMD	Knowledge transfer is highly developed between companies and universities. IMD WCY Executive Opinion Survey based on an index from 0 to 10.	1995-2011
v29	Internet users / 1000 inhabitants	(+)	WDI	Internet users are people with access to the worldwide network.	1995-2011
v30	Mobile phone users / 1000 inhabitants	(+)	WDI	Mobile cellular telephone subscriptions are subscriptions to a public mobile telephone service using cellular technology, which provide access to the public switched telephone network. Post-paid and prepaid subscriptions are included.	1997-2011
v31	Computers / 1000 inhabitants	(+)	IMD	Number of computers per 1000 people. Computer Industry Almanac Inc. April 2012. http://www.c-i-a.com. National sources.	1995-2011
I5. Business-friendly environment		**(+)**			
v32	Global quality of infrastructures	(+)	WEF	How would you assess general infrastructure (e.g., transport, telephony, and energy) in your country? [1 = extremely underdeveloped; 7 = extensive and efficient by international standards). World Economic Forum, Executive Opinion Survey.	2006-2011
v33	Investment risks	(+)	IMD	Euromoney country risk overall (scale from 0-100). Euromoney Country Risk Rankings September 2012. www.euromoneycountryrisk.com.	2002-2011
v34	Investment protection index	(+)	WDI	Business regulatory environment assesses the extent to which the legal, regulatory, and policy environments help or hinder private businesses in investing, creating jobs, and becoming more productive. (1=low, 6=high).	2005-2011
v35	Number of procedures required to start a new business	(-)	WDI	Start-up procedures are those required to start a business, including interactions to obtain necessary permits and licenses and to complete all inscriptions, verifications, and notifications to start operations. Data are for businesses with specific characteristics of ownership, size, and type of production. (Number).	2003-2011
v36	Number of documents required to export/import procedures (average)	(-)	WDI	**Export:** All documents required per shipment to export goods are recorded. It is assumed that the contract has already been agreed upon and signed by both parties. Documents required for clearance by government ministries, customs authorities, port and container terminal authorities, health and technical control agencies and banks are taken into account. Since payment is by letter of credit, all documents required by banks for the issuance or securing of a letter of credit are also taken into account. Documents that are renewed annually and that do not require renewal per shipment (for example, an annual tax clearance certificate) are not included. (Number). **Import:** All documents required per shipment to import goods are recorded. It is assumed that the contract has already been agreed upon and signed by both parties. Documents required for clearance by government ministries, customs authorities, port and container terminal authorities, health and technical control agencies and banks are taken into account. Since payment is by letter of credit, all documents required by banks for the issuance or securing of a letter of credit are also taken into account. Documents that are renewed annually and that do not require renewal per shipment (for example, an annual tax clearance certificate) are not included. (Number).	2005-2011
v37	Costs to export or import (average)	(-)	WDI	**Export:** Cost measures the fees levied on a 20-foot container in U.S. dollars. All the fees associated with completing the procedures to export or import the goods are included. These include costs for documents, administrative fees for customs clearance and technical control, customs broker fees, terminal handling charges and inland transport. The cost measure does not include tariffs or trade taxes. Only official costs are recorded. Several assumptions are made for the business surveyed: Has 60 or more employees; Is located in the country's most populous city; Is a private, limited liability company. It does not operate within an export processing zone or an industrial estate with special export or import privileges; Is domestically owned with no foreign ownership; Exports more than 10% of its sales. Assumptions about the traded goods: The traded product travels in a dry-cargo, 20-foot, full container load. The product: Is not hazardous nor does it include military items; Does not require refrigeration or any other special environment; Does not require any special phytosanitary or environmental safety standards other than accepted international standards. (Number). **Import:** Cost measures the fees levied on a 20-foot container in U.S. dollars. All the fees associated with completing the procedures to export or import the goods are included. These include costs for documents, administrative fees for customs clearance and technical control, customs broker fees, terminal handling charges and inland transport. The cost measure does not include tariffs or trade taxes. Only official costs are recorded. (Number).	2005-2011
v38	Corruption perception index	(+)	WDI	Transparency, accountability, and corruption in the public sector assess the extent to which the executive can be held accountable for its use of funds and for the results of its actions by the electorate and by the legislature and judiciary, and the extent to which public employees within the executive are required to account for administrative decisions, use of resources, and results obtained. The three main dimensions assessed here are the accountability of the executive to oversight institutions and of public employees for their performance, access of civil society to information on public affairs, and state capture by narrow vested interests. (1=low; 6=high).	1996-2011
v39	Fiscal pressure on firms	(-)	IMD	Collected corporate taxes on profits, income and capital gains, as a percentage of GDP. OECD Revenue Statistics 2012. Government Finance Statistics 2012. National sources.	1995-2011
		Sign	**Source**	**Description**	**Period**
I6. Quality of life and labour market conditions		**(+)**			
v40	Life expectancy at birth	(+)	WDI	Life expectancy at birth indicates the number of years a newborn infant would live if	1995-2011

				prevailing patterns of mortality at the time of its birth were to stay the same throughout its life.	
v41	Quality of life	(+)	IMD	Quality of life. IMD WCY Executive Opinion Survey based on an index from 0 to 10.	1995-2011
v42	Personal security and private property protection	(+)	IMD	Personal security and private property rights are adequately protected. IMD WCY Executive Opinion Survey based on an index from 0 to 10.	1995-2011
v43	Health expenses per capita	(+)	WDI	Total health expenditure is the sum of public and private health expenditures as a ratio of total population. It covers the provision of health services (preventive and curative), family planning activities, nutrition activities, and emergency aid designated for health but does not include provision of water and sanitation. Data are in international dollars converted using 2005 purchasing power parity (PPP) rates.	1995-2010
v44	Workers motivation	(+)	IMD	Worker motivation in companies is high. IMD WCY Executive Opinion Survey based on an index from 0 to 10.	1995-2011
v45	Hours of work	(-)	IMD	Average number of working hours per year. UBS Prices and Earnings 2012. National sources.	1995-2011
I7. Market potential		**(+)**			
v46	Population	(+)	WDI	Population, total refers to the total population.	1995-2011
v47	Share of population older than 65 years old on total population	(-)	WDI	Population ages 65 and above as a percentage of the total population. Population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship--except for refugees not permanently settled in the country of asylum, who are generally considered part of the population of the country of origin.	1995-2011
v48	Population growth rate	(+)	WDI	Population growth (annual %) is the exponential rate of growth of midyear population from year t-1 to t, expressed as a percentage.	1995-2011
v49	GDP (PPP) per capita	(+)	WDI	GDP per capita based on purchasing power parity (PPP). PPP GDP is gross domestic product converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as the U.S. dollar has in the United States. GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant 2005 international dollars.	1995-2011
v50	Population density (Inhabitants/km2)	(+)	WDI	Population density is midyear population divided by land area in square kilometers. Population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship--except for refugees not permanently settled in the country of asylum, who are generally considered part of the population of their country of origin. Land area is a country's total area, excluding area under inland water bodies, national claims to continental shelf, and exclusive economic zones. In most cases the definition of inland water bodies includes major rivers and lakes.	1995-2010
v51	Share of urban population on total population	(+)	WDI	Urban population refers to people living in urban areas as defined by national statistical offices. It is calculated using World Bank population estimates and urban ratios from the United Nations World Urbanization Prospects.	1995-2011

NOTE: WDI (World Development Indicators), UNCTAD (United Nations Conference on Trade and Development, IMD (International Institute for Management Development), TBC (The Conference Board), WEF (World Economic Forum).

Table A.3. ISEPI Dimension 1. Macroeconomic environment. Main Results.

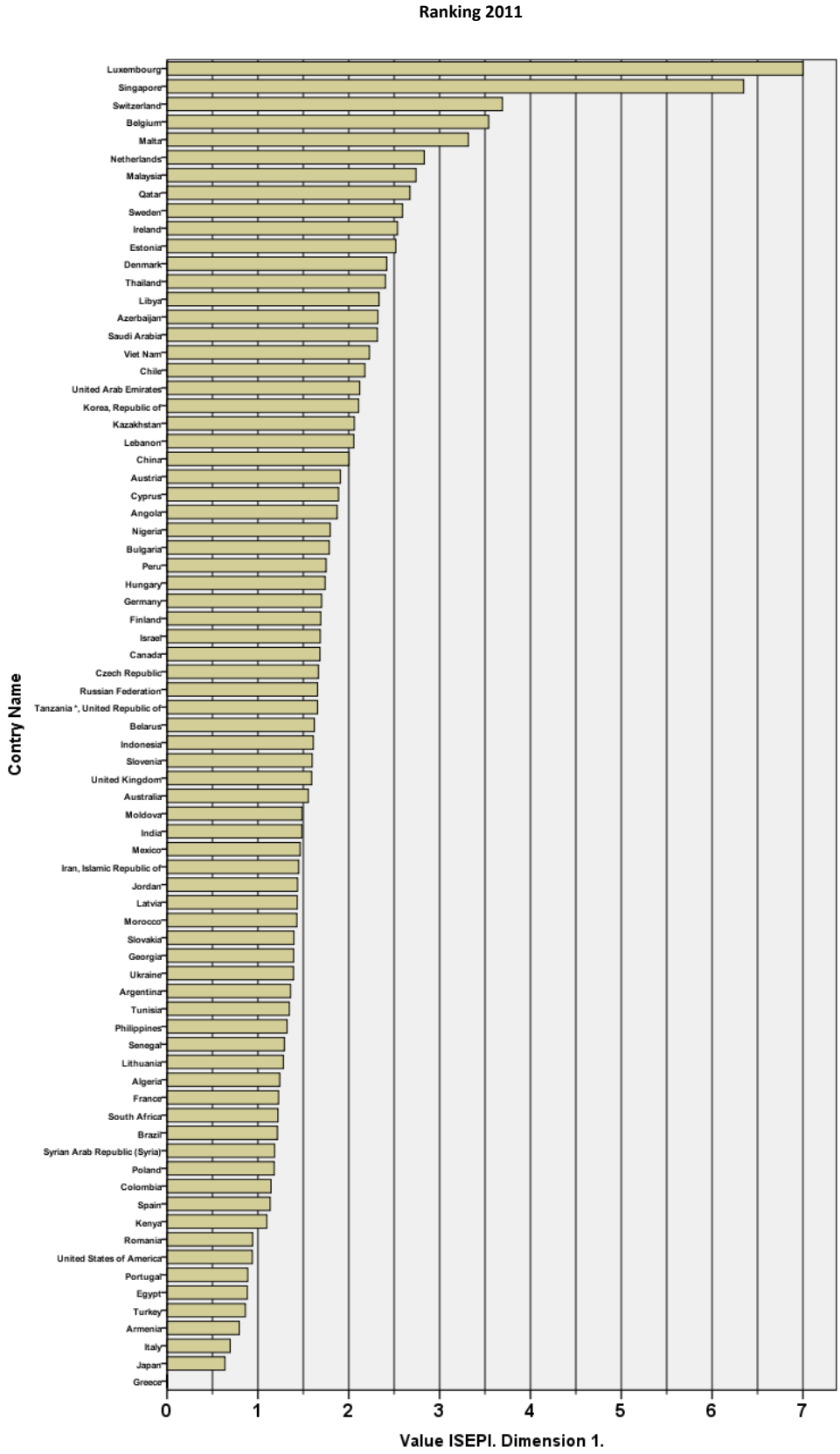
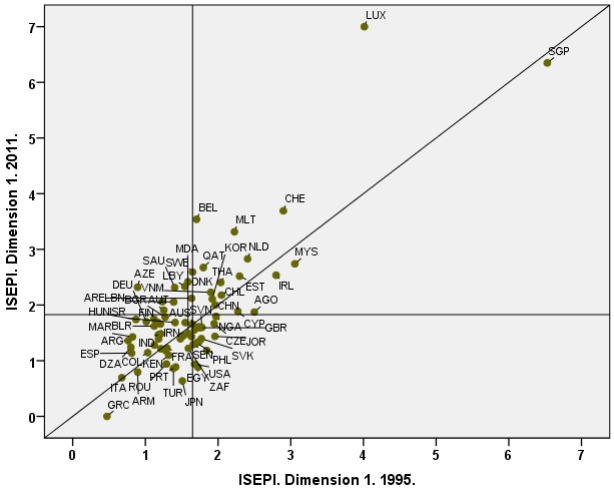


Table A.3. ISEPI I1. Macroeconomic environment. Main Results. (Cont.).

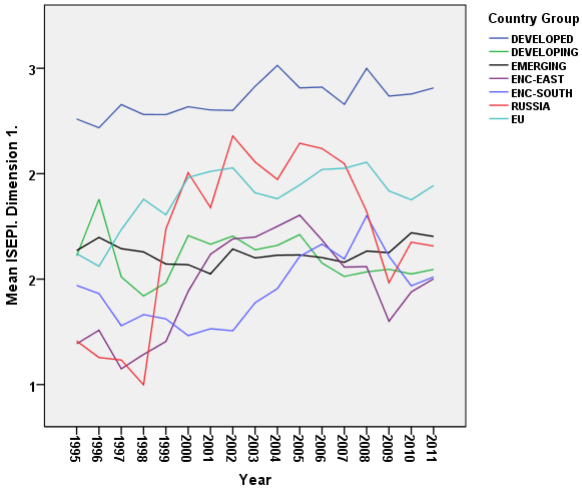
Descriptives 2011.

DEVELOPED	Mean	Std.Deviation	Range	Skewness
	2.41	1.63	5.71	1.71
	Highest		SGP	6.35
			CHE	3.69
			QAT	2.67
	Lowest		JPNS	0.64
			USA	0.94
			AUS	1.55
DEVELOPING	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	1.55	0.36	0.96	0.07
	Highest		KAZ	2.06
			AGO	1.87
			NGA	1.80
	Lowest		KEN	1.10
			COL	1.15
			SEN	1.29
EMERGING	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	1.70	0.53	1.88	0.47
	Highest		MYS	2.74
			THA	2.40
			VNM	2.23
	Lowest		TURF	0.86
			BRA	1,22
			ZAF	1,22
ENC-EAST	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	2.31	0.20	0.44	-0.53
	Highest		AZE	2.32
			BLR	1.62
			MDA	1.49
	Lowest		ARM	0.80
			UKR	1.39
			GEO	1.39
ENC-SOUTH	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	1.51	0.45	1.45	0.74
	Highest		LBY	2.33
			LBN	2.05
			ISR	1.69
	Lowest		EGY	0.88
			SYR	1.18
			DZA	1.24
RUSSIA	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	1.66	---	---	---
EU	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	1,94	1.28	7.00	2.43
	Highest		LUX	7.00
			BEL	3.54
			MLT	3.32
	Lowest		GRC	0.00
			ITA	0.69
			PRT	0.89

Comparison 1995-2011.



Evolution 1995-2011.



Box-plot 2011.

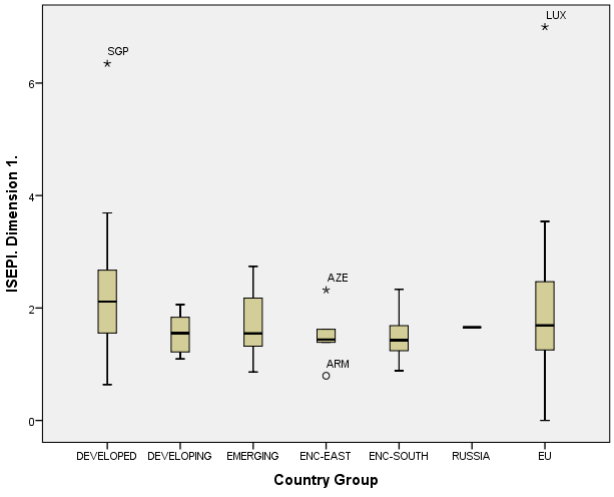


Table A.4. ISEPI I2. Costs and prices. Main Results.

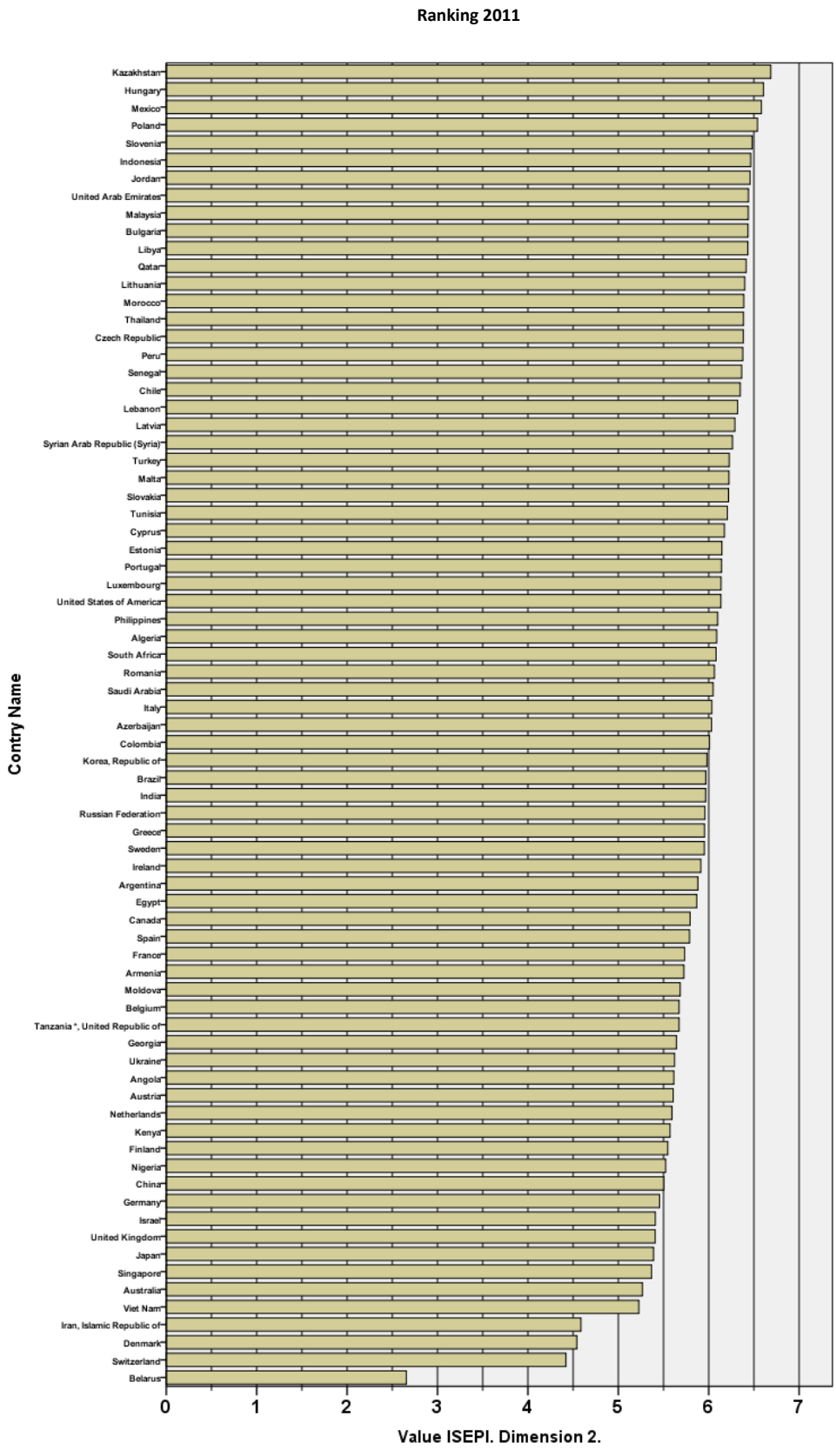
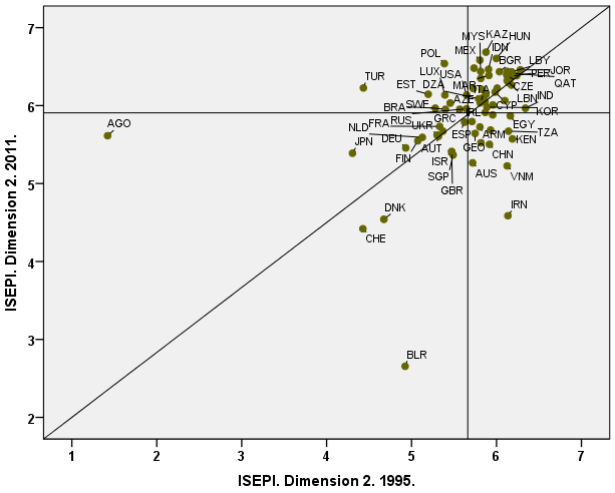


Table A.4. ISEPI I2. Costs and prices. Main Results. (Cont.).

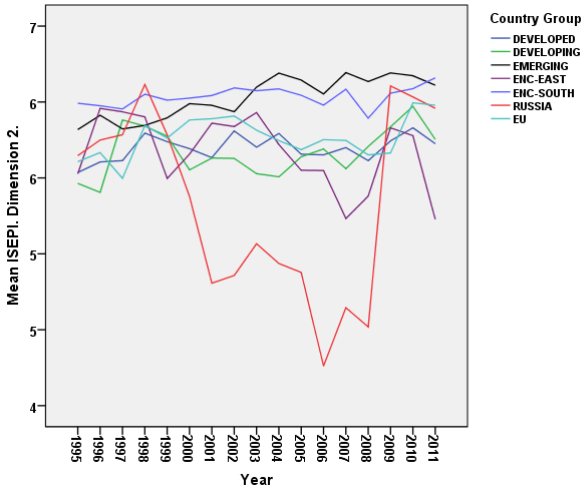
Descriptives 2011.

DEVELOPED	Mean	Std.Deviation	Range	Skewness
	5.73	0.62	2.02	-0.92
	Highest		ARE	6.44
			QAT	6.42
			USA	6.13
	Lowest		CHE	4.42
			AUS	5.27
			SGP	5.37
DEVELOPING	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	5.75	0.63	2.10	-0.42
	Highest		KAZ	6.69
			SEN	6.36
			COL	6.01
	Lowest		IRN	4.59
			NGA	5.52
			KEN	5.57
EMERGING	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	6.11	0.38	1.36	-1.10
	Highest		MEX	6.58
			IDN	6.46
			MYS	6.44
	Lowest		VNM	5.23
			IND	5.97
			BRA	5.97
ENC-EAST	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	5.23	1.27	3.38	-2.37
	Highest		AZE	6.03
			ARM	5.73
			MDA	5.69
	Lowest		BLR	2.66
			UKR	5.62
			GEO	5.64
ENC-SOUTH	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	6.16	0.34	1.05	-1.61
	Highest		JOR	6.46
			LBY	6.43
			MAR	6.39
	Lowest		ISR	5.41
			EGY	5.87
			DZA	6.09
RUSSIA	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	5.96	---	---	---
EU	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	5.98	0.45	2.06	-1.25
	Highest		HUN	6.60
			POL	6.54
			SVN	6.48
	Lowest		DNK	4.54
			GBR	5.41
			DEU	5.46

Comparison 1995-2011.



Evolution 1995-2011.



Box-plot 2011.

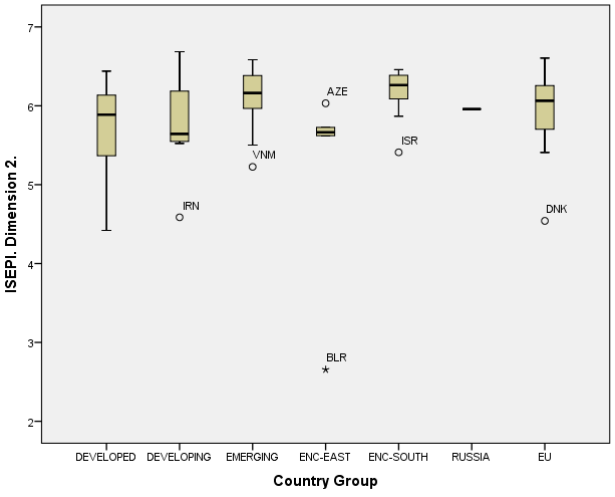


Table A.5. ISEPI I3. Productivity and human capital. Main Results.

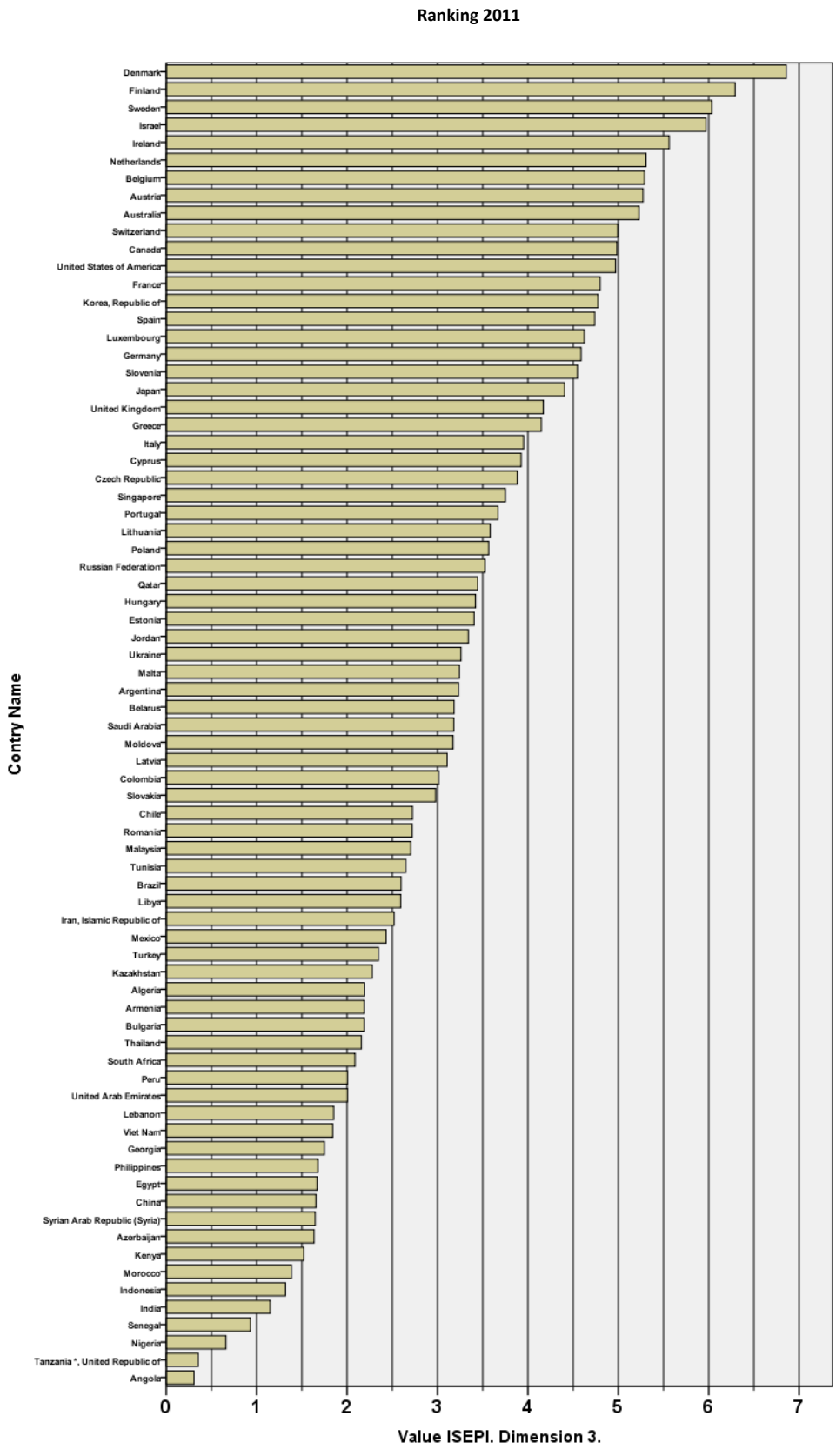
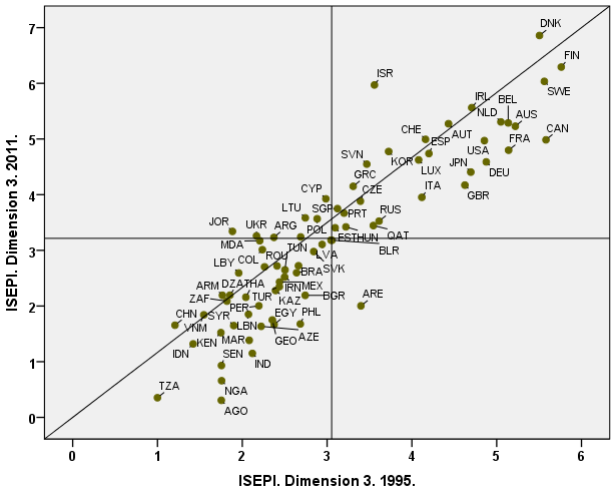


Table A.5. ISEPI I3. Productivity and human capital. Main Results. (Cont.).

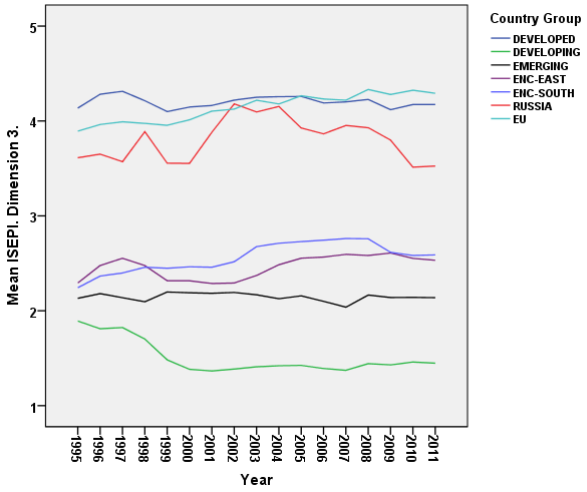
Descriptives 2011.

DEVELOPED	Mean	Std.Deviation	Range	Skewness
	4.17	1.05	3.23	-1.04
	Highest		AUS	5.23
			CHE	4.99
			CAN	4.98
	Lowest		ARE	2.00
			SAU	3.18
			QAT	3.44
DEVELOPING	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	1.45	1.05	2.71	0.37
	Highest		COL	3.01
			IRN	2.52
			KAZ	2.28
	Lowest		AGO	0.31
			TZA	0.35
			NGA	0.66
EMERGING	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	2.14	0.58	2.08	0.03
	Highest		ARG	3.23
			CHL	2.72
			MYS	2.70
	Lowest		IND	1.15
			IDN	1.32
			CHN	1.66
ENC-EAST	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	2.53	0.76	1.63	-0.21
	Highest		UKR	3.26
			BLR	3.18
			MDA	3.17
	Lowest		AZE	1.63
			GEO	1.75
			ARM	2.19
ENC-SOUTH	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	2.59	1.41	4.59	2.03
	Highest		ISR	5.97
			JOR	3.34
			TUN	2.65
	Lowest		MAR	1.38
			SYR	1.65
			EGY	1.67
RUSSIA	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	3.53	---	---	---
EU	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	4.29	1.13	4.67	0.42
	Highest		DNK	6.86
			FIN	6.29
			SWE	6.04
	Lowest		BGR	2.19
			ROU	2.72
			SVK	2.98

Comparison 1995-2011.



Evolution 1995-2011.



Box-plot 2011.

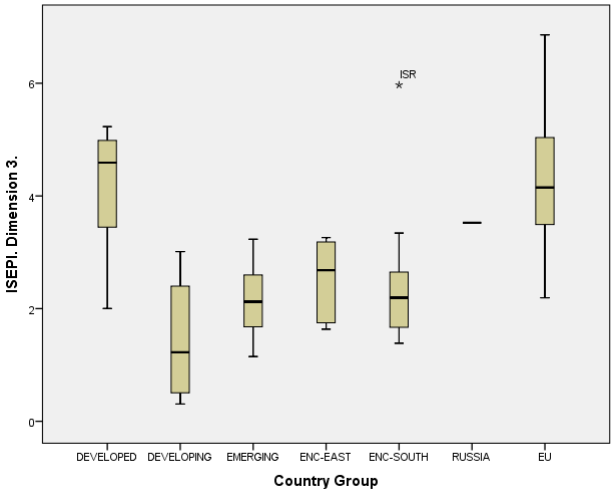


Table A.6. ISEPI I4. Technological and innovative capacity. Main Results.

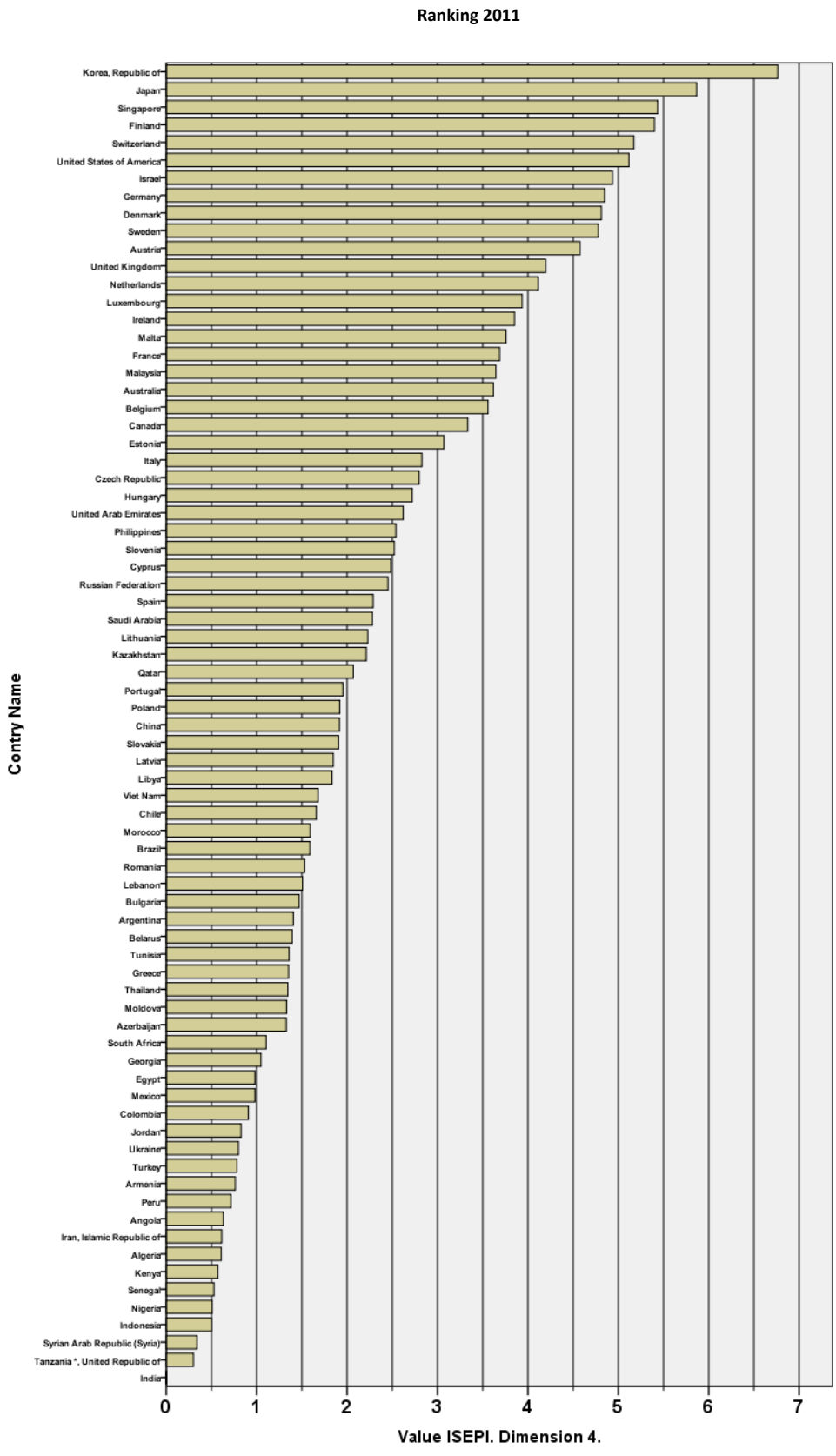
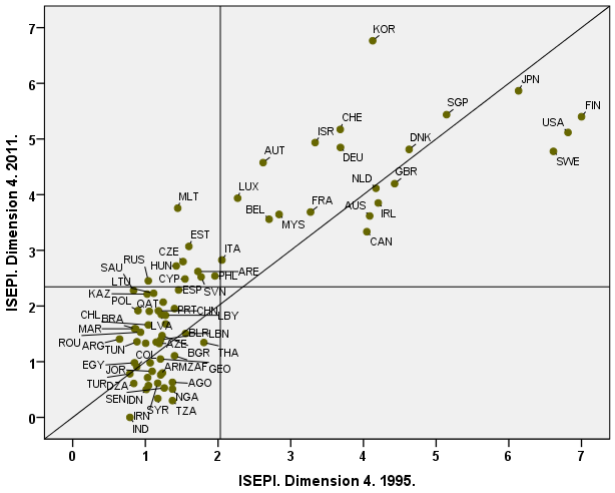


Table A.6. ISEPI I4. Technological and innovative capacity. Main Results. (Cont.).

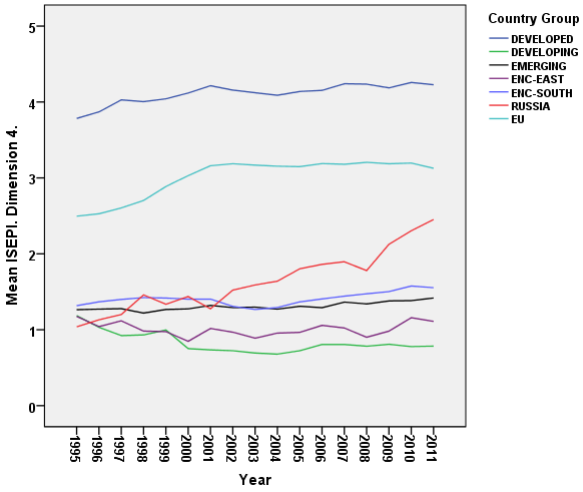
Descriptives 2011.

DEVELOPED	Mean	Std.Deviation	Range	Skewness
	4.23	1.65	4.70	0.05
	Highest		KOR	6.77
			JPN	5.87
			SGP	5.44
	Lowest		QAT	2.07
			SAU	2.28
			ARE	2.62
DEVELOPING	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	0.78	0.60	1.91	2.41
	Highest		KAZ	2.21
			COL	0.91
			AGO	0.63
	Lowest		TZA	0.30
			NGA	0.51
			SEN	0.53
EMERGING	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	1.42	0.91	3.65	1.00
	Highest		MYS	3.65
			PHL	2.54
			CHN	1.91
	Lowest		IND	0.00
			IDN	0.50
			PER	0.71
ENC-EAST	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	1.11	0.28	0.63	-0.38
	Highest		BLR	1.39
			MDA	1.33
			AZE	1.33
	Lowest		ARM	0.76
			UKR	0.80
			GEO	1.05
ENC-SOUTH	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	1.55	1.36	4.60	2.27
	Highest		ISR	4.94
			LBY	1.83
			MAR	1.59
	Lowest		SYR	0.34
			DZA	0.61
			JOR	0.83
RUSSIA	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	2.45	---	---	---
EU	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	3.13	1.19	4.05	0.23
	Highest		FIN	5.40
			DEU	4.85
			DNK	4.81
	Lowest		GRC	1.35
			BGR	1.47
			ROU	1.53

Comparison 1995-2011.



Evolution 1995-2011.



Box-plot 2011.

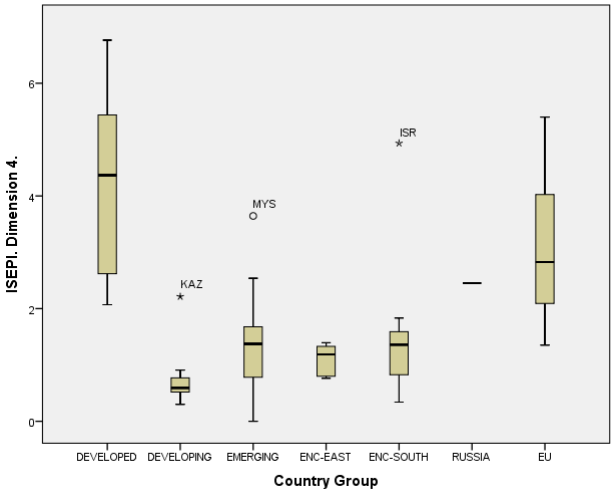


Table A.7. ISEPI I5. Business-friendly environment. Main Results.

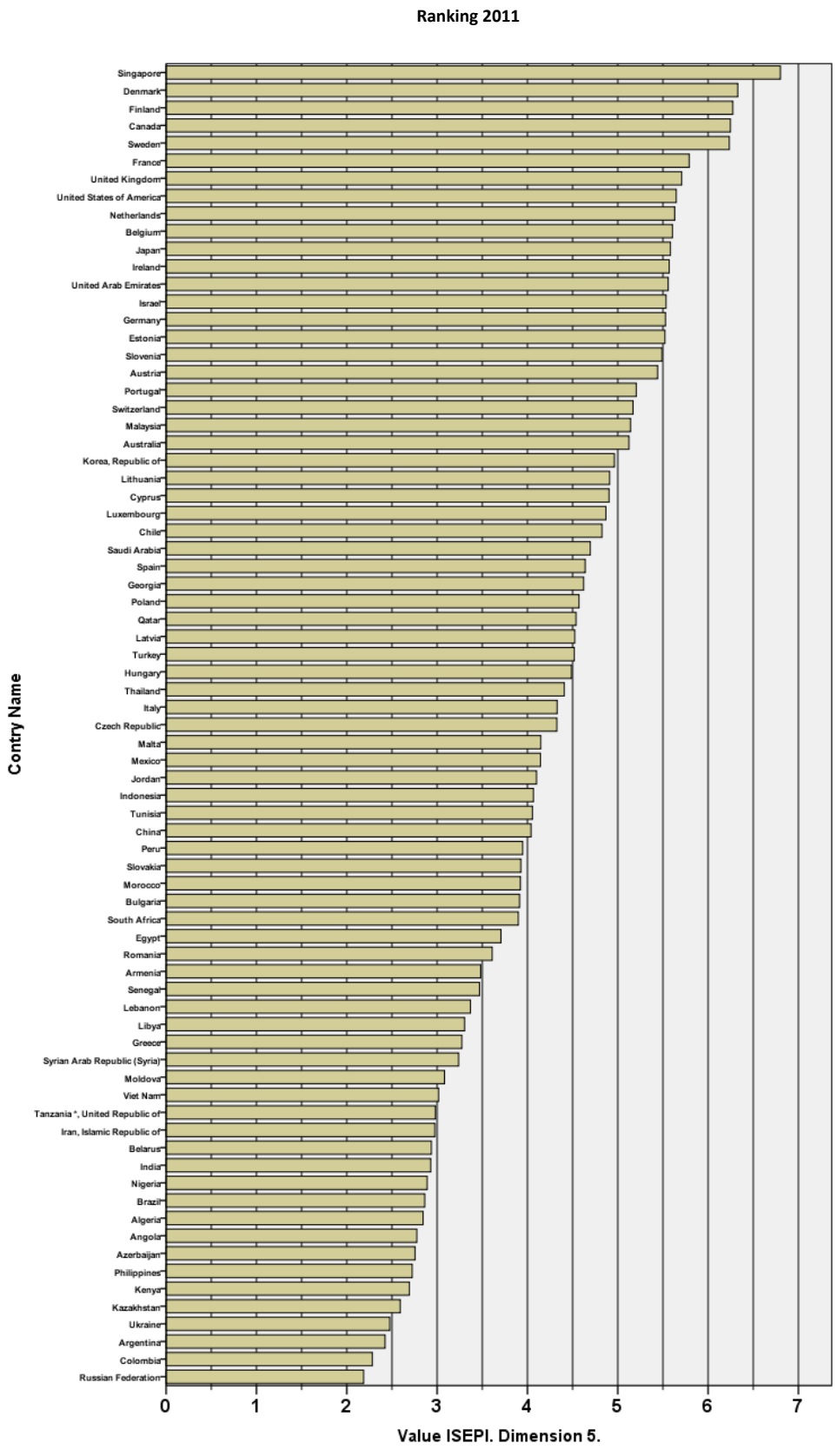
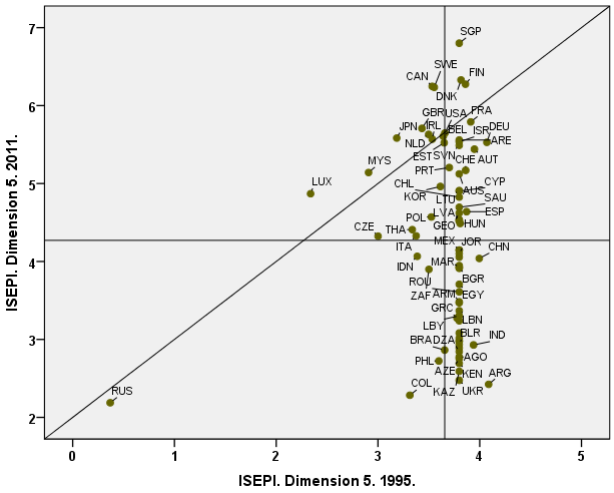


Table A.7. ISEPI I5. Business-friendly environment. Main Results. (Cont.).

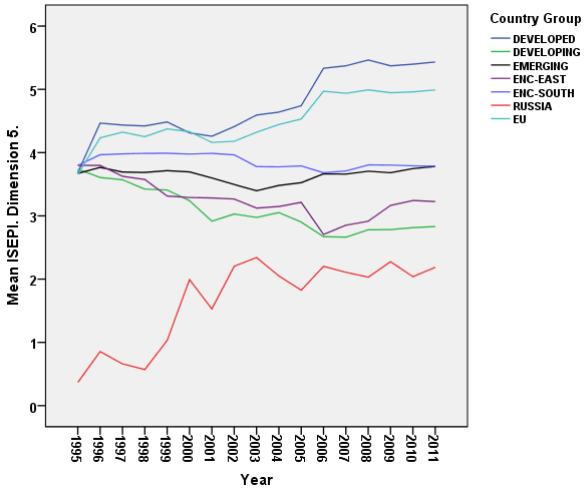
Descriptives 2011.

DEVELOPED	Mean	Std.Deviation	Range	Skewness
	5.43	0.70	2.26	0.76
	Highest		SGP	6.80
			CAN	6.25
			USA	5.65
	Lowest		QAT	4.54
			SAU	4.70
			KOR	4.96
DEVELOPING	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	2.83	0.35	1.19	0.39
	Highest		SEN	3.47
			TZA	2.98
			IRN	2.98
	Lowest		COL	2.28
			KAZ	2.59
			KEN	2.69
EMERGING	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	3.78	0.85	2.72	-0.17
	Highest		MYS	5.14
			CHL	4.83
			TUR	4.52
	Lowest		ARG	2.42
			PHL	2.72
			BRA	2.86
ENC-EAST	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	3.23	0.76	2.15	1.48
	Highest		GEO	4.62
			ARM	3.48
			MDA	3.08
	Lowest		UKR	2.48
			AZE	2.75
			BLR	2.94
ENC-SOUTH	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	3.79	0.78	2.69	1.44
	Highest		ISR	5.54
			JOR	4.10
			TUN	4.06
	Lowest		DZA	2.84
			SYR	3.24
			LBY	3.30
RUSSIA	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	2.19	---	---	---
EU	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	4.99	0.83	3.06	-0.23
	Highest		DNK	6.33
			FIN	6.27
			SWE	6.23
	Lowest		GRC	3.27
			ROU	3.61
			BGR	3.91

Comparison 1995-2011.



Evolution 1995-2011.



Box-plot 2011.

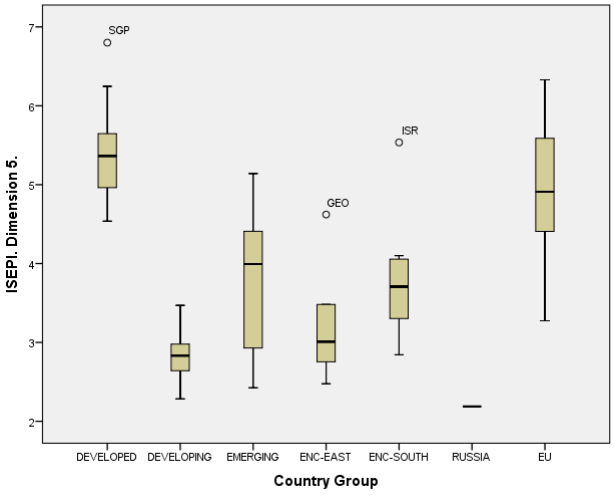


Table A.8. ISEPI I6. Quality of life and labour market conditions. Main Results.

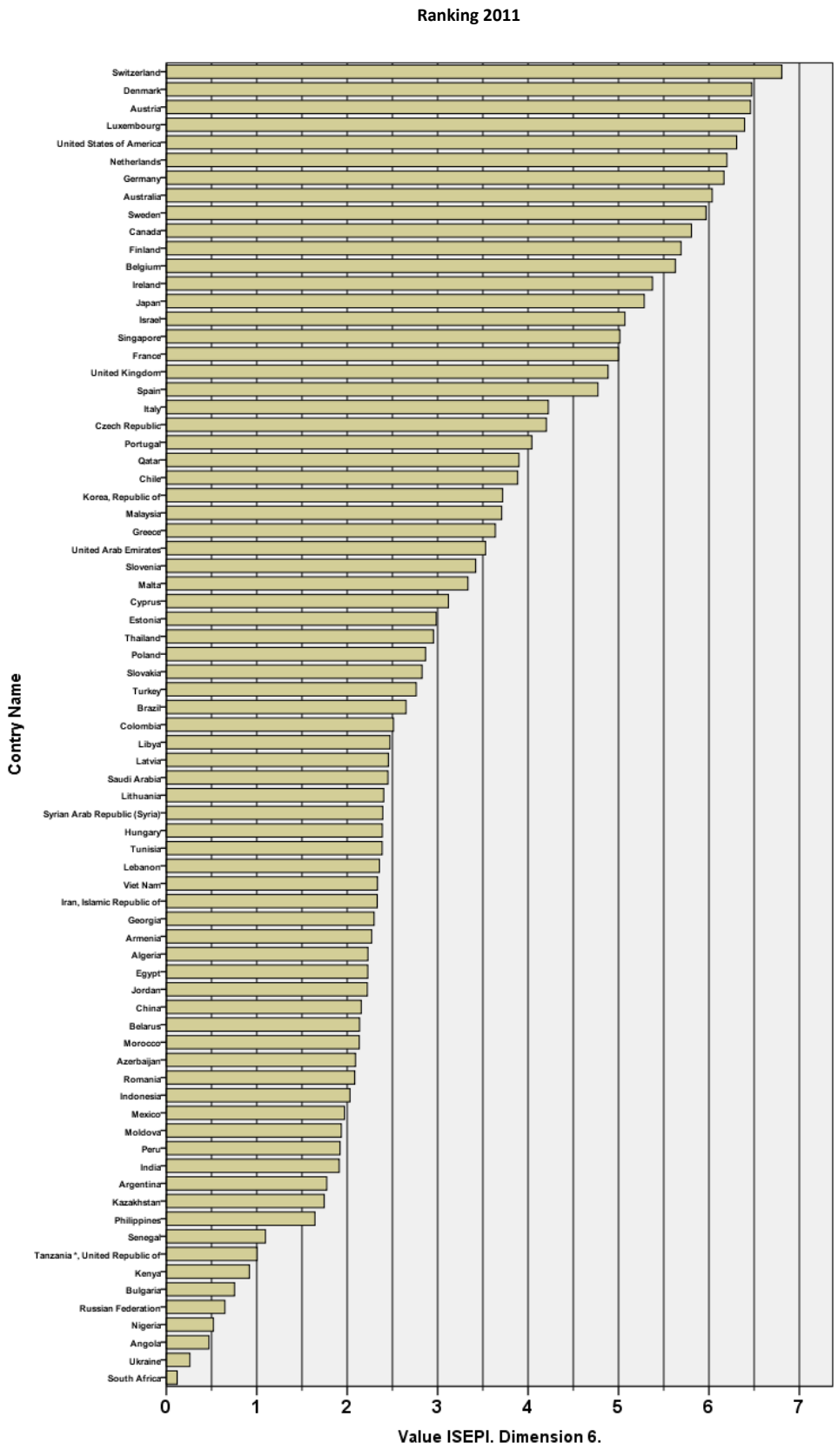
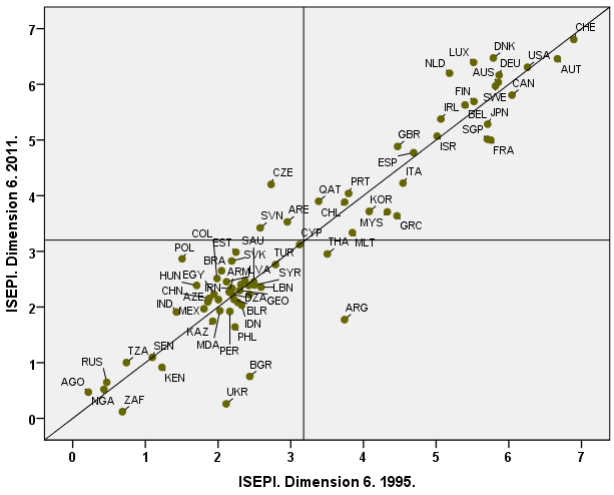


Table A.8. ISEPI I6. Quality of life and labour market conditions. Main Results. (Cont.).

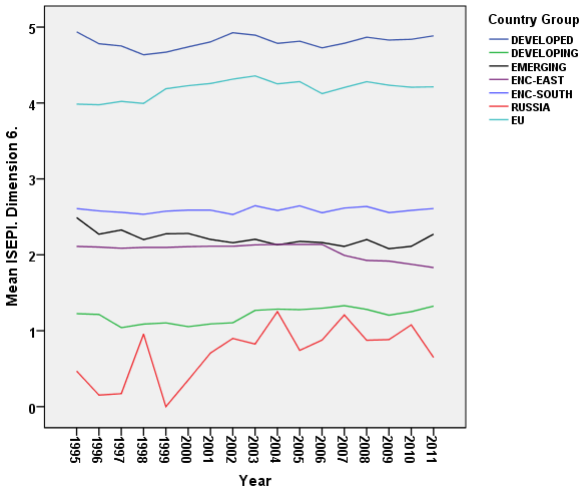
Descriptives 2011.

DEVELOPED	Mean	Std.Deviation	Range	Skewness
	4.88	1.42	4.35	-0.35
	Highest		CHE	6.81
			USA	6.31
			AUS	6.04
	Lowest		SAU	2.45
			ARE	3.53
			KOR	3.72
DEVELOPING	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	1.32	0.78	2.04	0.60
	Highest		COL	2.51
			IRN	2.33
			KAZ	1.75
	Lowest		AGO	0.47
			NGA	0.52
			KEN	0.92
EMERGING	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	2.27	0.93	3.76	-0.32
	Highest		CHL	3.88
			MYS	3.71
			THA	2.95
	Lowest		ZAF	0.12
			PHL	1.64
			ARG	1.77
ENC-EAST	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	1.83	0.78	2.04	-2.30
	Highest		GEO	2.30
			ARM	2.27
			BLR	2.14
	Lowest		UKR	0.26
			MDA	1.93
			AZE	2.09
ENC-SOUTH	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	2.61	0.93	2.94	-0.16
	Highest		ISR	5.07
			LBY	2.47
			SYR	2.39
	Lowest		MAR	2.13
			JOR	2.22
			EGY	2.23
RUSSIA	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	0.65	---	---	---
EU	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	4.21	1.61	5.72	-0.16
	Highest		DNK	6.47
			AUT	6.46
			LUX	6.39
	Lowest		BGR	0.75
			ROU	2.08
			HUN	2.39

Comparison 1995-2011.



Evolution 1995-2011.



Box-plot 2011.

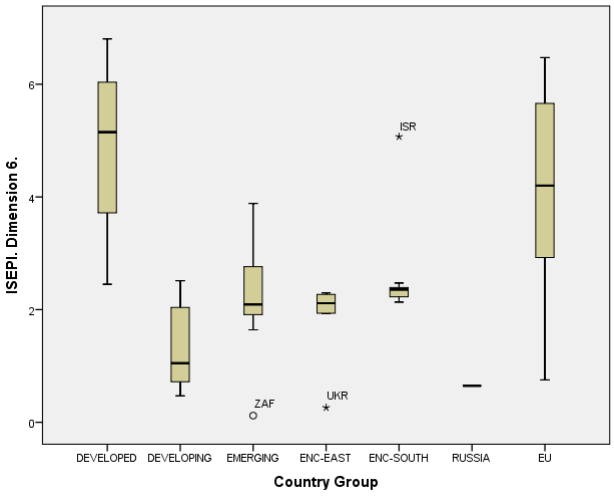


Table A.9. ISEPI I7. Market potential. Main Results.

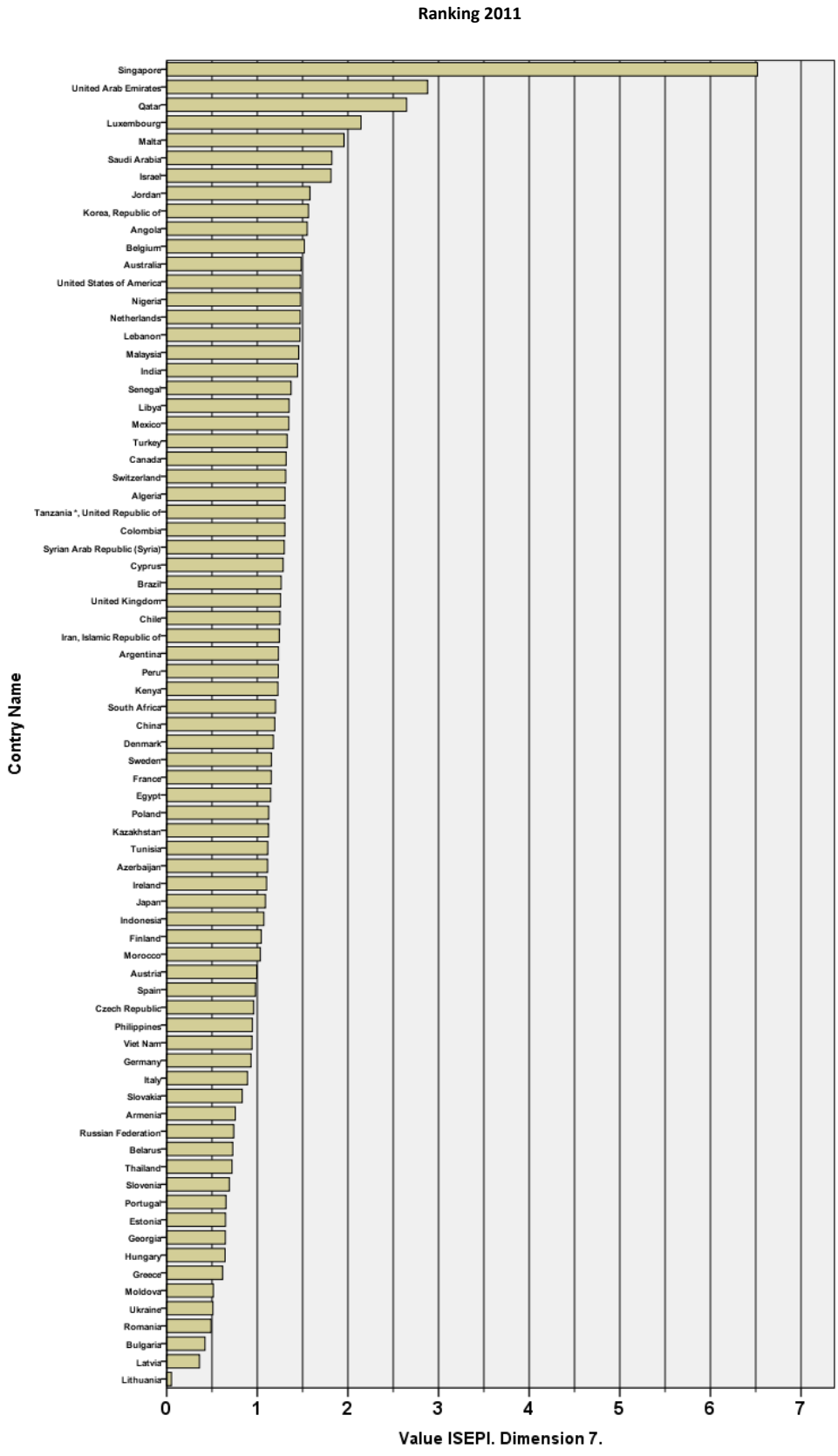
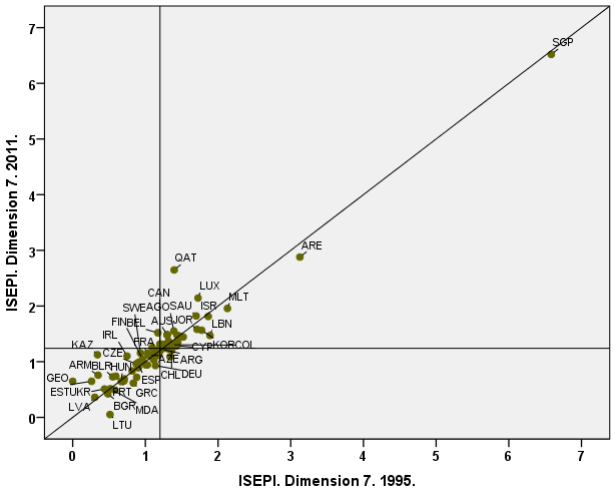


Table A.9. ISEPI I7. Market potential. Main Results. (Cont.).

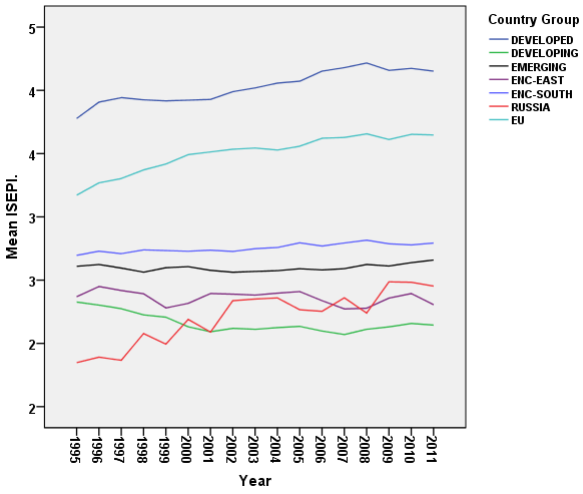
Descriptives 2011.

DEVELOPED	Mean	Std.Deviation	Range	Skewness
	2.21	1.62	5.43	2.48
	Highest		SGP	6.52
			ARE	2.88
			QAT	2.65
	Lowest		JPN	1.09
			CHE	1.31
			CAN	1.32
DEVELOPING	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	1.33	0.14	0.43	0.39
	Highest		AGO	1.55
			NGA	1.48
			SEN	1.37
	Lowest		KAZ	1.12
			KEN	1.23
			IRN	1.24
EMERGING	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	1.19	0.21	0.74	-0.92
	Highest		MYS	1.46
			IND	1.44
			MEX	1.35
	Lowest		THA	0.72
			VNM	0.94
			PHL	0.95
ENC-EAST	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	0.71	0.22	0.60	1.33
	Highest		AZE	1.11
			ARM	0.76
			BLR	0.73
	Lowest		UKR	0.51
			MDA	0.51
			GEO	0.65
ENC-SOUTH	**Mean**	**Std.Deviation**	**Range**	**Skewness**
		1.35	0.78	0.71
	Highest		ISR	1.81
			JOR	1.58
			LBN	1.47
	Lowest		MAR	1.03
			TUN	1.11
			EGY	1.15
RUSSIA	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	0.74	---	---	---
EU	**Mean**	**Std.Deviation**	**Range**	**Skewness**
	0.98	0.46	2.09	0.54
	Highest		LUX	2.14
			MLT	1.96
			BEL	1.52
	Lowest		LTU	0.05
			LVA	0.36
			BGR	0.42

Comparison 1995-2011.



Evolution 1995-2011.



Box-plot 2011.