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Analysis of EU Member States' strengths and weaknesses in the 2016 SMEs scoreboard

Analysis based on robust clustering

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Abstract

The European Commission's Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW), with the scientific support by the European Commission Joint Research Centre (JRC), assesses the Performance of Small and Medium Enterprises in Europe, depending on the performance in the ten principles of: (1) Entrepreneurship, (2) 'Second chance', (3) 'Think small first', (4) 'Responsive administration', (5) State aid & public procurement, (6) Access to finance, (7) Single market, (8) Skills and innovation, (9) Environment, and (10) Internationalisation. This JRC technical report adopts a robust consensus clustering methodology to group European countries in 5 robust Clusters, based on similar performance in these principles. Then, Cluster average values are exploited to analyse strengths and weaknesses of European countries within the Small Business Act principle and to derive a prioritization setting as well as a benchmarking tool to guide European Member States in improving along the ten principles.

1 Introduction

In 2008 the EU Council of Ministers has officially endorsed the Small Business Act for Europe (SBA), recognizing the central role of the Small and Medium Enterprises (SMEs) in the EU28 economy and aiming to improve the overall approach to entrepreneurship specific to the SMEs.

Since 2008 the European Commission's Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW) produces the SME Performance Review. This document includes, among others, the SBA country fact sheets whose main purpose is to describe the performance of the SMEs across the EU28 MSs using quantitative indicators that cover the broad range of ten SBA principles such as: (1) Entrepreneurship, (2) 'Second chance', (3) 'Think small first', (4) 'Responsive administration', (5) State aid & public procurement, (6) Access to finance, (7) Single market, (8) Skills and innovation, (9) Environment, and (10) Internationalisation. Due to statistical affinities between indicators included in the principles: (3) 'Think small first' and (4) 'Responsive administration', combined with a small number of indicators within the former principle, both of them have been merged into a single statistical dimension. Consequently, the ten aforementioned SBA principles are framed into nine dimensions, each populated with four up to twelve indicators (per principle).

Since 2011, the SBA Fact sheets are produced by DG GROW with scientific support by the Joint Research Centre (JRC). The monitoring and statistical support for the last edition, the 2016, has been recently published (Stano and Ghisetti, 2016).

The current report exploits a robust consensus clustering of EU28 countries to highlight the main strengths and weaknesses each country faces when compared to both EU28 and its Cluster's averages. Such analysis can help Member States in prioritizing their actions towards improvements in their weaknesses as well as in providing a proper, realistic and ambitious enough benchmarking.

Section 2 is devoted to identification and analysis of the five identified Clusters to highlight the common features as well as the main differences that characterize each of the five Clusters. The performance throughout the principles of the SBA Fact sheets is analysed in this Section.

Section 3 analyses each principles for the five Clusters. For each country strengths and weaknesses are identified depending on both EU28 average values as well as specific Cluster's performance.

Section 4 provides conclusive remarks and suggests conceptual suggestions on how public policies can drive improvements in selected principles of the Small Business Act, by accounting for the main risks of policy failures and sub-optimal outcomes that may arise in the absence of a coherent intervention.

2 Descriptive analysis of the clusters and cluster identification

Results of the robust consensus clustering exercise conducted in previous JRC analysis (Stano, 2017 forthcoming) outlined the existence of five robust consensus clusters of EU28 countries:

- Cluster 1: Estonia, Latvia, Lithuania;
- Cluster 2: Cyprus, France, Germany, Luxembourg, Malta, Slovenia;
- Cluster 3: Austria, Belgium, Denmark, Finland, Ireland, The Netherlands, Portugal, Sweden, United Kingdom;
- Cluster 4: Bulgaria, Czech Republic, Croatia, Greece, Hungary, Poland, Romania, Slovakia;
- Cluster 5: Italy, Spain.

The analysis conducted in this section is based on the Clusters identified in the map Figure 1, according to the analysis of the robust consensus Clusters methodology summarized in Figure 2.

The first striking observation that can be made by looking at the results of Figure 2 is the existence of two very much isolated clusters: Cluster 1 (Estonia, Latvia, Lithuania) and Cluster 5 (Italy, Spain) which are very weakly associated with every country outside their own cluster. Both clusters are very small and each coincides with a particular region of Europe, Baltic States and West Mediterranean Latin countries (without France) respectively.

Secondly, we can observe that, with the exception of Cluster 3, the associations between clusters (i.e., between countries within two separate clusters) are very weak. This means that countries in Clusters 1 and 2 are well separated from those in Clusters 4 and 5.

Cluster 3 countries instead are very well connected to countries in Cluster 2, through high correlations with Luxembourg, Germany, Slovenia and Cyprus. This is quite natural as continuous data are rarely clear-cut separated, thus grouping necessarily leads to the creation of overlapping clusters. Nevertheless, the unclear character of the borders defining the group requires being cautious about driving separate messages for Cluster 2 and Cluster 3.

Thirdly, we notice that Clusters are structurally different: Cluster 3 is very homogeneous with all the countries within it being very strongly associated to each other, while Cluster 2 and Cluster 4 are more heterogeneous with highly varying degree of association between the countries within it. Still, associations are high enough to be qualified in the same Cluster, but some countries are more connected to certain countries in the same Cluster and less connected to others.

Most importantly we observe that Greece links Cluster 4 with Cluster 5. Indeed in 36% of scenarios it belongs to the same Cluster as Spain and in 45% as Italy. Furthermore, connections between Greece and Cluster 5 are the strongest connections that Cluster 5 have with any of the EU28 countries.

Similarly, Luxembourg and Malta, belonging to Cluster 2, are the only two countries with connections to Cluster 1 countries, with a percentage of 45.

All in all, the structure of the 5 Clusters reported into Figure 2 is not so clear cut, as cross-cluster associations are depicted, as it is in the case of Greece, Malta and Luxembourg. More precisely, Luxembourg and Malta can be considered as bridges between Cluster 1 and Cluster 2, as in 45% of the robust clustering exercise, they would have been associated with Estonia, Latvia, Lithuania.

Similarly, Greece surely belongs to Cluster 4, but it reports quite good associations with Italy and Spain, thus also serving as a bridge to Cluster 5.

Consequently, the final cluster structure that is going to serve for the cluster analysis proposed in this methodological section will be guided by the following clusters:

- Cluster 1: Estonia, Latvia, Lithuania, *Luxembourg, Malta*;
- Cluster 2: Cyprus, France, Germany, *Luxembourg, Malta*, Slovenia;
- Cluster 3: Austria, Belgium, Denmark, Finland, Ireland, The Netherlands, Portugal, Sweden, United Kingdom;
- Cluster 4: Bulgaria, Czech Republic, Croatia, *Greece*, Hungary, Poland, Romania, Slovakia;
- Cluster 5: *Greece*, Italy, Spain.

In other words, in constructing cluster averages the values of the three bridging countries, i.e. Luxembourg, Malta and Greece, will be used two times. The first time is when constructing the average value of the Cluster they belong to, i.e. Cluster 2 in the case of Luxembourg and Malta, and Cluster 4 in the case of Greece.

The second time those 3 values are used is when constructing the average values for the Clusters they are serving are bridges to smoothen the distinction between the Cluster, as such distinction was not so clear cut (those 3 Countries show sufficient connections to the external Cluster they bridge). For instance, Luxembourg's values in the 9 separate dimensions will be used to construct the average value of both Cluster 1 (together with Estonia, Latvia, Lithuania and Malta) and the average value of Cluster 2 (together with Cyprus, France, Germany, Malta and Slovenia). This double counting will allow providing a smoother picture that better fits the picture provided into Figure 2, where ambiguous borders are found in the case of Greece, Luxembourg and Malta.

Figure 1. Cluster identification

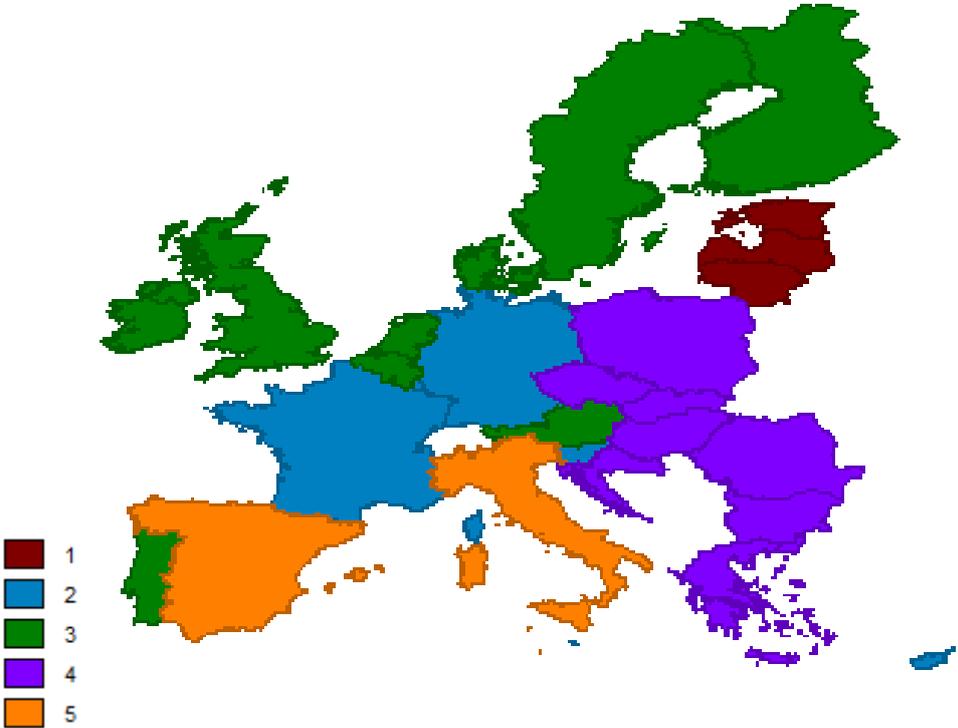


Figure 2. Robust consensus clustering \mathcal{P}^*

	EE	LV	LT	LU	MT	DE	FR	SL	CY	AT	BE	DK	FI	IE	NL	PT	SE	UK	BG	HR	CZ	HU	PL	RO	SK	EL	IT	ES
EE																												
LV	100%																											
LT	100%	100%																										
LU	45%	45%	45%																									
MT	45%	45%	45%	91%																								
DE	27%	27%	27%	55%	45%																							
FR	27%	27%	27%	55%	45%	91%																						
SL	27%	27%	27%	55%	45%	100%	91%																					
CY	36%	36%	36%	91%	82%	64%	64%	64%																				
AT	27%	27%	27%	64%	55%	64%	55%	64%	73%																			
BE	18%	18%	18%	55%	45%	55%	45%	55%	64%	91%																		
DK	18%	18%	18%	55%	45%	55%	45%	55%	64%	91%	100%																	
FI	18%	18%	18%	55%	45%	55%	45%	55%	64%	91%	100%	100%																
IE	18%	18%	18%	55%	45%	55%	45%	55%	64%	91%	100%	100%	100%															
NL	18%	18%	18%	55%	45%	55%	45%	55%	64%	91%	100%	100%	100%	100%														
PT	18%	18%	18%	55%	45%	55%	45%	55%	64%	91%	100%	100%	100%	100%	100%													
SE	18%	18%	18%	55%	45%	55%	45%	55%	64%	91%	100%	100%	100%	100%	100%	100%												
UK	18%	18%	18%	55%	45%	55%	45%	55%	64%	91%	100%	100%	100%	100%	100%	100%	100%											
BG	9%	9%	9%	9%	18%	18%	18%	18%	9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
HR	27%	27%	27%	27%	36%	36%	45%	36%	18%	9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
CZ	36%	36%	36%	55%	64%	45%	45%	45%	45%	18%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%
HU	27%	27%	27%	27%	36%	27%	36%	27%	18%	9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PL	9%	9%	9%	9%	18%	18%	18%	18%	9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
RO	9%	9%	9%	9%	18%	18%	18%	18%	9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
SK	36%	36%	36%	55%	64%	45%	45%	45%	45%	18%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%
EL	9%	9%	9%	9%	18%	18%	27%	18%	9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
IT	9%	9%	9%	9%	9%	9%	9%	9%	9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
ES	9%	9%	9%	9%	9%	18%	18%	18%	9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	

Note: Five robust clusters have been identified: (1) Cluster 1: Estonia, Latvia, Lithuania, Luxembourg, Malta; (2) Cluster 2: Cyprus, France, Germany, Luxembourg, Malta, Slovenia; (3) Cluster 3: Austria, Belgium, Denmark, Finland, Ireland, The Netherlands, Portugal, Sweden, United Kingdom; (4) Cluster 4: Bulgaria, Czech Republic, Croatia, Greece, Hungary, Poland, Romania, Slovakia; (5) Cluster 5: Greece, Italy, Spain. Darker colour of a cell signifies stronger association between the corresponding countries. Red border signals the cluster boundaries. The significant yet weak associations between the countries that do not belong to the same cluster are marked with grey colour.

2.1 Analysis of Clusters performance

Figure 3 summarizes a quite complex picture in terms of how the five clusters behave when compared to EU average. For certain principles, such as 'Internationalization', the five Cluster averages are very close to European average. Consequently the choice of benchmarking to provide policy recommendation with respect to either EU average or on Cluster specific performance will not lead to substantially different conclusion.

On the contrary, there are instead principles, such as 'Access to Finance', 'Single Market', 'Skills and Innovation' and 'Environment', in which the variation across the 5 Cluster averages is too high and the difference with respect to EU average too big to accept EU average as a valuable and feasible benchmark for Member States.

Figure 3. Principles and Cluster – EU averages

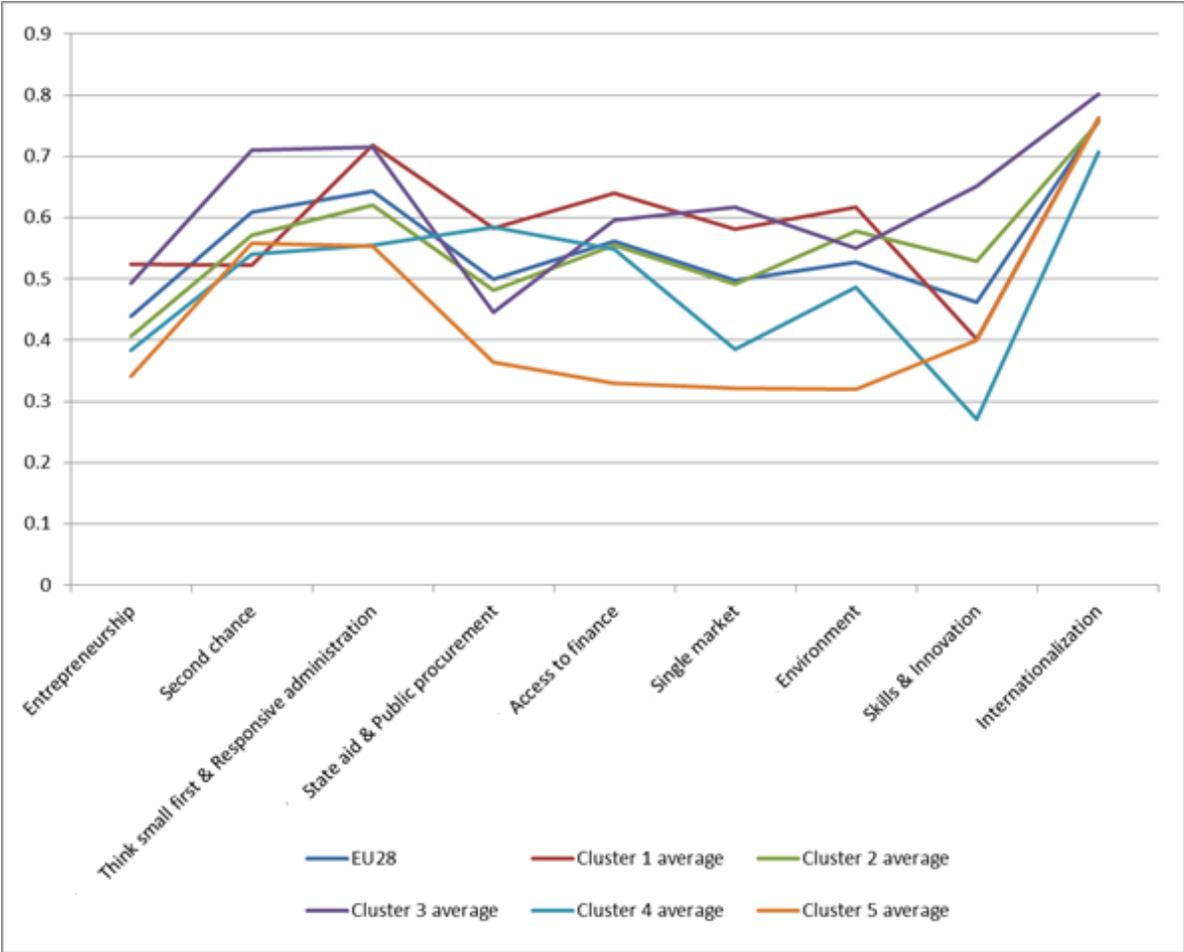
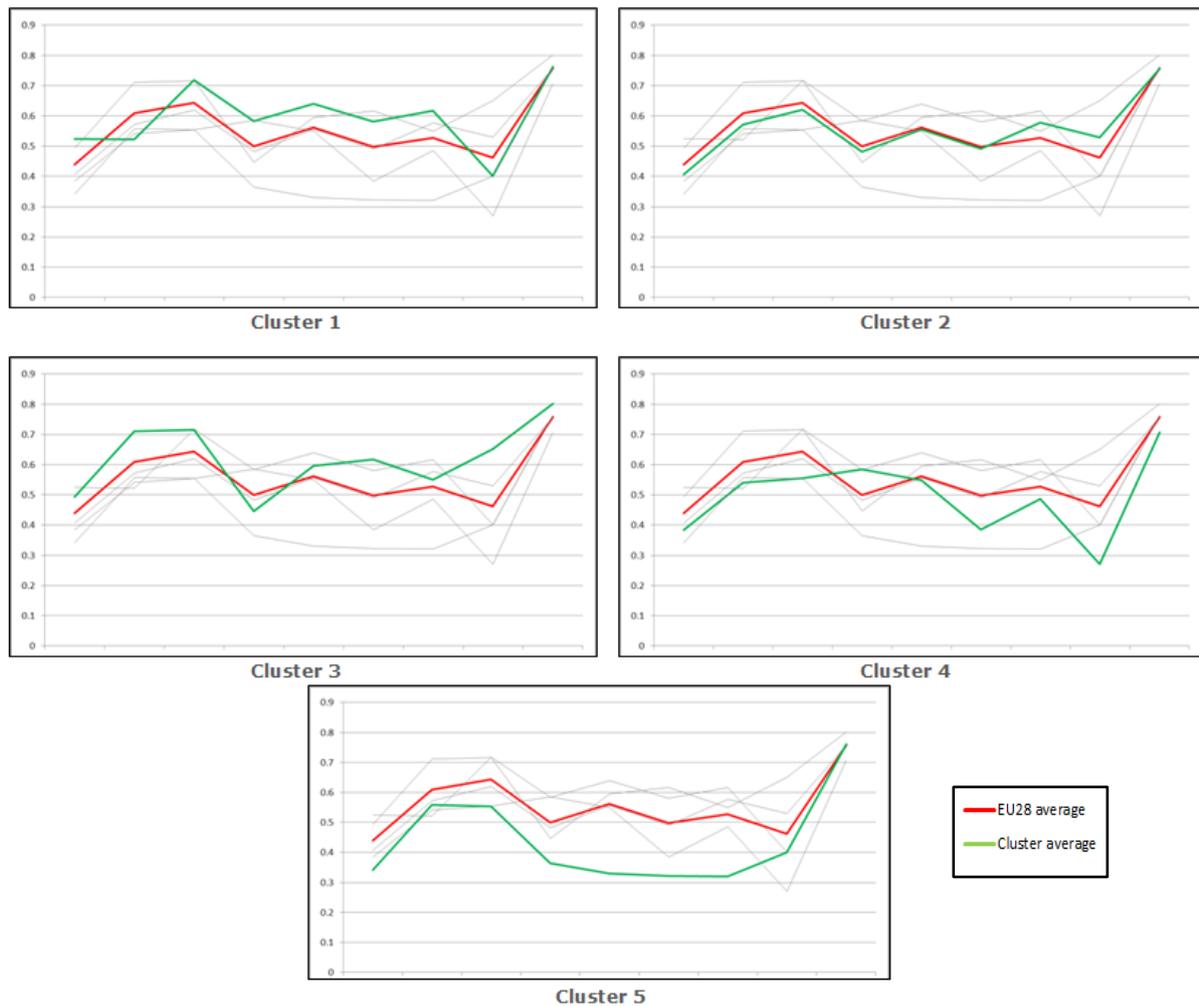


Figure 4 provides a clearer overview on how the five clusters behave with respect to EU average. Overall, Cluster 2 is the closest to the EU average, while Cluster 5 is the farthest to the EU average. In other words, for countries in Cluster 2 taking EU average values as the benchmark would not make much difference than using the Cluster average values. On the contrary, for Cluster 5 benchmarking with respect to EU versus to Cluster 5 average values will make the difference given the large gap in-between.

Figure 4. By Cluster comparisons of principles' values



Cluster 1 is performing better than the EU average in seven out of the nine principles; it is below EU average only for 'Second Chance' and 'Skills and Innovation'. Cluster 2 is better than EU average in 2 principles, 'Environment' and 'Skills & Innovation' and it is very close but below EU average for the remaining principles. Cluster 3 is worse than EU average only in the principle 'State aid & Public Procurement', while it is better than EU average in the remaining 8 principles. Cluster 4 is the exact opposite: it is better than EU average only in the principle 'State aid & Public Procurement', while it is worse than EU average in all the remaining principles. Lastly, Cluster 5 is always worse than the EU average, for some principles it is quite close to it ('Internationalization'), while for some it is very far from it ('Environment').

All in all, it emerges that Clusters' performance in the 9 dimensions are heterogeneous across Clusters and consequently Countries, when compared to EU average values, so that using EU average as a benchmark for all the European countries might be risky: it might not be achievable as a target for countries which are systematically far from it, e.g. countries in Cluster 5, while it might not be enough ambitious for countries which are systematically better than it, e.g. countries in Cluster 3.

To be stressed that the Cluster analysis has been performed on the 9 SBA principles. Consequently the clustering captures countries' common features with respect to SMEs performance and groups together countries sharing similar features. The ultimate goal of such an exercise is to allow for a proper benchmark with respect to the specific dimensions and indicators scrutinized. This implies that countries grouped in the same Cluster certainly can - and actually do - differ in their overall performance with respect to

broader economic aspects. Table 1 reports the GDP per capita in 2015 with EU28 average set equal to 100 for EU countries ranging from the best to the worst value and it assigns the same color to Countries of the same SBA Cluster.

It is evident that the ranking of countries by GDP per capita does not fully reflect the clustering, although some commonalities are depicted. It can be observed that countries in Cluster 3 are generally better than EU28 average, with the only exception of Portugal, and that all countries in Cluster 1, Cluster 4 and Cluster 5 are worse than EU28 average GDP per capita. Cluster 2 is instead very heterogeneous with respect to this dimension.

Table 1. Comparison of Countries, clustering and GDP per capita 2015

Country	Cluster	GDP p.c. 2015
Luxembourg	2	264
Ireland	3	177
Netherlands	3	128
Austria	3	128
Denmark	3	127
Germany	2	124
Sweden	3	124
Belgium	3	119
Finland	3	109
United Kingdom	3	108
France	2	106
Italy	5	96
Spain	5	90
Malta	2	88
Czech Republic	4	87
Slovenia	4	83
Cyprus	2	82
Portugal	3	77
Slovakia	2	77
Estonia	1	75
Lithuania	1	75
Poland	4	69
Greece	4	68
Hungary	4	68
Latvia	1	64
Croatia	4	58
Romania	4	57
Bulgaria	4	47

Note: EU28 average = 100, source: Eurostat

Given the evidence emerged so far, the next section elaborates on the need to exploit the clustering structure of Figure 2 to provide guidance on the appropriate benchmarks. As the principles are also intrinsically different in terms of how fast and easily they can be improved by countries, a separate section for each principle will be provided. More precisely it is discussed how the clustering of countries can be used to profile countries' performance on the nine dimensions with the aim to highlight – country by country with respect to the proper reference group – the level of priority to be assigned in order to improve principles' performance.

3 Analysis of principles by clusters

This section discusses the strengths and weaknesses country face in each of the SBA principles when compared to the average European performance as well as to the average performance of similar and comparable countries, i.e. the Cluster to which the country belongs.

Each sub-section at first visualizes countries' and Cluster's overall performance, and it then provides a Cluster based analysis on the Cluster commonalities and differences with respect to the performance of countries and Clusters in each dimension. Such a Cluster analysis is aimed to recognize, for each country, its main strengths and weaknesses as well as to provide countries with proper and realistic benchmarks: good or even outstanding performance achieved by countries similar, i.e. which belong to the same Cluster.

Such an analysis replicates the figures visualized in the SBA Country Fact sheets and it adds to those figures the Cluster value. As for the SBA Country Fact Sheets, in each Figure the EU average is set to zero and a green bar signals that the country has in the indicator a higher value than the EU average, while a red bar signals a negative performance with respect to the EU average. Building on this, a black line is added to each bar. This black line signals the performance, with respect to EU average, achieved in each indicator on average by the Cluster to which the country belongs. For instance in the case of France having a green bar in one indicator would signal its better than EU average performance, while showing the end of the green bar above the black line would imply a better than EU and also better than its Cluster average performance, in the case of France Cluster 2. This is the case for indicator 'Improvement-driven opportunity entrepreneurial activity' (1.4). On the contrary, a red bar would signal a worse than EU average performance, while a bar ending below the black line would signal a worse than EU and worse than its Cluster average performance. This is the case for France's performance in 'Early-stage entrepreneurial activity' (1.1).

This allows drawing implications which are based on both EU and Cluster average values. In case of too high missing values in the raw data for an indicator, no bar is reported for that country, while only the Cluster mean (black line) is visualized.

To be recalled that three countries are serving as "bridges" in this framework. In particular Luxembourg's and Malta's values will be used two times: when constructing the average value of the Cluster they belong to (Cluster 2) and when constructing the average values for the Clusters they are bridging (Cluster 1). On the one hand, the Cluster analysis assigns those countries to a specific Cluster. On the other hand however the cluster analysis reveals they have strong connections also to countries in the other Cluster. This double counting of these countries to construct Cluster average values allows providing a smoother picture that better fits the no clear cut borders in the country structure outlined into Section 2. In doing that, Luxembourg's and Malta's strengths and weaknesses will be only analyzed with respect to Cluster 2. Their values will however be exploited to provide recommendations for the three countries in Cluster 1 (Estonia, Latvia and Lithuania) and, for this reason, they will be included in all the nine Figures related to Cluster 1 as well, without being commented.

Similarly, Greece's values will be discussed in the context of Cluster 4 (the one to which Greece belong), but its values are also used to construct Cluster 5's average values and, accordingly, Greece will be visualized also in the nine Figures related to Cluster 5, together with Italy and Spain.

The next subsections provide the outlined analysis for each principle of the SBA and, after a general overview on the principles, a by Cluster analysis is provided.

3.1 Analysis of 'Entrepreneurship'

Countries' scores recorded in principle 'Entrepreneurship' are distributed as reported in the map in Figure 12, which shows the quantile distribution of those scores. The map ranges values from the 6 countries coloured in the lightest green, representing the worst performing ones in this dimension (Bulgaria, Croatia, Hungary, Italy, Slovenia and Spain), to the ones in darkest green, which are the best performing ones (Estonia, Latvia, Lithuania, The Netherlands, Portugal and Romania).

Figure 5. Quantile distribution of 'Entrepreneurship' by country



As found in Figure 5 a large range of variation across countries and across Clusters characterizes this principle.

Clusters' average values in the same principle are reported in Figure 6. This map shows that the lowest Cluster average is found for Cluster 5, while the highest Cluster average is obtained by Cluster 1.

Figure 6. Cluster averages for 'Entrepreneurship'



3.1.1 Analysis of 'Entrepreneurship' for Cluster 1

Trends in this area show a heterogeneous picture for the three countries in the Cluster. While all the Baltic countries report high performances in the overall dimension, Latvia and Lithuania are in an ascending trend, but Estonia reports a negative trend.

Overall, countries in the Cluster perform better than EU28 average with a great variation across them: from more than 60% of the indicators (Estonia) up to 90% of them (Latvia).

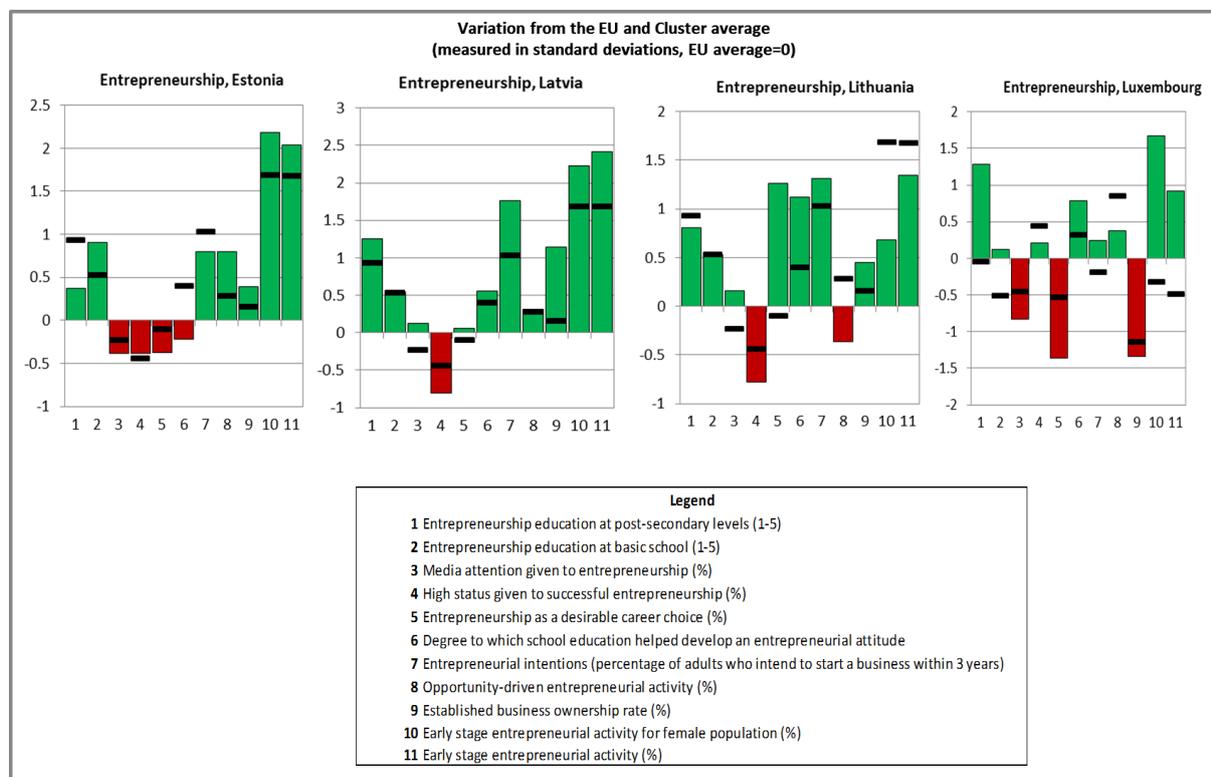
When comparing country specific values in the indicators of this principle interesting evidences are found.

The main weaknesses envisaged for Estonia are in 'media attention given to entrepreneurship' (1.8) and 'entrepreneurship as a desirable career' (1.6), where it performs worse than EU28 and Cluster average. Also, it scores less than the EU28 average, but close to its Cluster average in 'high status given to successful entrepreneurship' (1.7). 'Entrepreneurship education at post-secondary level' (1.9b) and 'entrepreneurial intentions' (1.5) should also constitute improvement areas given the higher achievements of its Cluster peers.

As for Latvia, the country is underperforming both the EU28 and the Cluster average in 'high status given to successful entrepreneurship' (1.7).

Lithuania's weaknesses stand in 'high status given to successful entrepreneurship' (1.7) and 'opportunity-driven entrepreneurial activity' (1.4), where it is below both the EU28 and the Cluster averages. Also, 'entrepreneurship education at post-secondary level' (1.9b) and early stage entrepreneurship (1.1 and 1.2) could constitute moderate priority areas given Lithuania's underperformance compared to the Cluster averages.

Figure 7. Indicators in 'Entrepreneurship' for countries in Cluster 1 compared to cluster and EU average



Latvia is outperforming Cluster and EU28 average in most cases, so it can be considered as a valuable benchmark for most of the indicators.

Estonia's performance in 'entrepreneurship education at basic school' (1.9a) and 'opportunity-driven entrepreneurial activity' (1.4) as well as Lithuania's performance in 'entrepreneurship as a desirable career' (1.7) recommend them as Cluster benchmarks in the respective indicators.

Table 2. Prioritization in Cluster 1, principle 'Entrepreneurship'

Country	Priority area (# indicator)	Main strength (# indicator)
Estonia	1.8; 1.7; 1.6; 1.5	1.9a; 1.4; 1.3; 1.2; 1.1
Latvia	1.7	1.1; 1.2; 1.3; 1.5; 1.8; 1.9b
Lithuania	1.2; 1.3; 1.7	1.5; 1.6; 1.8

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

3.1.2 Analysis of 'Entrepreneurship' for Cluster 2

Cluster 2 also exhibits a rather heterogeneous picture for the six countries composing it:

- Low performance and descending trend: France and Slovenia
- Low performance and ascending trend: Germany
- High performance and descending trend: Luxembourg

Generally, countries in Cluster 2 perform worse than the EU average in the majority of the indicators that constitute the principle 'Entrepreneurship'. Exceptions include Luxembourg with only 3 out of 11 indicators under the EU average followed by France with almost half outperforming indicators. Note that Malta and Cyprus were eliminated from the Figure due to missing values in the raw data; an interpretation on the existing data might lead to inaccurate policy recommendations.

The main priority areas identified for France are in 'entrepreneurship education at basic school' (1.9a), 'media attention given to entrepreneurship' (1.8) and entrepreneurial activity (1.1, 1.2 and 1.3) provided it scores worse than both the EU28 and Cluster average.

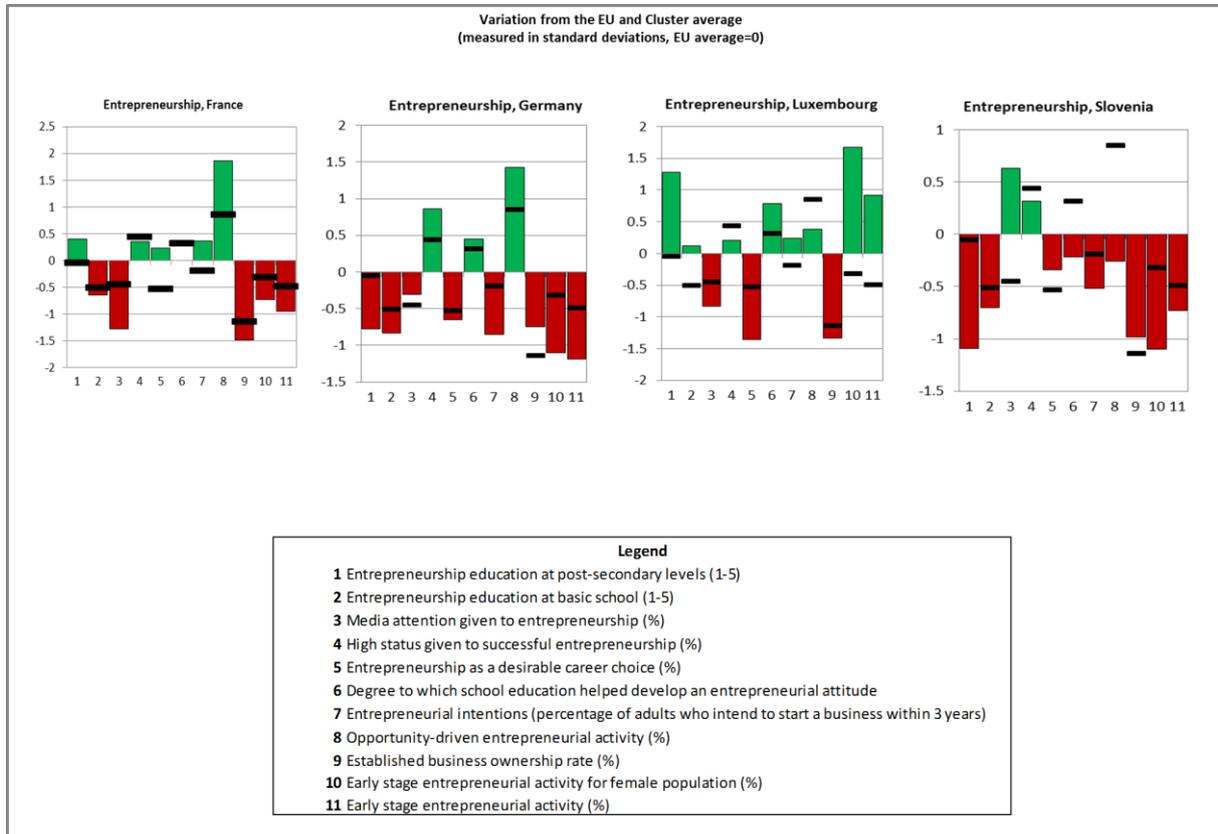
Germany's main weaknesses relate to the entrepreneurial education (1.9a, 1.9b), 'entrepreneurship as a desirable career choice' (1.6), 'entrepreneurial intentions' (1.5) and entrepreneurial activity (1.1 and 1.2). In case of 'media attention given to entrepreneurship' (1.8) and 'established business ownership rate' (1.3) Germany underperforms the EU28 values but performs better than its Cluster's peers.

Luxembourg's main areas of weakness are 'media attention given to entrepreneurship' (1.8), 'entrepreneurship as a desirable career' (1.6) and 'established business ownership rate' (1.3) where it is worse than both the EU28 and Cluster average. In addition, it underperforms the Cluster averages in 'high status given to successful entrepreneurship' (1.7) and 'opportunity-driven entrepreneurial activity' (1.4).

Slovenia is underperforming both the EU28 and the Cluster averages in most of the indicators. It outperforms the EU28 values, but scores worse in the Cluster averages in 'high status given to successful entrepreneurship' (1.7). Its only strength is 'media attention given to entrepreneurship' (1.8). Additionally, even though its values are lower

than the EU28 average, it outperforms those of its Cluster peers in 'established business ownership rate' (1.3).

Figure 8. Indicators in 'Entrepreneurship' for countries in Cluster 2 compared to cluster and EU average



Luxembourg can serve as a benchmark for the remaining countries of its Cluster in most of the indicators. Slovenia can serve as benchmark in 'media attention given to entrepreneurship' (1.8), Germany in 'high status given to successful entrepreneurship' (1.7) and 'opportunity-driven entrepreneurial activity' (1.4) and France in 'entrepreneurship as a desirable career' (1.6) and 'entrepreneurial intentions' (1.5).

Table 3. Prioritization in Cluster 2, principle 'Entrepreneurship'

Country	Priority area (# indicator)	Main strength (# indicator)
France	1.1; 1.2; 1.3; 1.8; 1.9a	1.4; 1.5; 1.6; 1.9b
Germany	1.1; 1.2; 1.3; 1.5; 1.6; 1.8; 1.9a; 1.9b	1.4; 1.7
Luxembourg	1.3; 1.6; 1.8	1.1; 1.2; 1.5; 1.9a; 1.9b
Slovenia	1.1; 1.2; 1.3; 1.4; 1.5; 1.6; 1.9a; 1.9b	1.8

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

3.1.3 Analysis of 'Entrepreneurship' for Cluster 3

Performance and trends of countries in Cluster 3 in the 'Entrepreneurship' dimension generally point out high performances and increasing trends, except for Belgium (low performance and ascending trend), Sweden (low performance and descending trend) and Finland (high performance and descending trend).

Performance in the indicators constituting the dimension relative to the EU28 averages is ranging from 25% (Belgium) to 80% (Portugal). Countries outperforming the EU28 in more than half of the indicators are: Austria and Ireland (60%), Finland, the Netherlands and United Kingdom (50%).

Moving to the main recommendations that emerge from the analysis of the combination of country, Cluster and EU28 averages, several considerations may be drawn.

Austria's weaknesses are reported in 'entrepreneurship education at basic school' (1.9a), 'entrepreneurship as a desirable career' (1.6), 'entrepreneurial intentions' (1.5) and 'opportunity-driven entrepreneurial activity' (1.4) where it performs worse than both the EU28 and the Cluster average. In addition, in 'media attention given to entrepreneurship' (1.8) its Cluster is capable of better achievements.

Belgium is performing worse than both EU28 and Cluster average in the majority of the indicators of the principle and underperforms its Cluster average in 'entrepreneurship education at basic school' (1.9a). Its only strength is 'entrepreneurship education at post-secondary level' (1.9b).

Denmark's main priority areas are related to 'media attention given to entrepreneurship' (1.8), 'entrepreneurship as a desirable career' (1.6), 'entrepreneurial intentions' (1.5) and entrepreneurial activity (1.1, 1.2 and 1.3) provided it scores worse than both the EU28 and Cluster average.

Finland's main weaknesses are found in 'entrepreneurship education at post-secondary level' (1.9b), 'entrepreneurship as a desirable career' (1.6), 'entrepreneurial intentions' (1.5) and entrepreneurial activity (1.1 and 1.2) where it scores lower than both the EU28 and the Cluster averages. To a lesser extent, the 'entrepreneurship education at basic school' (1.9a) could also constitute a priority area given the higher performance of the other countries in the Cluster.

Ireland is underperforming both the EU28 and Cluster averages in 'high status given to successful entrepreneurship' (1.7), 'entrepreneurship as a desirable career' (1.6), 'opportunity-driven entrepreneurial activity' (1.4) and 'established business ownership rate' (1.3). Additionally, Ireland has lower achievements compared to its peers in 'entrepreneurship education at basic school' (1.9a).

The Netherlands show values below EU28 and Cluster averages in 'high status given to successful entrepreneurship' (1.7), 'entrepreneurial intentions' (1.5) as well as in the entrepreneurial activity (1.1 and 1.2) and those should be identified as the main priority area for the country in this dimension.

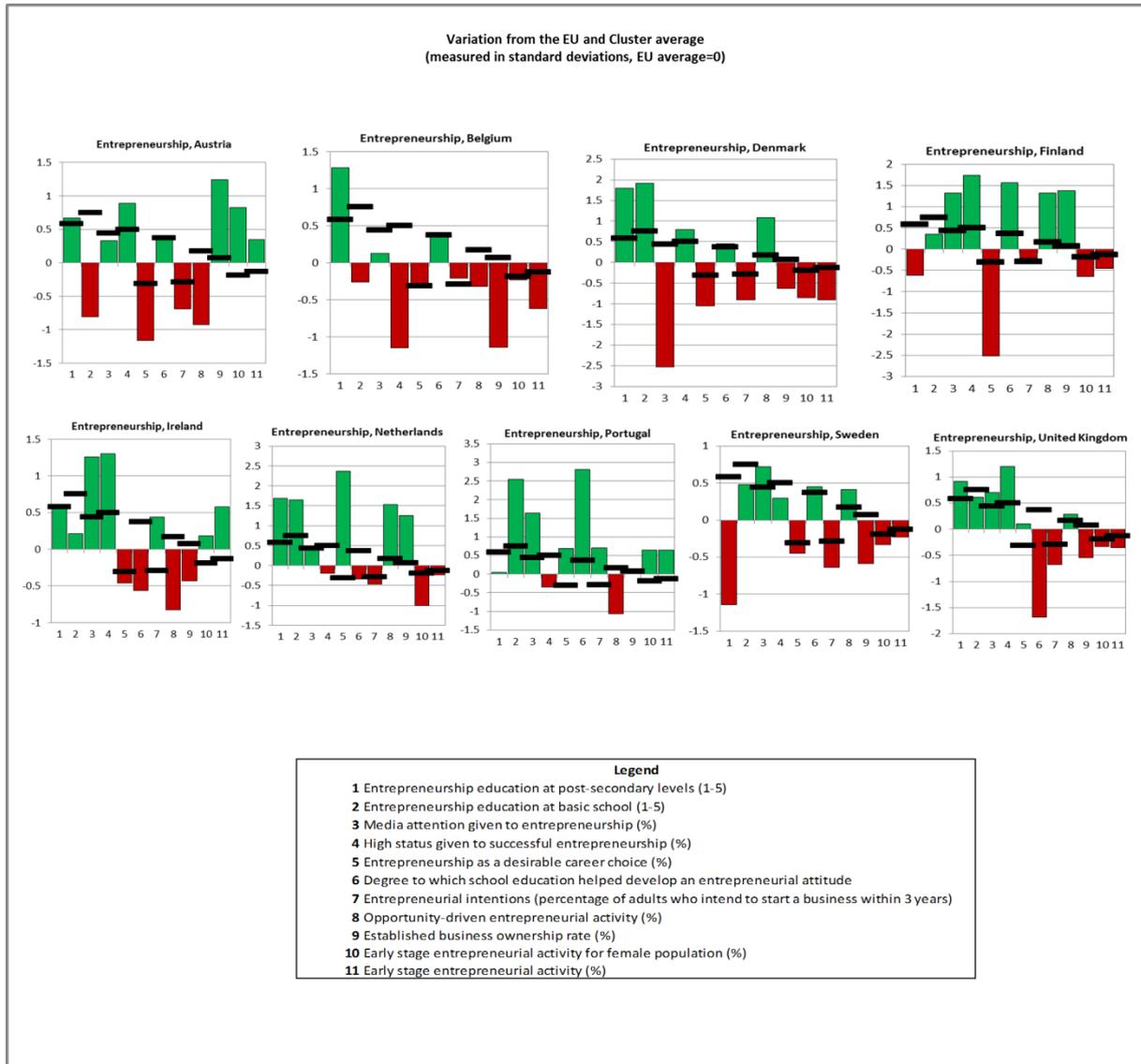
Portugal's main priority areas are identified in 'high status given to successful entrepreneurship' (1.7) and 'opportunity-driven entrepreneurial activity' (1.4) in which it underperforms both the EU28 and the Cluster averages. Moreover, it reports lower than its Cluster's achievements in 'entrepreneurship education at post-secondary level' (1.9b).

Sweden's weaknesses are related to 'entrepreneurship education at post-secondary level' (1.9b), 'entrepreneurship as a desirable career' (1.6), 'entrepreneurial intentions' (1.5) and entrepreneurial activity (1.1, 1.2 and 1.3) provided it scores worse than both the EU28 and Cluster average. Also, attention should be given to 'entrepreneurship education at basic school' (1.9a) areas in which its Cluster peers have reported higher achievements.

United Kingdom shows below EU28 and Cluster averages in 'entrepreneurial intentions' (1.5) and entrepreneurial activity (1.1, 1.2 and 1.3) and this should be identified as its

main priority area. Moreover, there is room for improvement in 'entrepreneurship education at basic school' (1.9a) considering similar countries obtained higher results in this indicator.

Figure 9. Indicators in 'Entrepreneurship' for countries in Cluster 3 compared to cluster and EU average



Portugal is outperforming both the EU28 and Cluster averages in most of the indicators of this dimension thus serving as benchmark for the other countries in the Cluster.

Denmark registered the best performance in 'entrepreneurship education at post-secondary level' (1.9b) performance which qualifies it as an outstanding benchmark in the area.

Also, Finland's outperformances in 'high status given to successful entrepreneurship' (1.7) and 'opportunity-driven entrepreneurial activity' (1.4) makes it suitable for benchmarking the two indicators for the analysed Cluster.

Austria could serve as benchmark in 'established business ownership rate' (1.3) and in 'early stage entrepreneurial activity for female population' (1.2).

Lastly, Ireland outperformed in 'early stage entrepreneurial activity' (1.1).

Table 4. Prioritization in Cluster 3, principle 'Entrepreneurship'

Country	Priority area (# indicator)	Main strength (# indicator)
Austria	1.4; 1.5; 1.6; 1.9a	1.1; 1.2; 1.8; 1.9b
Belgium	1.1; 1.2; 1.3; 1.4; 1.5; 1.6; 1.7; 1.9a	1.9b
Denmark	1.1; 1.2; 1.3; 1.5;1.6; 1.8	1.4; 1.7; 1.9a; 1.9b
Finland	1.1; 1.2; 1.5; 1.6; 1.9b	1.3; 1.4; 1.7; 1.8
Ireland	1.3; 1.4; 1.6; 1.9a	1.1; 1.2; 1.5; 1.7; 1.8; 1.9b
The Netherlands	1.1; 1.2; 1.5; 1.7	1.3; 1.4; 1.6; 1.9a; 1.9b
Portugal	1.4; 1.7	1.1; 1.2; 1.5; 1.6; 1.8; 1.9a
Sweden	1.1; 1.2; 1.3; 1.5; 1.6; 1.9b	1.4; 1.8
United Kingdom	1.1; 1.2; 1.3; 1.5; 1.9a	1.4; 1.7; 1.8; 1.9b

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

3.1.4 Analysis of 'Entrepreneurship' for Cluster 4

Countries in Cluster 4 are characterized by an overall weakness in this dimension, in which they generally report low values and descending trends with the exception of Slovakia (low values and ascending trend) and Romania (high values and ascending trend). As such, considering the performances relative to the EU28 averages, Romania is showcasing 80% outperforming indicators, performance that is decreasing to 40% in case of Czech Republic, Greece, Hungary and Slovakia up until 30% in case of Bulgaria.

The main recommendations that emerge from the analysis of the country, Cluster and EU28 averages are following in the next paragraphs.

Bulgaria's main priority areas include 'entrepreneurship education at post-secondary level' (1.9b), 'entrepreneurship education at basic school' (1.9a), 'media attention given to entrepreneurship' (1.8), 'entrepreneurial intentions' (1.5), 'opportunity-driven entrepreneurial activity' (1.4) and entrepreneurial activity (1.1, 1.2 and 1.3) provided it scores worse than both the EU28 and Cluster average. In addition it underperforms its Cluster's achievements in 'entrepreneurship as a desirable career' (1.6). To be noted that Bulgaria exhibits a large degree of time-variability in all indicators of this dimension (see Table 52, Annex 1) and this can affect the accountability of the provided interpretation.

Croatia's weaknesses are in 'entrepreneurship education at post-secondary level' (1.9b), 'entrepreneurship education at basic school' (1.9a), 'media attention given to entrepreneurship'(1.8), 'high status given to successful entrepreneurship' (1.7), 'opportunity-driven entrepreneurial activity' (1.4) and 'established business ownership rate' (1.3) where it reports values lower than both the EU28 and Cluster averages.

Czech Republic's priority areas are related to its lower than the EU28 and Cluster averages value in 'entrepreneurship education at post-secondary level' (1.9b), 'entrepreneurship education at basic school' (1.9a), 'high status given to successful entrepreneurship' (1.7) and entrepreneurial activity (1.1, 1.2 and 1.3). It also underperforms its Cluster average in 'entrepreneurial intentions' (1.5).

Greece performs worse than the EU28 and Cluster averages in 'entrepreneurship education at basic school' (1.9a), 'media attention given to entrepreneurship' (1.8), 'entrepreneurial intentions' (1.5), 'opportunity-driven entrepreneurial activity' (1.4) and 'early stage entrepreneurial activity' (1.1), these indicators constituting main priority areas.

Hungary's weaknesses are related to the low 'entrepreneurship education at post-secondary level' (1.9b), 'entrepreneurship education at basic school' (1.9a), 'media attention given to entrepreneurship' (1.8), 'entrepreneurial intentions' (1.5) and 'established business ownership rate' (1.3), areas in which it exhibits values lower than both the EU28 and the Cluster averages. Additionally, the country underperforms its Cluster average in 'entrepreneurial intentions' (1.5).

Poland's main priority areas are constituted by 'entrepreneurship education at post-secondary level' (1.9b), 'entrepreneurship education at basic school' (1.9a), 'high status given to successful entrepreneurship' (1.7) and 'established business ownership rate' (1.3) where it reported values lower than both the EU28 and Cluster averages. To a lesser extent, 'media attention given to entrepreneurship' (1.8) and 'opportunity-driven entrepreneurial activity' (1.4) might represent possible areas of interest as they score less than the EU28 averages.

Romania has values lower than the EU28 and Cluster averages in 'entrepreneurship education at post-secondary level' (1.9b) and 'opportunity-driven entrepreneurial activity' (1.4).

Slovakia's main priority areas are represented by 'entrepreneurship education at post-secondary level' (1.9b), 'entrepreneurship as a desirable career' (1.6) and 'established business ownership rate' (1.3) in which it reports values lower than both the EU28 and Cluster averages. To a lesser extent, 'entrepreneurship education at basic school' (1.9a) and 'high status given to successful entrepreneurship' (1.7) might represent possible areas of interest as they score less than the EU28 averages.

Romania is outperforming the EU28 and Cluster averages in most of the indicators and could thus generally constitute a benchmark for the rest of the Cluster's countries.

Following, Greece could serve as benchmark in 'entrepreneurship education at post-secondary level' (1.9b) and 'established business ownership rate' (1.3).

Lastly 'opportunity-driven entrepreneurial activity' (1.4) could be benchmarked by Hungary due to its outstanding performance in this indicator.

Figure 10. Indicators in 'Entrepreneurship' for countries in Cluster 4 compared to cluster and EU average

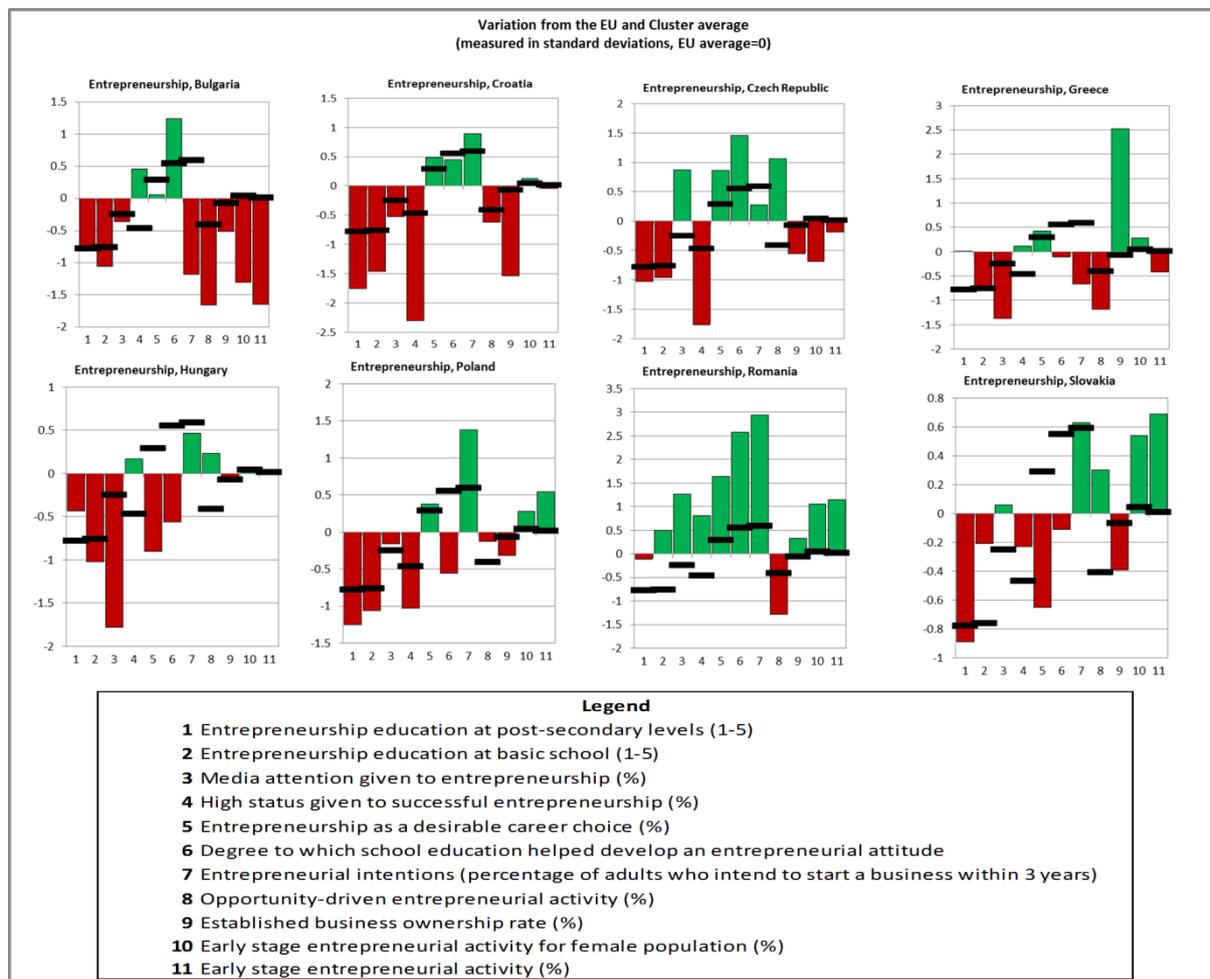


Table 5. Prioritization in Cluster 4, principle 'Entrepreneurship'

Country	Priority area (# indicator)	Main strength (# indicator)
Bulgaria	1.1; 1.2; 1.3; 1.4; 1.5; 1.8; 1.9a; 1.9b	1.7
Croatia	1.1; 1.2; 1.3; 1.4; 1.7; 1.8; 1.9a; 1.9b	1.5; 1.6
Czech Republic	1.1; 1.2; 1.3; 1.7; 1.9a; 1.9b	1.4; 1.6; 1.8
Greece	1.1; 1.4; 1.5; 1.8; 1.9a	1.2; 1.3; 1.7; 1.9b
Hungary	1.4; 1.5; 1.8; 1.9a; 1.9b	1.4; 1.7
Poland	1.3; 1.4; 1.7; 1.8; 1.9a; 1.9b	1.1; 1.2; 1.5; 1.6

Romania	1.4; 1.9b	1.1; 1.2; 1.3; 1.5; 1.6; 1.7; 1.8; 1.9a
Slovakia	1.3; 1.6; 1.7; 1.9a; 1.9b	1.1; 1.2; 1.4; 1.5; 1.8

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

3.1.5 Analysis of 'Entrepreneurship' for Cluster 5

Both countries composing this small cluster, i.e Italy and Spain, are exhibiting low performances and descending trends in the dimension.

An analysis of the country, Cluster and EU28 averages is provided in the further paragraphs.

Italy's main weaknesses emerge from the 'entrepreneurship education at post-secondary level' (1.9b), 'entrepreneurship education at basic school' (1.9a), 'opportunity-driven entrepreneurial activity' (1.4) and entrepreneurial activity (1.1, 1.2 and 1.3), where it stands below the EU28 and Cluster averages. To a lesser extent, 'media attention given to entrepreneurship' (1.8) and 'entrepreneurial intentions' (1.5) could constitute priority areas given their underperformance relative to the EU28 averages.

Spain's focus areas should be 'entrepreneurship education at post-secondary level' (1.9b), 'high status given to successful entrepreneurship' (1.7), 'entrepreneurship as a desirable career' (1.6), 'entrepreneurial intentions' (1.5) as well as 'early entrepreneurial activity' (1.1), where it stands below the EU28 and Cluster averages. Additionally, it scores lower than its Cluster average in 'established business ownership rate' (1.3). To a lesser extent, 'media attention given to entrepreneurship' (1.8), 'opportunity-driven entrepreneurial activity' (1.4) and 'early stage entrepreneurial activity for female population' (1.2) could constitute priority areas given their underperformance relative to the EU28 averages.

In this case benchmarking within the cluster is not possible for most of the indicators given the bad performance of both Italy and Spain.

Italy could serve as benchmark in 'high status given to successful entrepreneurship' (1.7) and 'entrepreneurship as a desirable career' (1.6).

Given the closeness of Greece to this countries and its good performance in 'established business ownership rate' (1.3) and 'early stage entrepreneurial activity for female population' (1.2), its achievements could be used as a benchmark by the two countries.

Figure 11. Indicators in 'Entrepreneurship' for countries in Cluster 5 compared to cluster and EU average

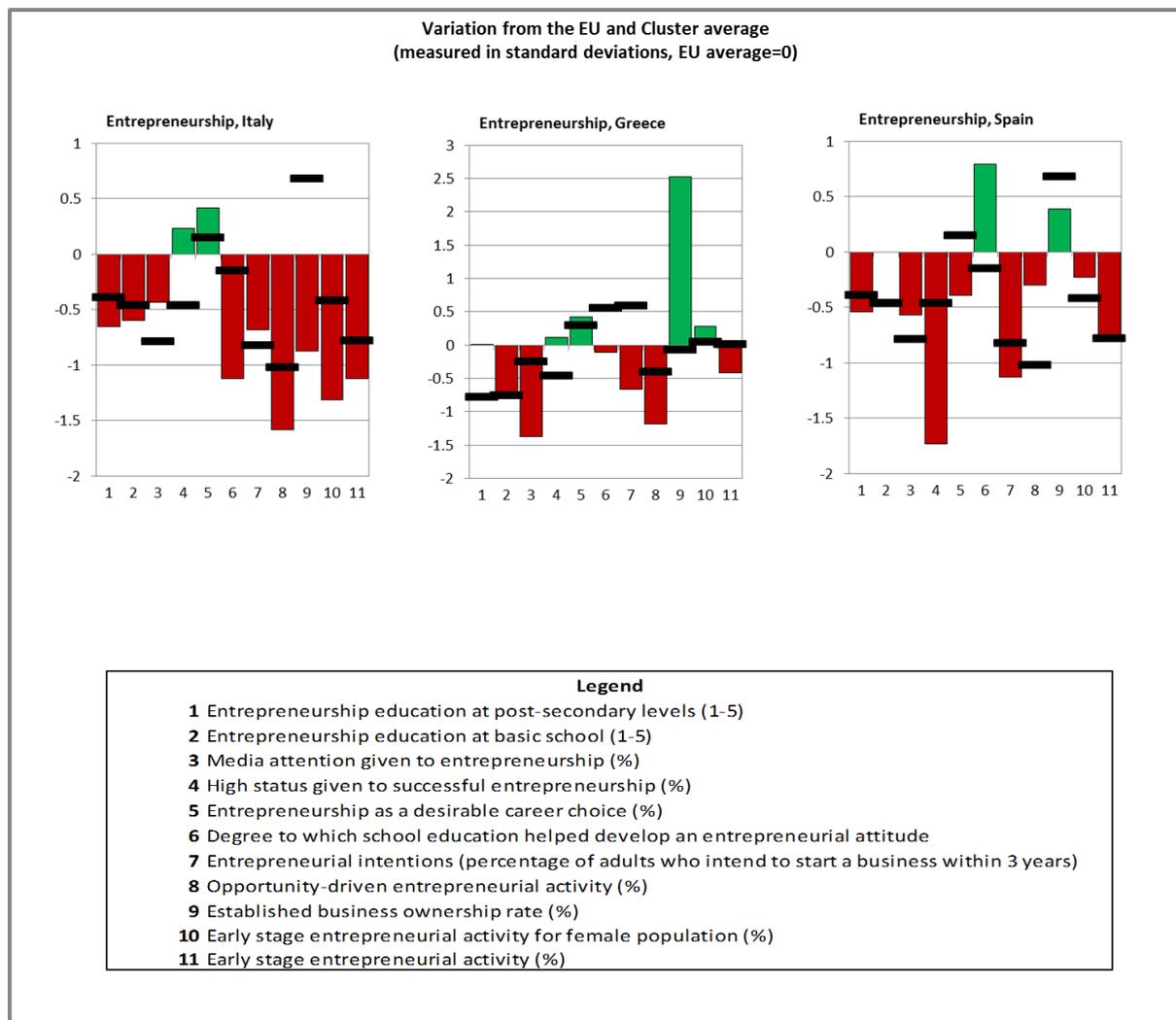


Table 6. Prioritization in Cluster 5, principle 'Entrepreneurship'

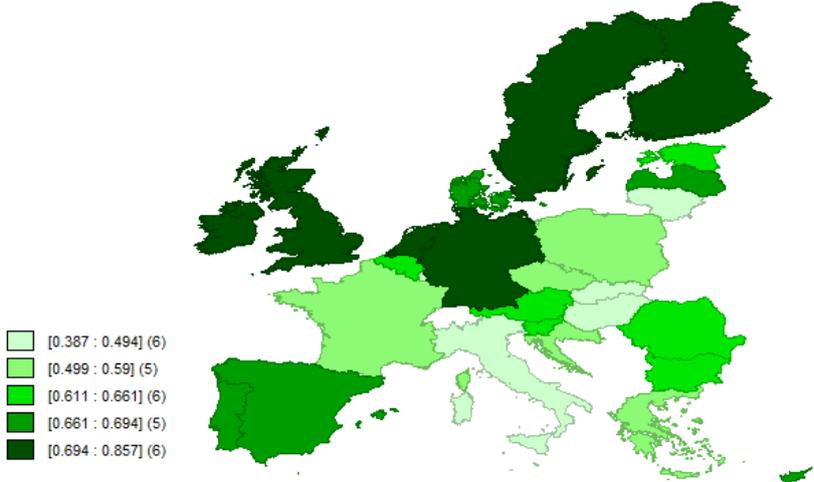
Country	Priority area (# indicator)	Main strength (# indicator)
Italy	1.1; 1.2; 1.3; 1.4; 1.5, 1.8; 1.9a; 1.9b	1.6; 1.7
Spain	1.1; 1.2; 1.4; 1.5; 1.6; 1.7; 1.8; 1.9b	1.3

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

3.2 Analysis of 'Second Chance'

Countries' scores recorded in principle 'Second Chance' are distributed as reported in the map in Figure 12, which shows the quantile distribution of those scores. The map ranges values from the six countries coloured in the lightest green, representing the worst performing ones in this dimension (Italy, Malta, Luxembourg, Lithuania, Hungary, Slovakia) to the six ones in darkest green, which are the best performing ones (Ireland, United Kingdom, The Netherlands, Germany, Sweden and Finland).

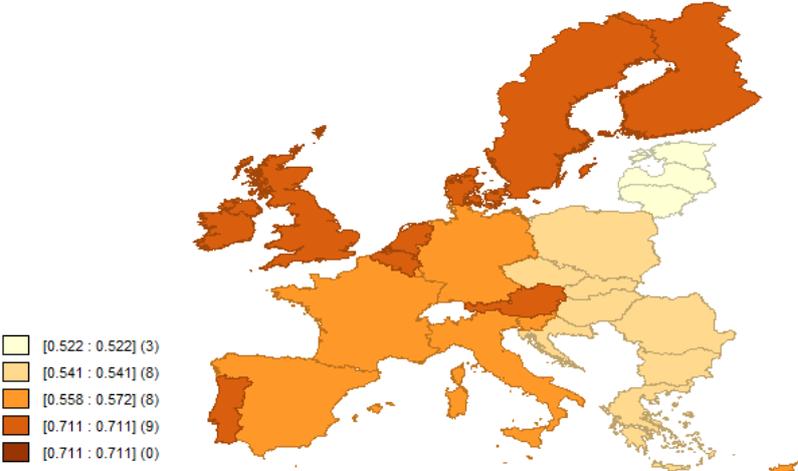
Figure 12. Quantile distribution of 'Second Chance' by country



As found in Figure 12 a large range of variation across countries and across Clusters characterizes this principle.

Clusters' average values in the same principle are reported in Figure 13. This map shows that the lowest Cluster average is found for Cluster 1, while the highest Cluster average is obtained by Cluster 3.

Figure 13. Cluster averages for '2. Second Chance'



Given the evidence outlined so far, next subsection aims to discuss the area of improvements in this principle by clusters.

3.2.1 Analysis of 'Second Chance' for Cluster 1

Trends in this area show a heterogeneous picture for the three countries in the Cluster: Latvia is in the overall dimension having a high performance and a positive trend, Lithuania is on the contrary worse than EU28 average and with a decreasing trend, while Estonia is on average close to EU28 and reports a stationary pattern.

Overall, countries in the Cluster perform better than EU28 average with a great variation across them: in 100% of the indicators for Latvia, to the 60% of Estonia and the 40% of Lithuania.

As for the previous principle, it is possible to disentangle some areas of strengths and weaknesses based on the scores in the indicators building the principle with EU average set to zero.

The main weaknesses envisaged for Estonia are in 'time to resolve insolvency' (2.1) and 'degree of support for a second chance' (2.3), where it performs worse than EU28 and Cluster average. The main priority areas for Lithuania are 'time to resolve insolvency' (2.1), where it is close to Cluster average but worse than EU28 average and in 'fear of failure rate' (2.4) and 'strength of the insolvency framework' (2.5).

Latvia is outperforming Cluster and EU28 average, so it can be considered as a valuable benchmark for most the indicators, with the exception of 'strength of the insolvency framework' (2.5) in which Estonia can be taken as a valuable benchmark.

Figure 14. Indicators in 'Second Chance' for countries in Cluster 1 compared to cluster and EU average

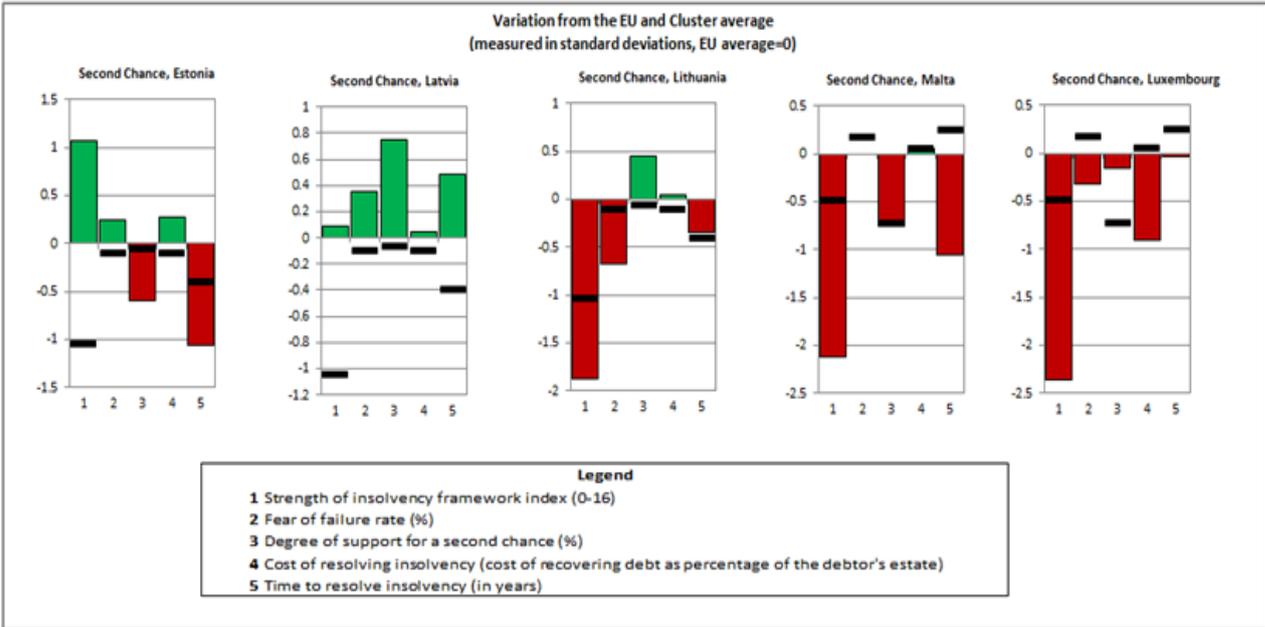


Table 7. Prioritization in Cluster 1, principle 'Second Chance'

Country	Priority area (# indicator)	Main strength (# indicator)
Estonia	2.1; 2.3(**)	2.5
Latvia		2.1; 2.3(**); 2.4
Lithuania	2.1; 2.4; 2.5	2.3(**)

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

3.2.2 Analysis of 'Second Chance' for Cluster 2

Countries in Cluster 2 share the common feature of a relative stability in this dimension over time, as neither relevant deterioration nor significant progress is found for those countries. Countries in Cluster 2 can be split into a group of country with a high performance with respect to EU28 average, to which belong Germany, Cyprus and Slovenia, and a group of countries with a low performance, i.e. Malta, Luxembourg and France.

Overall, half of the countries in the Cluster perform better than EU28 in 60% of the indicators (Cyprus, Germany, and Slovenia), France only in 40%, while Luxembourg and Malta are lower in all the available indicators.

As far as the main strengths and weaknesses for this Cluster are concerned, Cyprus's main weakness is reported in 'cost to resolve insolvency' (2.2) where it is far worse than EU28 and Cluster average.

The main priority area identified for France are 'fear of failure rate' (2.4) and 'strength of the insolvency framework' (2.5), while for 'degree of support for a second chance' (2.3) a moderate priority is assigned given that the value scores worse than EU28 average but much better than the Cluster average.

The most relevant priority area identified for Germany in this dimension is 'fear of failure rate' (2.4), while for 'degree of support for a second chance' (2.3) a moderate priority is assigned given that the value scores worse than EU28 average but those are better than the Cluster average.

Although the lack of data for 2 out of the 5 indicators building this dimension, Malta's main areas of weakness are 'time to resolve insolvency' (2.1) and 'strength of the insolvency framework' (2.5). Moderate priority has to be given to 'degree of support for a second chance' (2.3), where it is worse than EU28 average but close to the cluster average.

Luxembourg is the weakest country in this area, and faces three main areas of priority in 'cost to resolve insolvency' (2.2), 'fear of failure rate' (2.4), 'strength of the insolvency framework' (2.5) and a moderate priority regarding the 'degree of support for a second chance' (2.3), where it is worse than EU28 average but better than the cluster average.

Slovenia's main priority area in this principle is 'degree of support for a second chance' (2.3), where it is worse than both EU28 and Cluster average.

Germany can serve as a benchmark for the remaining countries of its Cluster in 'time to resolve insolvency' (2.1) and in 'strength of the insolvency framework' (2.5), as it is the best performing of the Cluster in these dimensions.

Slovenia can serve as a benchmark for the remaining countries of its Cluster in 'cost to resolve insolvency' (2.2) and 'fear of failure rate' (2.4), as it is the best performing of the Cluster in this dimension.

Cyprus can serve as a benchmark for the remaining countries of its Cluster in its 'degree of support for a second chance' (2.3), as it is the best performing of the Cluster in this dimension and it is the only country of the Cluster facing a performance which is better than EU28 average.

Figure 15. Indicators in 'Second Chance' for countries in Cluster 2 compared to cluster and EU average

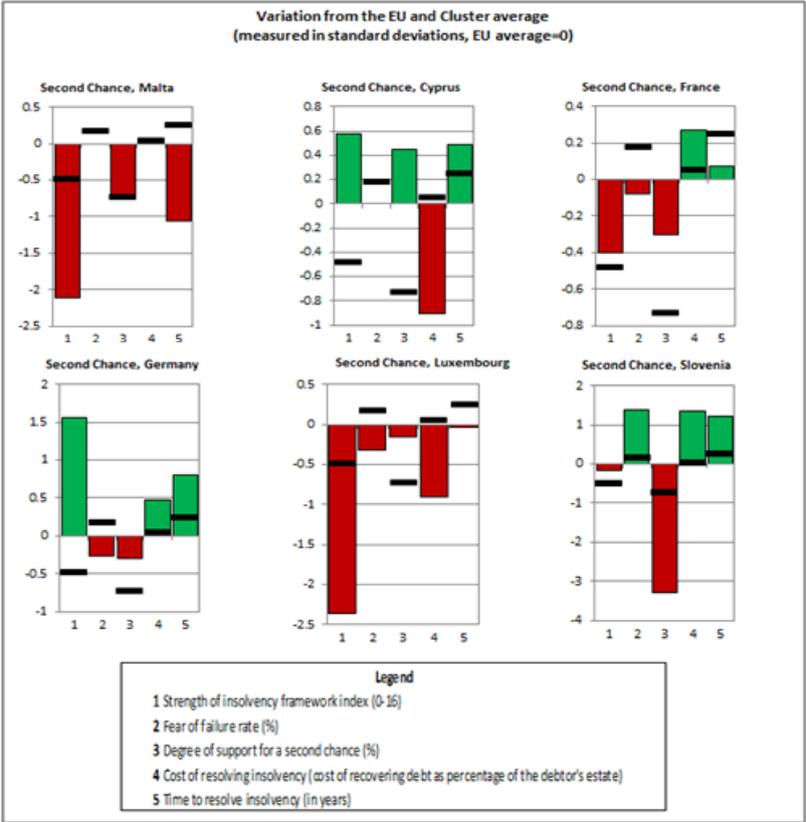


Table 8. Prioritization in Cluster 2, principle 'Second Chance'

Country	Priority area (# indicator)	Main strength (# indicator)
Malta	2.1; 2.5	
Cyprus	2.2	2.5; 2.3(**)
France	2.4; 2.5	2.2
Germany	2.3(**); 2.4	2.1; 2.2; 2.5
Luxembourg	2.2; 2.4; 2.5	
Slovenia	2.3(**)	2.1; 2.2; 2.3(**)

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

3.2.3 Analysis of 'Second Chance' for Cluster 3

Cluster 3 is the best performing in this principle. All countries in Cluster 3 are defined in the SBA Fact Sheet as characterized by a high performance in this dimension, being all better than EU28 average. Furthermore, neither relevant deterioration nor significant progress has been signalled for these countries, thus pointing to a pretty stationary evolution in this principle.

With the only exception of Belgium (40%), all countries in the cluster have better than EU28 average performance in the majority of the indicators: from the 100% of Finland to the 60% of Austria, Denmark, Ireland, Portugal and the Netherlands.

Moving to the main recommendations that emerge from the analysis of the combination of country, Cluster and EU28 averages, the following considerations may be drawn.

Austria's main weaknesses are reported in 'support for a second chance' (2.3) and 'strength of the insolvency framework' (2.5), where it is far worse than EU28 and Cluster average.

Belgium is performing worse than both EU28 and Cluster averages in the majority of the indicators of the principle. Its main weaknesses would thus be 'support for a second chance' (2.3), 'fear of failure' (2.4) and 'strength of the insolvency framework' (2.5).

Denmark's main weaknesses are found in 'support for a second chance' (2.3) and 'fear of failure' (2.4), where it is worse than both EU28 and Cluster average.

Ireland's main weakness is found in 'strength of the insolvency framework' (2.5), where it is worse than both EU28 and Cluster average. Moderate priority has to be given to 'cost to resolve insolvency' (2.2) and 'fear of failure' (2.4), where its Cluster is capable of much better achievements.

The Netherlands show below EU28 and Cluster averages in 'support for a second chance' (2.3) and 'strength of the insolvency framework' (2.5), and those should be identified as the main priority areas for the country in this dimension.

Portugal's main priority areas are identified for indicators in which it is close to EU28 average, but it can be reasonable to assume a better margin of improvements when looking at the Cluster average, to which Portugal is very far. These indicators are 'time to resolve insolvency' (2.1) and 'fear of failure' (2.4). Similarly, Sweden's main priority area would be 'time to resolve insolvency' (2.1), as in this indicator it is very far from the achievable Cluster's target, although it is very close to the EU28 average.

United Kingdom shows below EU28 and Cluster averages in 'strength of the insolvency framework' (2.5), and this should be identified as its main priority area.

Finland is outperforming in all the indicators of this dimension and can serve as a benchmark for most the indicators in the Cluster. More precisely it is the best performing country in the Cluster in 'time to resolve insolvency' (2.1), 'cost to resolve insolvency' (2.2), 'fear of failure' (2.4) and 'strength of the insolvency framework' (2.5).

Sweden outperforms both Cluster and EU28 average in 'support for a second chance' (2.3), and it can be seen as the best practice to guide other countries' performances.

Figure 16. Indicators in 'Second Chance' for countries in Cluster 3 compared to cluster and EU average

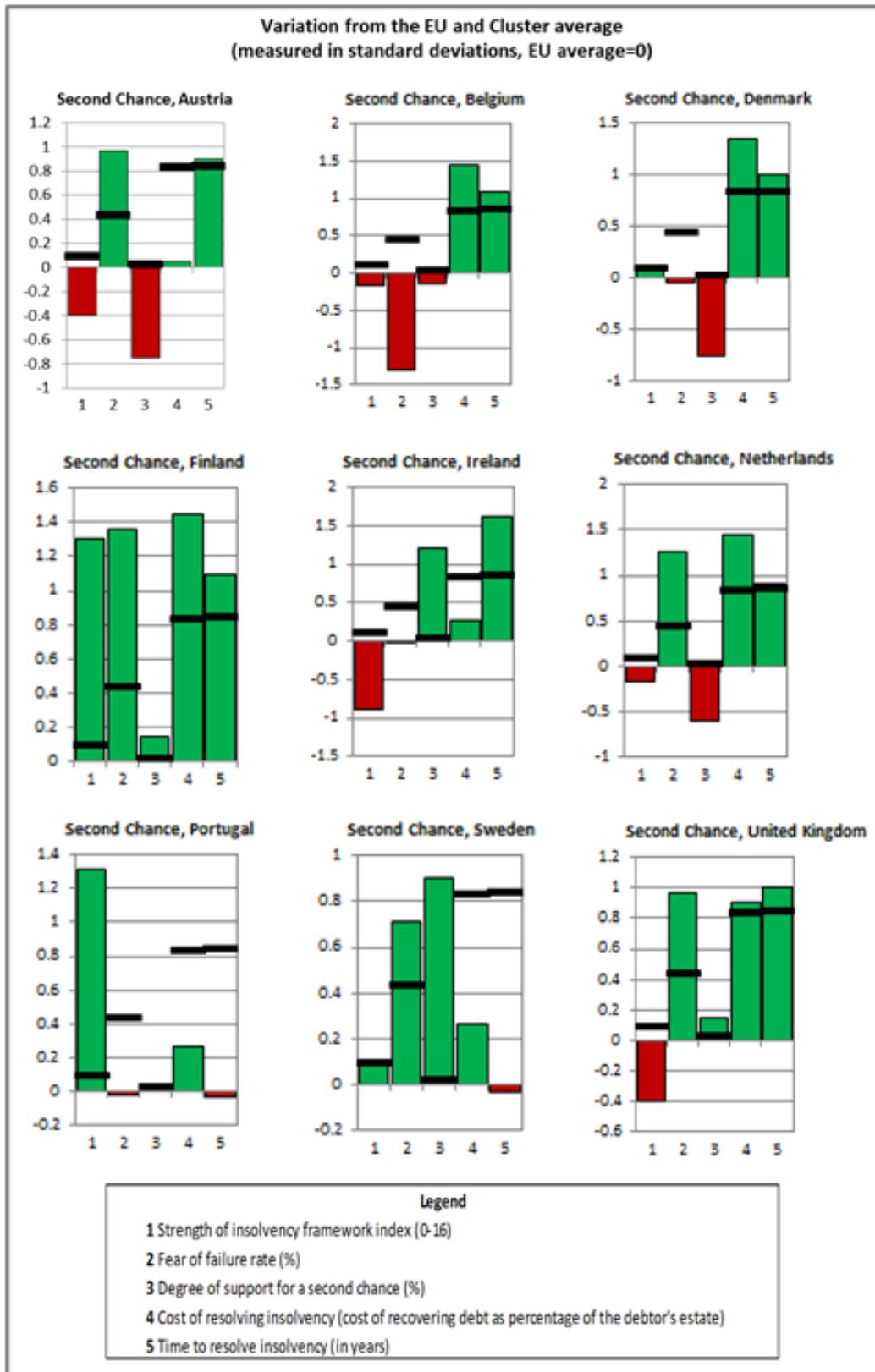


Table 9. Prioritization in Cluster 3, principle 'Second Chance'

Country	Priority area (# indicator)	Main strength (# indicator)
Austria	2.3(**);2.5	2.4
Belgium	2.3(**); 2.4; 2.5	2.1; 2.2
Denmark	2.3(**); 2.4	2.1; 2.2
Finland		2.1; 2.2; 2.4; 2.5
Ireland	2.5	2.1;2.3(**)
The Netherlands	2.3(**); 2.5	2.2; 2.4
Portugal	2.1; 2.4	2.5
Sweden	2.1	2.3(**); 2.4
United Kingdom	2.5	2.1; 2.4

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

3.2.4 Analysis of 'Second Chance' for Cluster 4

Countries in Cluster 4 are characterized by an overall weakness in this dimension, in which they all report a low performance when compared to EU28 average. The only exception is Bulgaria, characterized by a slightly better but stable performance than EU28 average.

More than half of the countries in the Cluster (5 out of 8) face a worse than EU28 average performance in more than half of the indicators. Bulgaria is instead better than EU28 average in 80% of the indicators, while Greece and Romania in 60% of the cases.

The main recommendations that emerge from the analysis of the country, Cluster and EU28 averages follow. All countries are weak and show below EU28 average performance in 'time to resolve insolvency' (2.1). This is a priority area for most of the countries.

Furthermore, Hungary is the weakest country in this dimension, whose priority areas are identified for almost all the indicators. More precisely in 'cost to resolve insolvency' (2.2), 'support for a second chance' (2.3), 'fear of failure' (2.4) and 'strength of the insolvency framework' (2.5).

Bulgaria's and Romania's main weakness is in 'time to resolve insolvency' (2.1), where they perform worse than both EU28 and Cluster average. Croatia and Czech Republic are worse than both EU28 and Cluster average in 'cost to resolve insolvency' (2.2) and 'support for a second chance' (2.3), while they are worse only than EU28 in 'time to resolve insolvency' (2.1). These 3 are the priority areas identified for both countries. Greece's priority areas are 'time to resolve insolvency' (2.1) and 'fear of failure' (2.4), where it shows worse values than both EU28 and Cluster average.

Following the same logic above Poland's main areas of intervention are 'time to resolve insolvency' (2.1), 'support for a second chance' (2.3) and 'fear of failure' (2.4). Slovakia is worse than both EU28 and Cluster average in 'time to resolve insolvency' (2.1),

'support for a second chance' (2.3) and 'fear of failure' (2.4). Those should be considered its priority areas.

Greece can be the benchmark for the countries of its Cluster in 'support for a second chance' (2.3) and 'cost to resolve insolvency' (2.2) (jointly with Bulgaria) as it scores better than both the EU28 and Cluster averages.

Bulgaria can serve as a benchmark for the remaining countries of its Cluster in 'fear of failure' (2.4) and 'cost to resolve insolvency' (2.2) (jointly with Greece) as it scores better than both the EU28 and Cluster average.

Romania and Czech Republic can serve as benchmark for the remaining countries of the Cluster in 'strength of the insolvency framework' (2.5), as they scores better than both the EU28 and Cluster 4 averages being the best performing of the Cluster.

Figure 17. Indicators in 'Second Chance' for countries in Cluster 4 compared to cluster and EU average

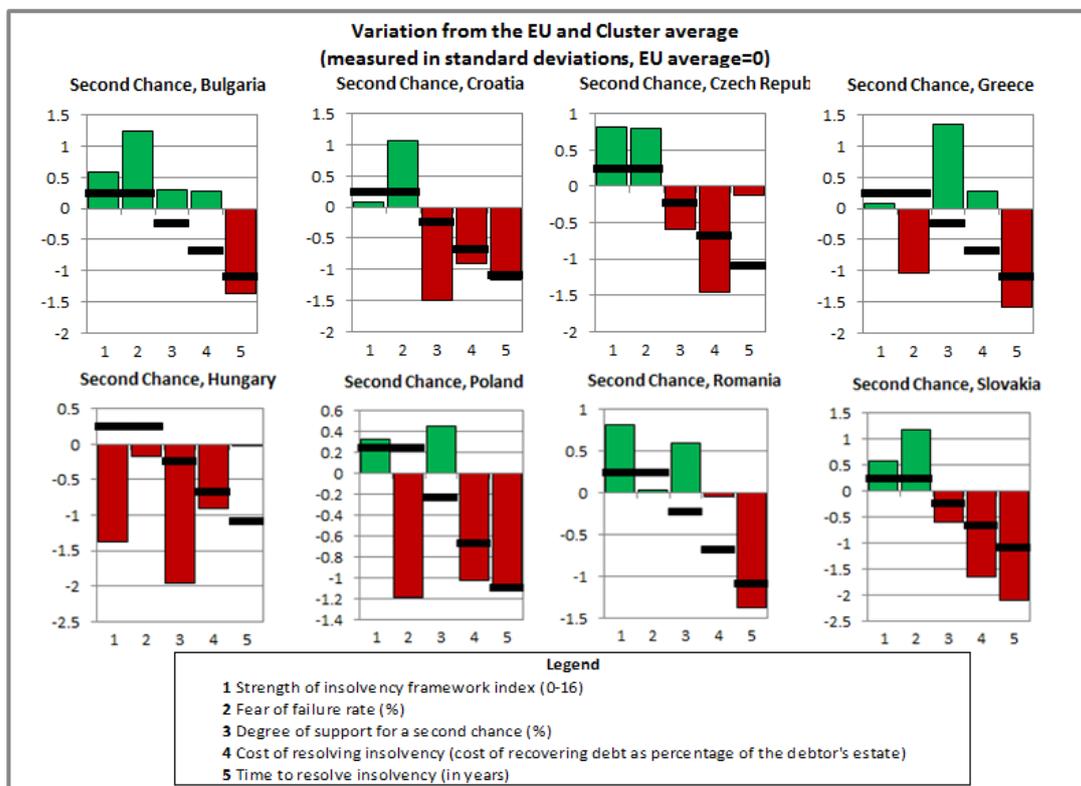


Table 10. Prioritization in Cluster 4, principle 'Second Chance'

Country	Priority area (# indicator)	Main strength (# indicator)
Bulgaria	2.1	2.2; 2.4; 2.5
Croatia	2.1; 2.2; 2.3(**)	2.4
Czech Republic	2.1; 2.2; 2.3(**)	2.4; 2.5
Greece	2.1; 2.4	2.2; 2.3(**)

Hungary	2.2; 2.3(**); 2.4; 2.5	
Poland	2.1; 2.2; 2.4	2.3(**)
Romania	2.1	2.3(**); 2.5
Slovakia	2.1; 2.2; 2.3(**)	2.4

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

3.2.5 Analysis of 'Second Chance' for Cluster 5

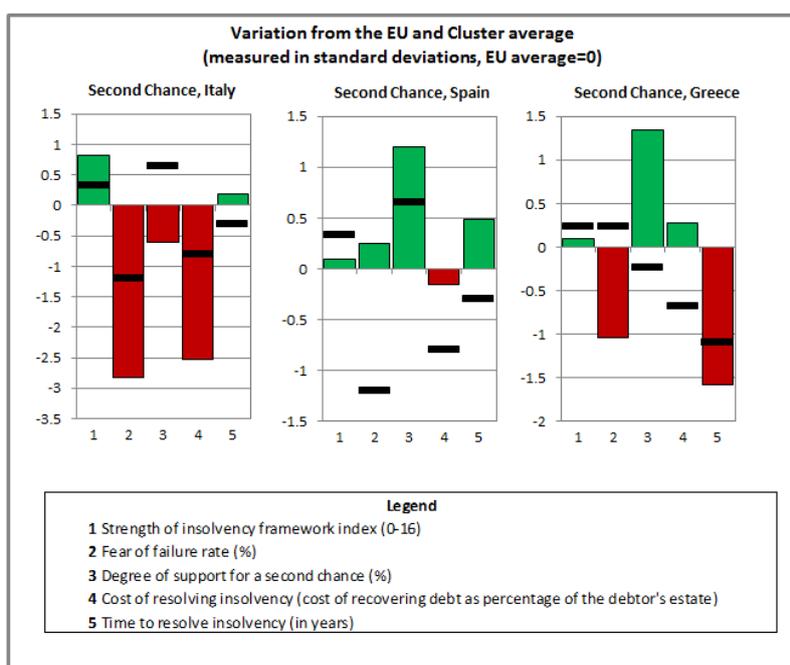
The two countries composing this small cluster are very different with respect to their performance in this dimension. Whereas Spain is a high performance country experiencing a progress over time, Italy is on the contrary experiencing a deteriorating trend in an already low performance.

Spain performs better than EU28 average in 80% of the indicators, while Italy only in 40% of them.

The main priority area identified for Spain by analysing its performance and by comparing it to Cluster and EU28 average is 'cost to resolve insolvency' (2.2), in which it is worse than both the outlined averages.

Italy's main priority areas are instead in 'cost to resolve insolvency' (2.2), 'support for a second chance' (2.3) and 'fear of failure' (2.4), where it performs worse than both EU28 and Cluster average.

Figure 18. Indicators in 'Second Chance' for countries in Cluster 5 compared to cluster and EU average



Spain’s good achievements in ‘support for a second chance’ (2.3), especially high when compared to EU28 average, can serve as a benchmark for Italy. In addition to this, when specifically considering Cluster average, it emerges a good performance even in ‘fear of failure’ (2.4), which can be used as a signal for Italy’s improvements. Italy can instead serve as a benchmark for ‘strength of the insolvency framework’ (2.5), where it performs better than EU28 average, Cluster average as well as Greece and Spain.

Table 11. Prioritization in Cluster 5, principle ‘Second Chance’

Country	Priority area (# indicator)	Main strength (# indicator)
Italy	2.2; 2.3 (**); 2,4	2.5
Spain	2.2	2.3(**); 2.4

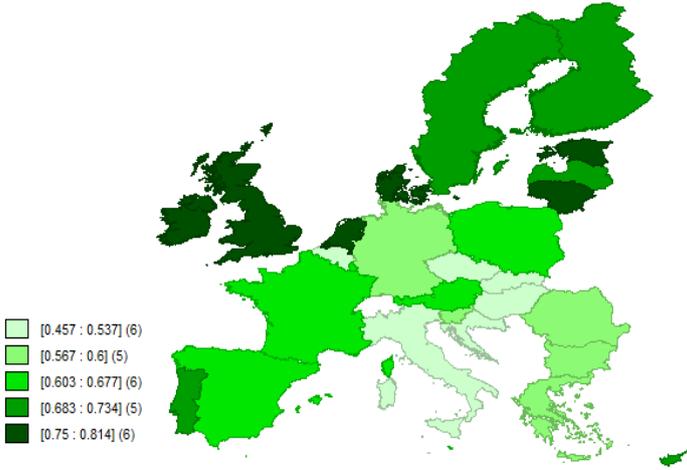
Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

3.3 Analysis of 'Think Small First & Responsible Administration'

Countries' scores recorded in principle 'Think Small First & Responsible Administration' are distributed as reported in the map in Figure 19, which shows the quantile distribution of those scores. The map ranges values from the 6 countries coloured in the lightest green, representing the worst performing ones in this dimension (Croatia, Czech Republic, Italy, Hungary, Slovakia, and Malta) to the ones in dark green, which are the best performing ones (Ireland, United Kingdom, the Netherland, Denmark, Lithuania and Estonia).

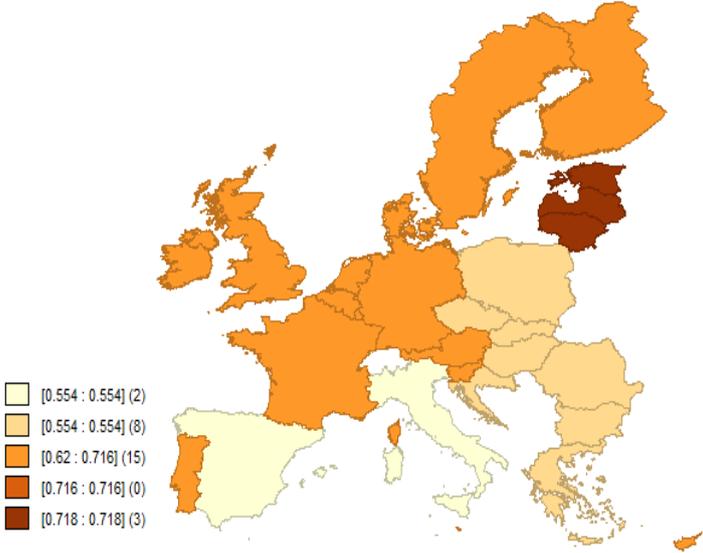
Figure 19. Quantile distribution of 'Think Small First & Responsible Administration' by country



As found in Figure 19 a large range of variation across countries and across Clusters characterizes this principle.

Clusters' average values in the same principle are reported in Figure 20. This map shows that the lowest Cluster average is found for Cluster 5, while the highest Cluster average is obtained by Cluster 1.

Figure 20. Cluster averages for 'Think Small First & Responsible Administration'



Given the evidence outlined so far, next subsection aims to discuss the area of improvements in this principle by clusters.

3.3.1 Analysis of 'Think Small First & Responsible Administration' for Cluster 1

Trends in this area show a very homogeneous picture for the three countries in the Cluster: Estonia, Latvia and Lithuania all report a high performance combined with a positive trend of progress over time.

This is confirmed when analysing their achievements in the indicators when compared to EU28 average, as they are well above this average in the majority of them, from the 93% of positive cases in Estonia to the 60% of Lithuania.

Estonia's main weakness is in 'paid-in minimum capital' (3.3), where it stands below both EU28 and Cluster average. Moderate priority can be given to 'competence and effectiveness of government staff in supporting new and growing firms' (3.13) as well, as there it is better than EU28 but quite far from its Cluster's achievements.

Latvia's main weaknesses are in 'time required to comply with major taxes' (3.7), 'cost to enforce contracts' (3.8) and 'fast changing legislation and policies' (3.9) where it stands below both EU28 and Cluster average.

Lithuania's main weaknesses are in 'time to start a business' (3.1), 'cost to enforce contracts' (3.8) and 'burden of government regulations' (3.12) where it stands below both EU28 and Cluster average and faces a significant gap with respect to its Cluster.

Latvia is the best performing in 'time to start a business' (3.1), 'cost to start a business' (3.2), 'paid-in minimum capital' (3.3) and 'number of tax payments per year' (3.6) and it can serve as a benchmark for the remaining countries in this indicator.

Estonia is the best performing in 'time required to comply with major taxes' (3.7), 'complexity of administrative procedure for doing business' (3.10) and 'burden of government regulations' (3.12) and it can serve as a benchmark for the remaining countries in these indicators.

Lithuania is the best performing in 'time to register property' (3.4) and 'start-up number of procedures' (3.11) and it can serve as a benchmark for the remaining countries in these indicators.

Figure 21. Indicators in 'Think Small First & Responsible Administration' for countries in Cluster 1 compared to cluster and EU average

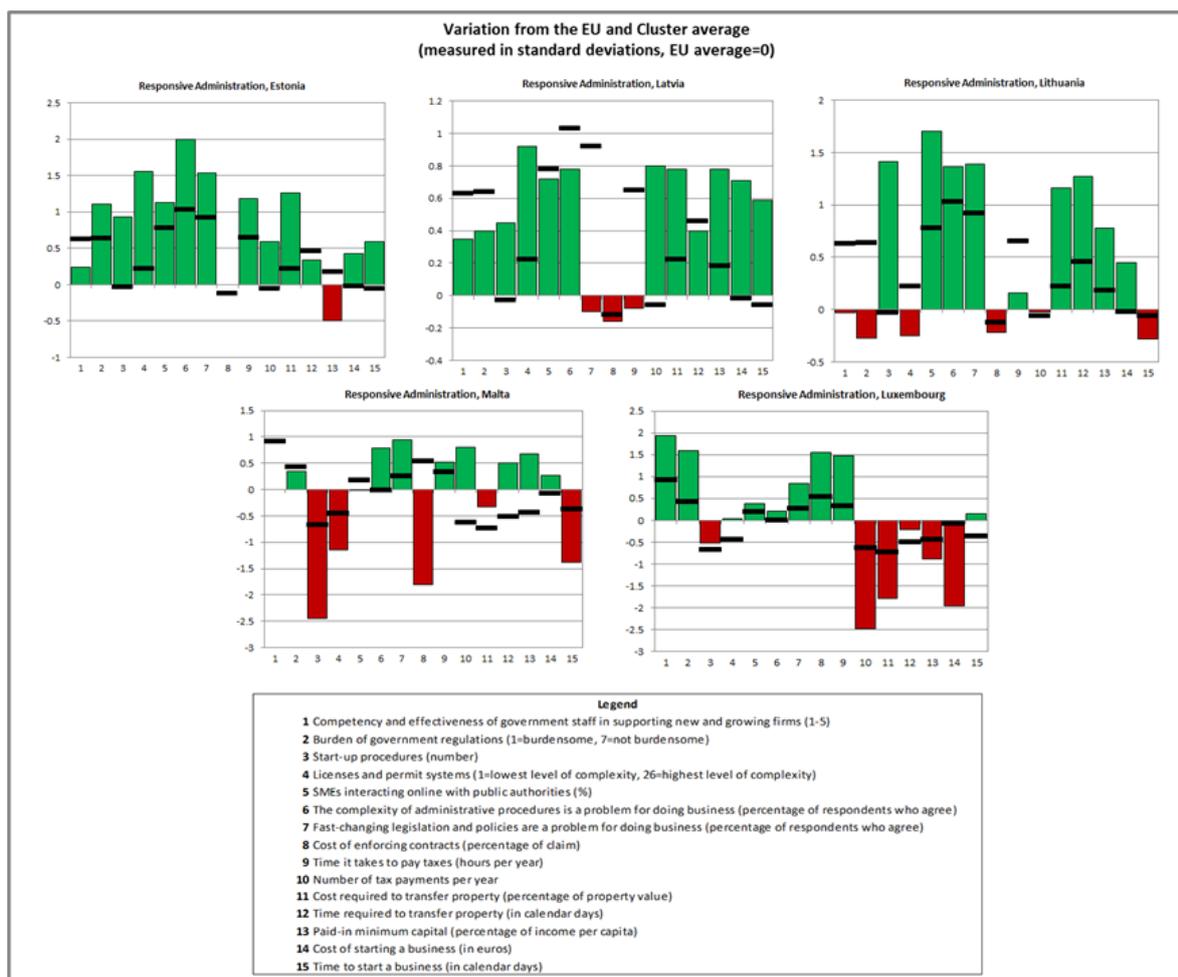


Table 12. Prioritization in Cluster 1, principle 'Think Small First & Responsible Administration'

Country	Priority area (# indicator)	Main strength (# indicator)
Estonia	3.3(*)	3.7; 3.10; 3.11; 3.12
Latvia	3.7; 3.8; 3.9	3.1; 3.2; 3.3(*); 3.6
Lithuania	3.1; 3.8; 3.12	3.4(*); 3.11

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

3.3.2 Analysis of 'Think Small First & Responsible Administration' for Cluster 2

The majority of countries in Cluster 2 face a relatively low performance in this dimension when compared to EU28 average, with the exception of Cyprus and Luxembourg. Furthermore, all countries in the Cluster report a slightly positive trend of improvement in this principle over time.

The whole Cluster is characterized by indicators which are better than EU28 average in about 60% of the cases, excluded Germany with 40% and Slovenia with 46%.

Given the high number of indicators in this dimension and the relatively low performance of countries in this Cluster, the number of weaknesses and thus of areas of priority would be far higher than the number of strengths.

Malta's main weaknesses are evident in 'time to start a business' (3.1), 'cost to enforce contracts' (3.8) and 'start-up number of procedures' (3.11), where it is worse than both EU28 and Cluster average, as well as in 'cost to register property' (3.5) where it is better than Cluster average but still worse than EU28 average.

Cyprus's main weaknesses are evident in 'cost to register property' (3.5), 'number of tax payments per year' (3.6), where it is worse than both EU28 and Cluster average, as well as in 'start-up number of procedures' (3.11) where it is better than Cluster average but worse than EU28 average.

France's main weaknesses are in 'time to start a business' (3.1), 'time to register property' (3.4), 'fast changing legislation and policies' (3.9), 'complexity of administrative procedure for doing business' (3.10) and 'burden of government regulations' (3.12) where it is worse than both EU28 and Cluster average, as well as in 'cost to register property' (3.5) where it is better than Cluster average but worse than EU28 average.

Germany's main weaknesses are in 'time to start a business' (3.1), 'paid-in minimum capital' (3.3), 'time to register property' (3.4), 'time required to comply with major taxes' (3.7) and 'start-up number of procedures' (3.11) where it is worse than both EU28 and Cluster average, as well as in 'cost to register property' (3.5) where it is better than Cluster average but worse than EU28 average.

Slovenia is the only country in the Cluster showing a worse than EU28 average value in 'competence and effectiveness of government staff in supporting new and growing firms' (3.13), this should be a priority area for the country. In addition to this, it shows severe weaknesses in 'paid-in minimum capital' (3.3), 'time to register property' (3.4), 'time required to comply with major taxes' (3.7), 'fast changing legislation and policies' (3.9), and 'complexity of administrative procedure for doing business' (3.10).

Slovenia is the only country in the Cluster showing a better than EU28 average value in 'cost to register property' (3.5) and 'start-up number of procedures' (3.11) thus making the country a reference for benchmarking in this principle.

Malta is the best performing country of the Cluster in 'number of tax payments per year' (3.6), 'fast changing legislation and policies' (3.9) and 'complexity of administrative procedure for doing business' (3.10), thus serving as a benchmarking for the remaining countries in the Cluster.

Cyprus is the best performing country of the Cluster in 'paid-in minimum capital' (3.3) and 'time to register property' (3.4), thus serving as a benchmarking for the remaining countries in the Cluster.

Luxembourg is the best performing country of the Cluster in many indicators: 'time required to comply with major taxes' (3.7), 'cost to enforce contracts' (3.8), 'burden of government regulations' (3.12), and 'competence and effectiveness of government staff in supporting new and growing firms' (3.13). It is a proper benchmark for countries in the Cluster.

Figure 22. Indicators in 'Think Small First & Responsible Administration' for countries in Cluster 2 compared to cluster and EU average

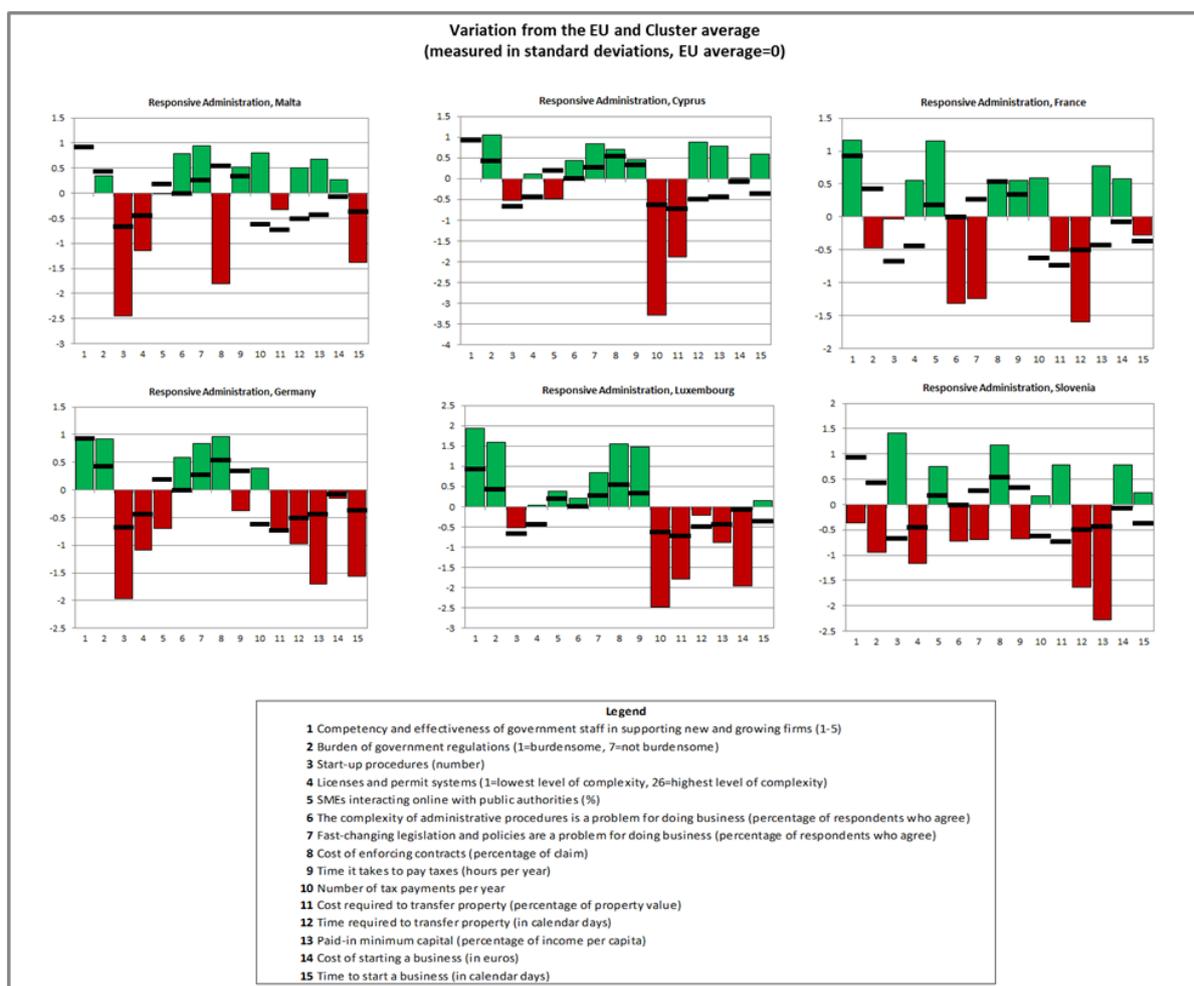


Table 13. Prioritization in Cluster 2, principle 'Think Small First & Responsible Administration'

Country	Priority area (# indicator)	Main strength (# indicator)
Malta	3,1; 3,5; 3,8; 3,11	3,6; 3,9; 3,10
Cyprus	3,5; 3,6; 3,11	3,3(*); 3,4(*)
France	3,1; 3,4(*); 3,5; 3,9; 3,10; 3,12	3,3(*)
Germany	3,1; 3,3(*); 3,4(*); 3,5; 3,7; 3,11	3,9; 3,10; 3,12
Luxembourg	3,2; 3,3(*); 3,5; 3,6	3,7; 3,8; 3,12; 3,13
Slovenia	3,3(*); 3,4(*); 3,7; 3,9; 3,10; 3,13	3,5; 3,11

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

3.3.3 Analysis of 'Think Small First & Responsible Administration' for Cluster 3

Most of the countries in Cluster 3 are characterized by a high performance in this principle and a positive trend of improvement over time. This holds true for Denmark, Finland, the Netherlands, Ireland, Portugal, Sweden, and the United Kingdom. The only exceptions are Belgium and Austria, countries that face a low performance combined with a stationary trend.

With the only exception of Belgium (46% of positive cases), all countries in this Cluster have indeed a better than EU28 average performance in the majority of the indicators. Moreover, 7 of the 9 countries in the Cluster have close to 80% of indicators performing better than EU28 average. The only countries excluded from this outperformance are Austria and Belgium, as expected from the overall weak performance in the principle.

Overall, the number of weaknesses will be lower than those outlined for the previous Cluster, as Cluster 3 is a better performing one. Still, the combination of Cluster and EU28 average allows drawing relevant country based insights.

Austria's main weaknesses are in 'time to start a business' (3.1) and 'start-up number of procedures' (3.11) where it is worse than EU28 average and really far from its Cluster average achievements. Although close to EU28 average, an improvement to be better aligned with its Cluster can be reached suggested in 'fast changing legislation and policies' (3.9), where all the countries in the Cluster (excluding Belgium) are far better than EU28 average.

Belgium's main weaknesses are in 'cost to start a business' (3.2), 'paid-in minimum capital' (3.3), 'time to register property' (3.4), 'cost to register property' (3.5), 'fast changing legislation and policies' (3.9), 'complexity of administrative procedure for doing business' (3.10) and 'burden of government regulations' (3.12) where it is worse than EU28 average and far from its Cluster average achievements.

Denmark's main weakness is in 'paid-in minimum capital' (3.3), where it is worse than EU28 average and far from its Cluster average achievements. Moderate priority has to be given to 'cost to enforce contracts' (3.8), where it is better than Cluster average but worse than EU28 average, as well as to 'burden of government regulations' (3.12), where it is on the contrary better than EU28 average but its Cluster is capable of a far better performance.

Finland's main weaknesses are in 'time to start a business' (3.1), 'time to register property' (3.4), and 'competence and effectiveness of government staff in supporting new and growing firms' (3.13) where it is worse than EU28 average and far from its Cluster average achievements.

Ireland's main weaknesses are in 'time to start a business' (3.1), 'time to register property' (3.4), and 'cost to enforce contracts' (3.8) where it is worse than EU28 average and far from its Cluster average achievements.

The Netherlands' main weaknesses are in 'cost to start a business' (3.2), 'cost to register property' (3.5) where it is worse than EU28 average and far from its Cluster average achievements, as well as in 'cost to enforce contracts' (3.8) in which it is close to its Cluster average but worse than EU28 average.

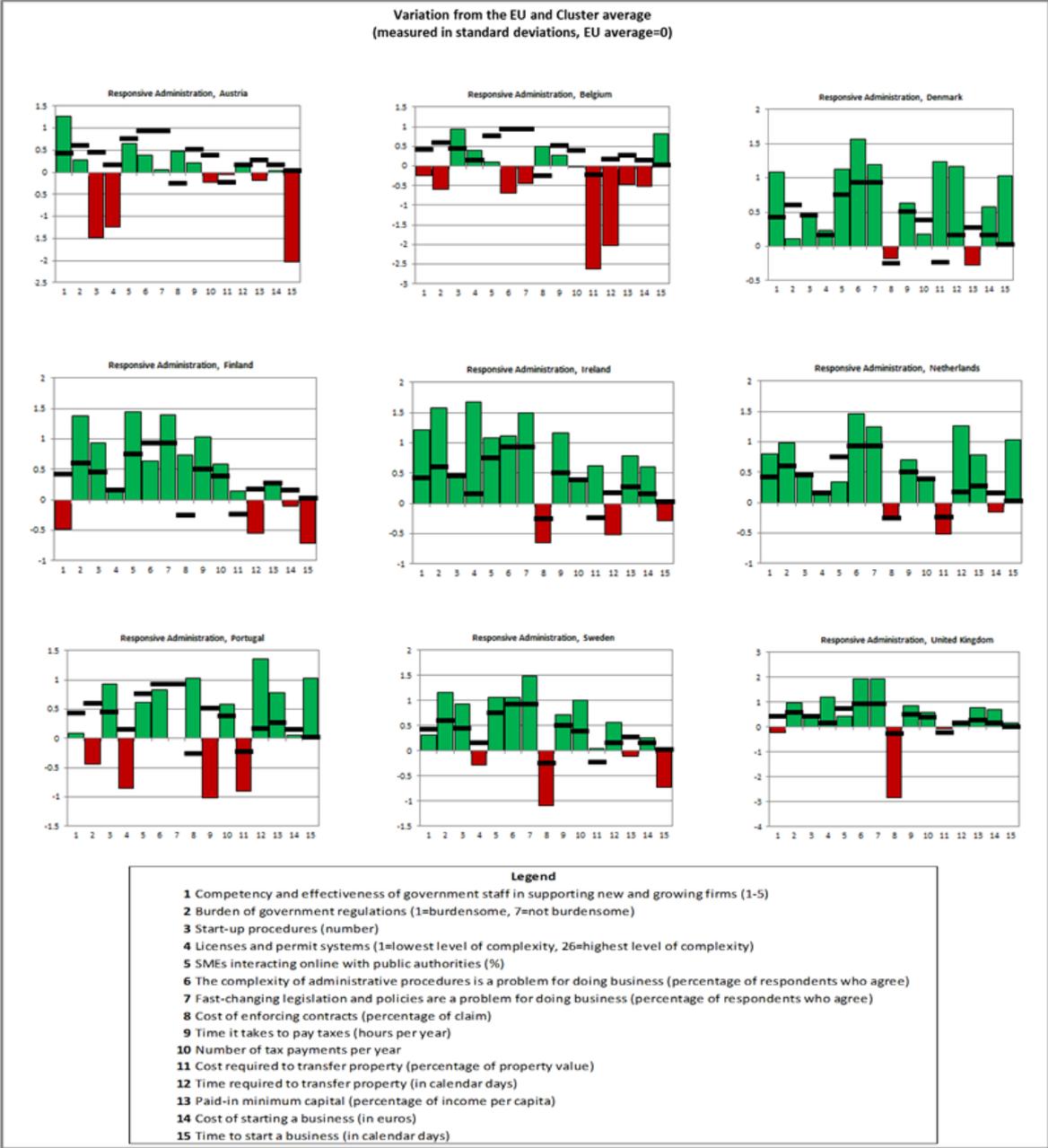
Portugal's main weaknesses are in 'cost to start a business' (3.2), 'cost to register property' (3.5), and 'time required to comply with major taxes' (3.7) where it is worse than EU28 and its Cluster average.

Sweden's main weaknesses are in 'time to start a business' (3.1), 'paid-in minimum capital' (3.3), and 'cost to enforce contracts' (3.8) where it is worse than EU28 average and from its Cluster average.

United Kingdom's main weaknesses are in 'cost to register property' (3.5), 'cost to enforce contracts' (3.8), and 'competence and effectiveness of government staff in

supporting new and growing firms' (3.13) where it is worse than EU28 and its Cluster average.

Figure 23. Indicators in 'Think Small First & Responsible Administration' for countries in Cluster 3 compared to cluster and EU average



Austria is the best performing country of the Cluster in 'competence and effectiveness of government staff in supporting new and growing firms' (3.13), thus serving as a benchmarking for the remaining countries in the Cluster.

Denmark is the best performing country of the Cluster in 'time to start a business' (3.1), thus serving as a benchmarking for the remaining countries in the Cluster.

Ireland is the best performing country of the Cluster in 'burden of government regulations' (3.12), thus serving as a benchmarking for the remaining countries in the Cluster.

Portugal is the best performing country of the Cluster in 'cost to enforce contracts' (3.8), thus serving as a benchmarking for the remaining countries in the Cluster. In this indicator most of the countries in the Cluster show a worse than EU28 average performance. It is furthermore the best performing country in 'time to register property' (3.4).

United Kingdom is the best performing country of the Cluster in 'fast changing legislation and policies' (3.9) and 'complexity of administrative procedure for doing business' (3.10), thus serving as a benchmarking for the remaining countries in the Cluster.

Table 14. Prioritization in Cluster 3, principle 'Think Small First & Responsible Administration'

Country	Priority area (# indicator)	Main strength (# indicator)
Austria	3.1; 3.9; 3.11	3.13
Belgium	3.2; 3.3; 3.4; 3.5; 3.9; 3.10; 3.12	3.1; 3.13
Denmark	3.2; 3.3; 3.8	3.1; 3.4; 3.5; 3.10
Finland	3.1; 3.4; 3.13	3.8; 3.11; 3.12
Ireland	3.1; 3.4; 3.8	3.7; 3.9; 3.12
The Netherlands	3.2; 3.5; 3.8	3.1; 3.3; 3.4; 3.10
Portugal	3.2; 3.5; 3.7	3.1; 3.4; 3.8
Sweden	3.1; 3.3; 3.8	3.6; 3.11; 3.12
United Kingdom	3.5; 3.8; 3.13	3.9; 3.10

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

3.3.4 Analysis of 'Think Small First & Responsible Administration' for Cluster 4

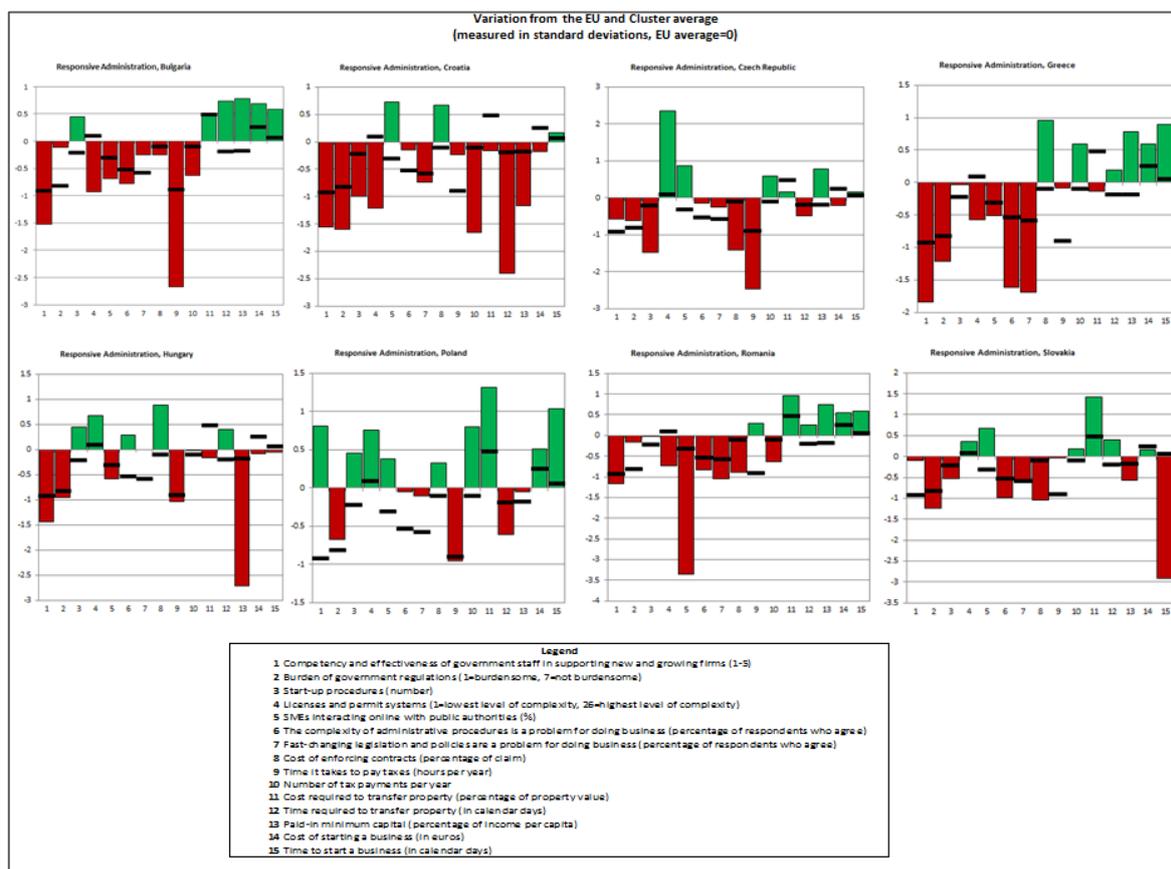
Cluster 4 is strongly balanced and homogeneous with respect to this principle. All countries in the Cluster are improving their performance in time. Furthermore, with the only exception of Poland (experiencing a high performance), all countries in the Cluster are worse than EU28 average.

This is fully captured by the analysis of specific indicators building this principle, as all countries (excluded Poland) are worse than EU28 average in the majority of the indicators, up to the case of Croatia, where it is lower than EU28 average values in 80% of the indicators.

All the countries in the Cluster have a strong weakness in 'fast changing legislation and policies' (3.9) and 'burden of government regulations' (3.12), where all countries suffer from a below EU28 average performance. Similarly, all countries excluding Hungary are very weak in 'complexity of administrative procedure for doing business' (3.10) and all countries excluding Romania are very weak in 'time required to comply with major taxes' (3.7).

In addition to these common weaknesses, Bulgaria, Croatia, Greece and Romania have a very weak performance in 'competence and effectiveness of government staff in supporting new and growing firms' (3.13). Furthermore, Croatia and Poland have a priority regarding 'time to register property' (3.4), Hungary in 'paid-in minimum capital' (3.3) and Slovakia in 'time to start a business' (3.1).

Figure 24. Indicators in 'Think Small First & Responsible Administration' for countries in Cluster 4 compared to cluster and EU average



Bulgaria is the best performing country in 'cost to start a business' (3.2), 'paid-in minimum capital' (3.3) and 'time to register property' (3.4), and should thus serve as a benchmark for the other countries.

Poland is the only country with an above EU28 average value in 'competence and effectiveness of government staff in supporting new and growing firms' (3.13), and should thus serve as a benchmark for the other countries. Furthermore, it is the best performing country in 'competency and effectiveness of government staff in supporting new and growing firms' (3.1) and 'number of tax payments per year' (3.6).

Hungary is the only country with an above EU28 average value in 'complexity of administrative procedure for doing business' (3.10), and should thus serve as a benchmark for the other countries.

Romania is the only country with an above EU28 average value in 'time required to comply with major taxes' (3.7), and should thus serve as a benchmark for the other countries.

Greece is the best performing country in 'cost to enforce contracts' (3.8), and should thus serve as a benchmark for the other countries.

Slovakia is the best performing country in 'cost to register property' (3.5), and should thus serve as a benchmark for the other countries.

Table 15. Prioritization in Cluster 4, principle 'Think Small First & Responsible Administration'

Country	Priority area (# indicator)	Main strength (# indicator)
Bulgaria	3.7; 3.9; 3.10; 3.12; 3.13	3.2; 3.3(*); 3.4(*); 3.11
Croatia	3.4(*); 3.7; 3.9; 3.10; 3.12; 3.13	3.8
Czech Republic	3.7; 3.9; 3.10; 3.12	3.3(*); 3.6
Greece	3.7; 3.9; 3.10; 3.12; 3.13	3.1; 3.3(*); 3.8
Hungary	3.3(*); 3.7; 3.9; 3.12	3.8; 3.10; 3.11
Poland	3.4(*); 3.7; 3.9; 3.10; 3.12	3.1; 3.6; 3.7; 3.11; 3.13
Romania	3.9; 3.10; 3.12; 3.13	3.3(*); 3.5; 3.7
Slovakia	3.1; 3.7; 3.9; 3.10; 3.12	3.4(*); 3.5

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

3.3.5 Analysis of 'Think Small First & Responsible Administration' for Cluster 5

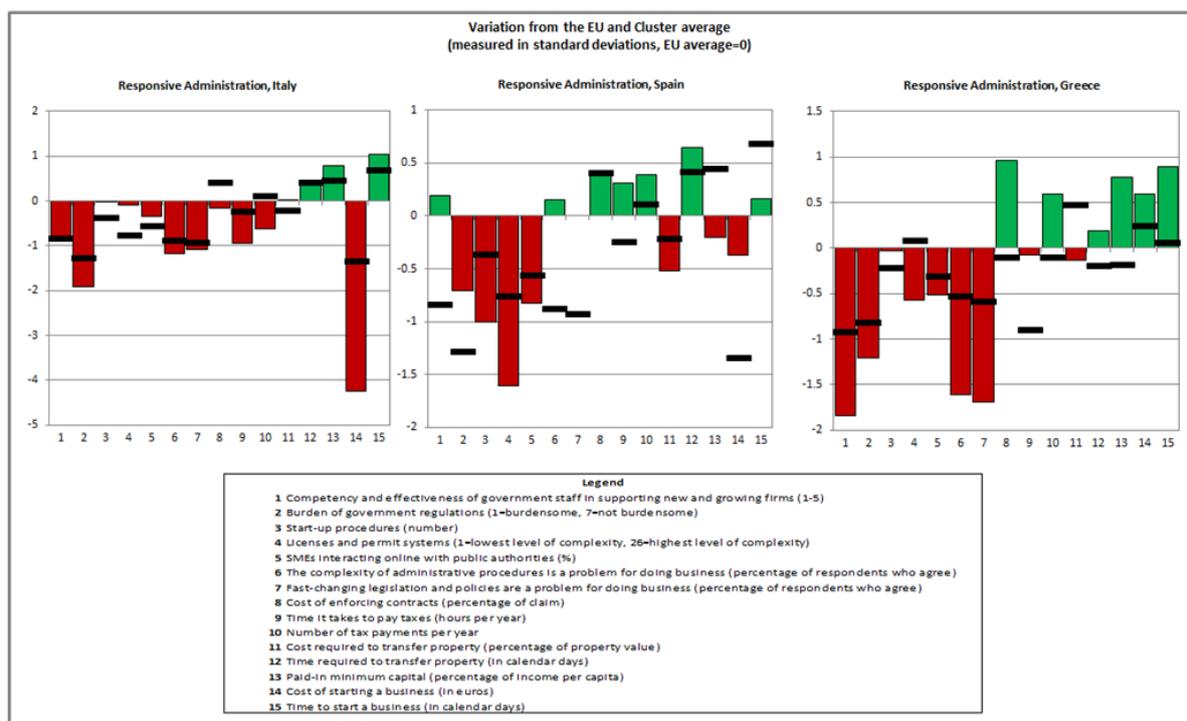
Cluster 5 is very small and thus easily homogeneous in this principle as both countries are characterized by a low but improving performance in this principle.

Whereas Italy is better than EU28 average only in 20% of the indicators, Spain reports a much better (although still weak) percentage: 50%.

Italy's big gap in this dimension makes it a difficult exercise to outline a ranking in its priority areas, as priority seems to be needed for all the indicators in the dimension excluding 'time to start a business' (3.1), 'paid-in minimum capital' (3.3) and 'time to register property' (3.4).

Spain's main weaknesses are in 'cost to start a business' (3.2), 'paid-in minimum capital' (3.3), 'cost to register property' (3.5) and 'start-up number of procedures' (3.11), although the relatively bad performance call for improvements even in the other indicators.

Figure 25. Indicators in 'Think Small First & Responsible Administration' for countries in Cluster 5 compared to cluster and EU average



Italy can serve as a benchmark with respect to 'time to start a business' (3.1) and 'paid-in minimum capital' (3.3).

On the contrary, Spain can be a proper benchmark with respect to 'number of tax payments per year' (3.6), 'time required to comply with major taxes' (3.7), 'cost to enforce contracts' (3.8) and 'complexity of administrative procedure for doing business' (3.10).

Table 16. Prioritization in Cluster 5, principle 'Think Small First & Responsible Administration'

Country	Priority area (# indicator)	Main strength (# indicator)
Italy	All indicators excluding 3.1; 3.3(*) and 3.4(*)	3.1; 3.3(*)
Spain	3.2; 3.3(*); 3.5; 3.11	3.6; 3.7; 3.8; 3.10

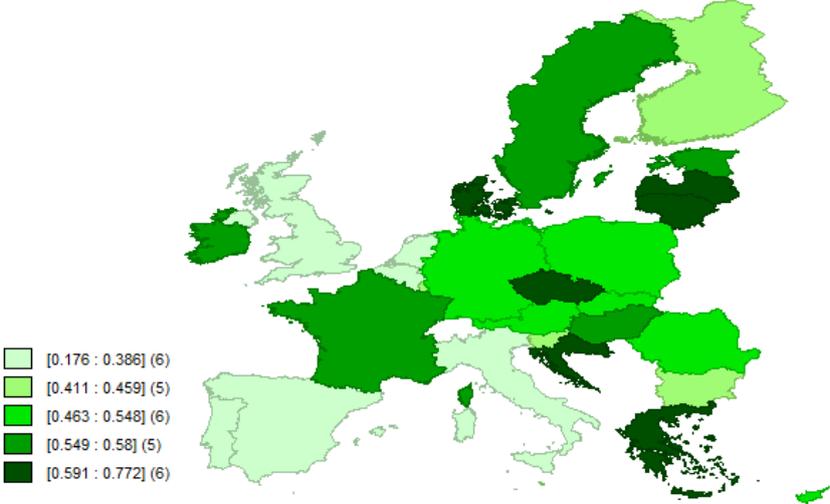
Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

3.4 Analysis of 'State aid & Public procurement'

Countries' scores recorded in principle 'State aid & Public procurement' are distributed as reported in the map in Figure 26, which shows the quantile distribution of those scores. The map ranges values from the 6 countries coloured in the lightest green, representing the worst performing ones in this dimension (Belgium, Italy, The Netherlands, Portugal, Spain and United Kingdom), to the ones in darkest green, which are the best performing ones (Croatia, Czech Republic, Denmark, Greece, Latvia and Lithuania).

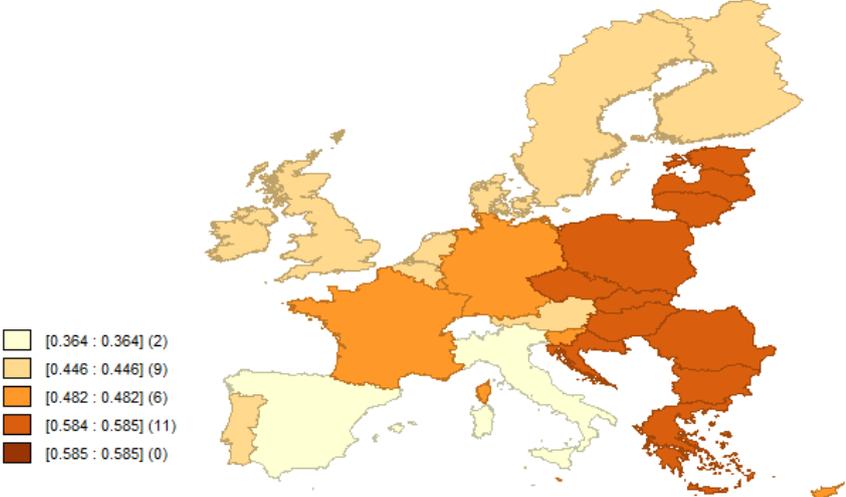
Figure 26. Quantile distribution of 'State aid & Public procurement' by country



As found in Figure 26 a large range of variation across countries and across Clusters characterizes this principle.

Clusters' average values in the same principle are reported in Figure 27. This map shows that the lowest Cluster average is found for Cluster 5, while the highest Cluster average is obtained by Clusters 1 and 4.

Figure 27. Cluster averages for 'State aid & Public procurement'



Given the evidence outlined so far, next subsection aims to discuss the area of improvements in this principle by clusters.

3.4.1 Analysis of 'State aid & Public procurement' for Cluster 1

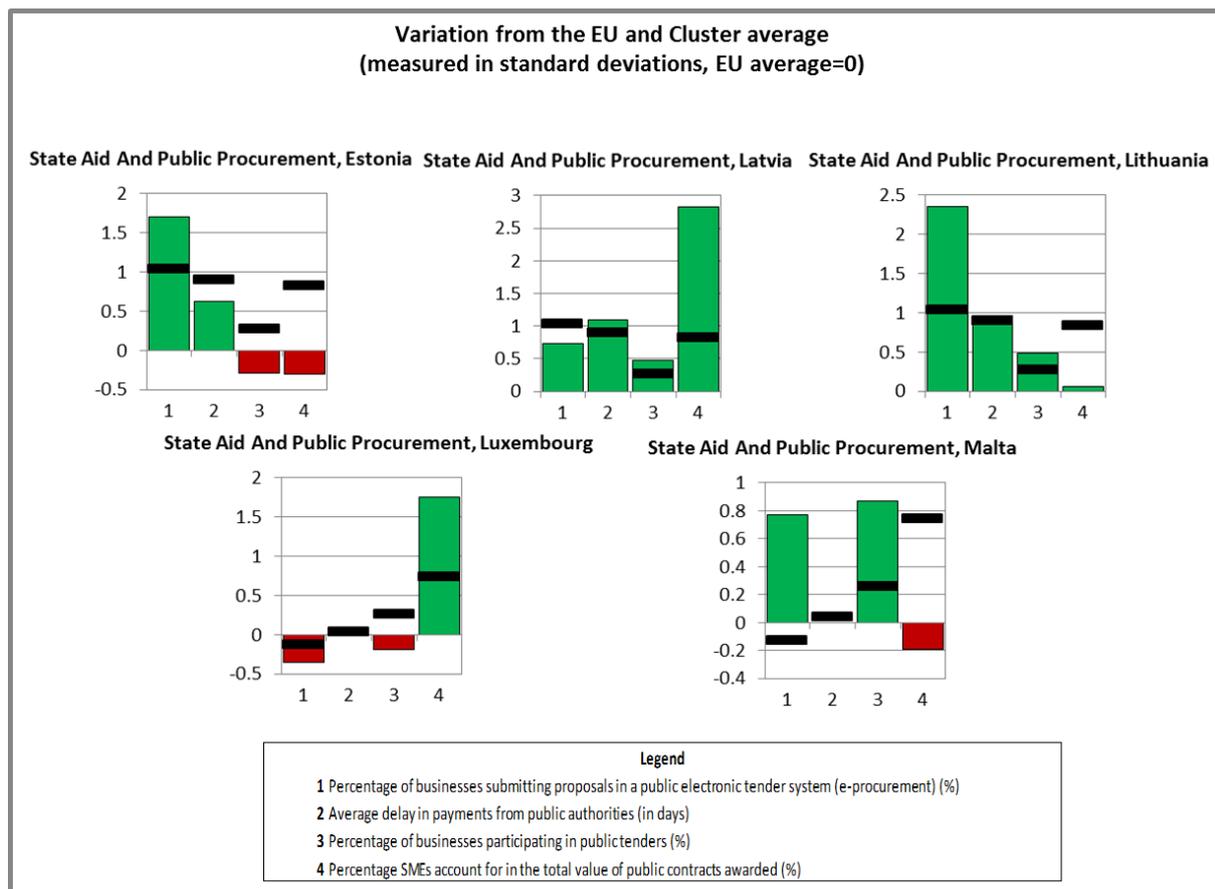
Performances in this area show a heterogeneous picture for the three countries in the Cluster: Latvia and Lithuania are in the overall dimension having a high performance and a positive trend, while Estonia is on average close to EU28 and reports a negative trend.

Overall, countries in the Cluster perform better than EU28 average with a great variation across them: in 100% of the indicators for Latvia and Lithuania, to the 50% of Estonia.

As for the previous principle, it is possible to disentangle some areas of strengths and weaknesses based on the scores in the indicators building the principle with EU average set to zero.

The main weaknesses envisaged for Estonia are in 'percentage SMEs account for in the total value of public contracts awarded' (5.1) and 'percentage of businesses participating in public tenders' (5.2), where it performs worse than EU28 and Cluster average. As for Latvia, the country is underperforming the Cluster average in 'percentage of businesses submitting proposals in a public electronic tender system' (5.4). Lithuania's weakness stands in 'percentage SMEs account for in the total value of public contracts awarded' (5.1), where it is above the EU28 average but worse than the Cluster average.

Figure 28. Indicators in 'State aid & Public procurement' for countries in Cluster 1 compared to cluster and EU average



Latvia is outperforming Cluster and EU28 average in most of the indicators, so it can be considered as a valuable benchmark, with the exception of 'percentage of businesses submitting proposals in a public electronic tender system' (5.4) in which Lithuania can be taken as a valuable benchmark.

Table 17. Prioritization in Cluster 1, principle 'State aid & Public procurement'

Country	Priority area (# indicator)	Main strength (# indicator)
Estonia	5.1(**); 5.2	5.4
Latvia	5.4	5.1(**); 5.2; 5.3
Lithuania	5.1(**)	5.4; 5.2

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

3.4.2 Analysis of 'State aid & Public procurement' for Cluster 2

Cluster 2 also exhibits a rather heterogeneous picture for the six countries composing it with Cyprus, Germany and Luxembourg having a low performance, but a positive trend in the overall dimension and Malta and Slovenia showcasing a low performance and negative trends while France exhibits high performances and a positive trend.

Overall, half of the countries in the Cluster perform better than EU28 in 75% of the indicators (France, Malta, Slovenia), while the rest are outperforming the EU28 average in only 50% of the cases.

As far as the main strengths and weaknesses for this Cluster are concerned, Cyprus's main weaknesses are reported in 'average delay in payments from public authorities' (5.3) and 'percentage of businesses participating in public tenders' (5.2) where it is below both the EU28 and Cluster average.

The main priority area identified for France is in the 'average delay in payments from public authorities' (5.3) provided it scores worse than both the EU28 and Cluster average. A secondary priority area is given by the 'percentage SMEs account for in the total value of public contracts awarded' (5.1) in which case France performs slightly better than the EU28 average, but underperforms considerably the Cluster average.

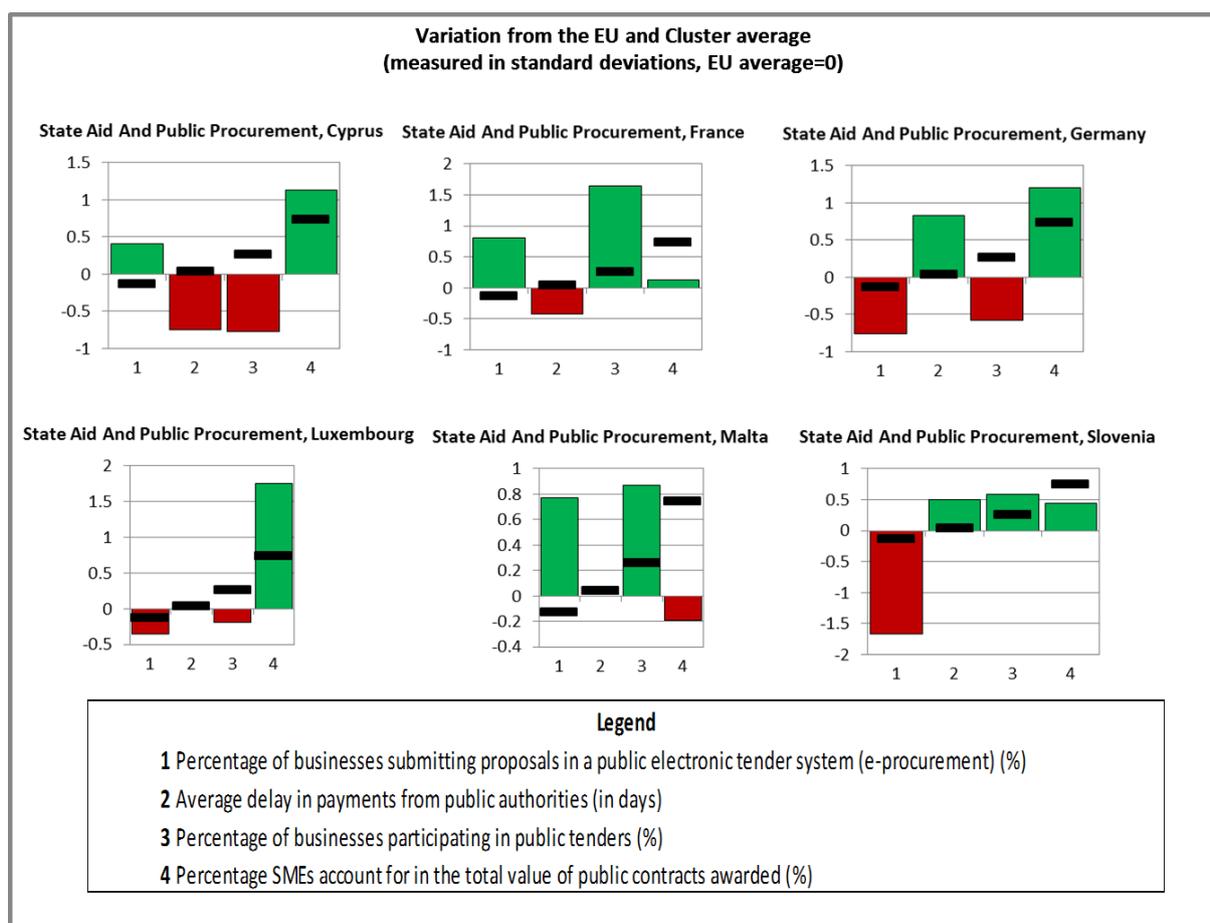
The most relevant priority areas identified for Germany in this dimension are 'percentage of businesses submitting proposals in a public electronic tender system' (5.4) and 'percentage of businesses participating in public tenders' (5.2), in which the country underperforms both the EU28 and Cluster averages.

Similarly, Luxembourg's main areas of weakness are 'percentage of businesses submitting proposals in a public electronic tender system' (5.4) and 'percentage of businesses participating in public tenders' (5.2), where it is worse than both the EU28 and Cluster average.

Malta faces one main areas of priority in 'percentage SMEs account for in the total value of public contracts awarded' (5.1), where it is slightly underperforming the EU28 average, but is far worse than the Cluster average.

Slovenia's main priority area in this principle is 'percentage of businesses submitting proposals in a public electronic tender system' (5.4), where it considerably underperforms both the EU28 and the Cluster average. To a more moderate extent, 'percentage SMEs account for in the total value of public contracts awarded' (5.1) represents a focus area given it outperforms the EU28 average, but it scores lower than its Cluster average.

Figure 29. Indicators in 'State aid & Public procurement' for countries in Cluster 2 compared to cluster and EU average



France can serve as a benchmark for the remaining countries of its Cluster in 'percentage of businesses submitting proposals in a public electronic tender system' (5.4) and in 'percentage of businesses participating in public tenders' (5.2), as it is the best performing of the Cluster in these dimensions.

Germany can serve as a benchmark for the remaining countries of its Cluster in 'average delay in payments from public authorities' (5.3), as it the best performing of the Cluster in this dimension.

Luxembourg can serve as a benchmark for the remaining countries of its Cluster in its 'percentage SMEs account for in the total value of public contracts awarded' (5.1), as it the best performing of the Cluster in this dimension.

Table 18. Prioritization in Cluster 2, principle 'State aid & Public procurement'

Country	Priority area (# indicator)	Main strength (# indicator)
Malta	5.1(**)	5.2; 5.4
Cyprus	5.2;5.3	5.1(**); 5.4
France	5.1(**); 5.3	5.2; 5.4
Germany	5.2; 5.4	5.1(**);5.3

Luxembourg	5.2; 5.4	5.1(**)
Slovenia	5.1(**); 5.4	5.2; 5.3

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

3.4.3 Analysis of 'State aid & Public procurement' for Cluster 3

Performance and trends of countries in Cluster 3 in the 'State aid & Public procurement' dimension draw a heterogeneous picture:

- High performance and ascending trend: Denmark and Ireland
- High performance and descending trend: Austria, Belgium, Portugal and United Kingdom
- Low performance and descending trend: Finland and The Netherlands
- Low performance and ascending trend: Sweden.

Generally, the nine countries constituting the third Cluster showcase performances above the EU28 averages. Most of the countries outperform the EU28 averages in 50% of the indicators (Finland, Ireland, the Netherlands and United Kingdom). Otherwise, outperformances range from 100% indicators (Denmark) to 25% (Belgium and Portugal). Austria and Sweden outperform the EU28 averages in 75% of the indicators.

Moving to the main recommendations that emerge from the analysis of the combination of country, Cluster and EU28 averages, the following considerations may be drawn.

Austria's weaknesses are reported in 'percentage of businesses participating in public tenders' (5.2) where it is below the EU28. Moderate priority can be given to 'percentage of businesses submitting proposals in a public electronic tender system' (5.4) where its Cluster is capable of much better achievements.

Belgium is performing worse than both EU28 and Cluster average in the majority of the indicators of the principle. Its main weaknesses would thus be 'percentage of businesses submitting proposals in a public electronic tender system' (5.4), 'average delay in payments from public authorities' (5.3) and 'percentage of businesses participating in public tenders' (5.2).

Finland's main weaknesses are found in 'percentage of businesses submitting proposals in a public electronic tender system' (5.4) and 'percentage of businesses participating in public tenders' (5.2). In the latter case it outperforms its Cluster average, but stands below the EU28 average.

Ireland's main weakness is found in 'percentage of businesses participating in public tenders' (5.2) and 'percentage SMEs account for in the total value of public contracts added' (5.4) where it shows values below EU28 and Cluster averages.

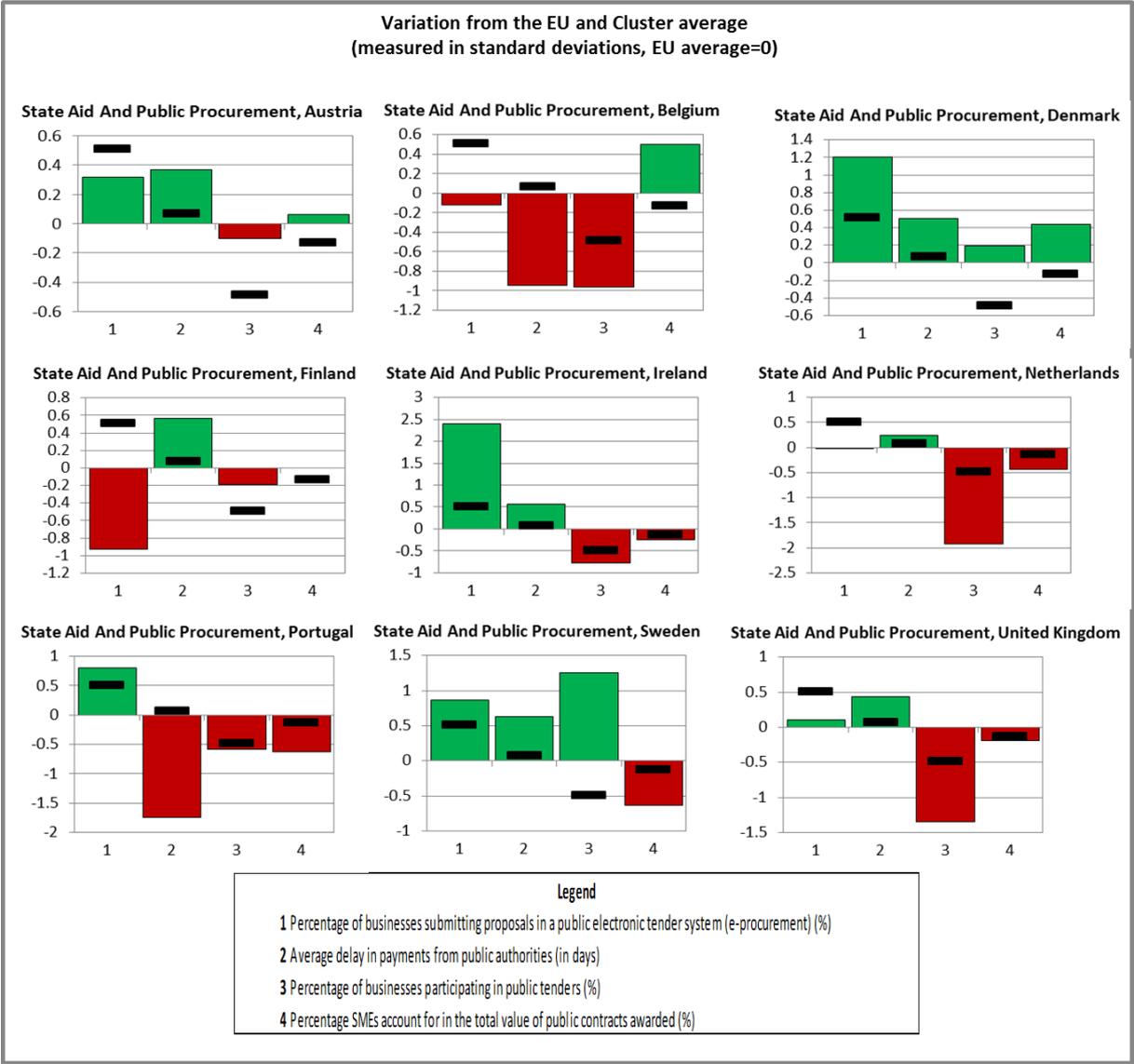
The Netherlands show values below EU28 and Cluster averages in 'percentage of businesses participating in public tenders' (5.2) and 'percentage SMEs account for in the total value of public contracts added' (5.4), and those should be identified as the main priority area for the country in this dimension. Also, moderate priority should be given to 'percentage of businesses submitting proposals in a public electronic tender system' (5.4) in which case the Netherlands only slightly outperform the EU28 average and stand far worse than the Cluster average.

Portugal's main priority areas are identified in 'average delay in payments from public authorities' (5.3), 'percentage of businesses participating in public tenders' (5.2) and 'percentage SMEs account for in the total value of public contracts added' (5.4).

Sweden’s weakness is related to ‘percentage SMEs account for in the total value of public contracts added’ (5.4) where it underperforms both the EU28 and the Cluster averages.

United Kingdom shows below EU28 and Cluster averages in ‘percentage of businesses participating in public tenders’ (5.2) and ‘percentage SMEs account for in the total value of public contracts added’ (5.4), and this should be identified as its main priority area. Moreover, there is room for improvement in ‘percentage of businesses submitting proposals in a public electronic tender system’ (5.4) considering similar countries obtained higher results in this indicator.

Figure 30. Indicators in ‘State aid & Public procurement’ for countries in Cluster 3 compared to cluster and EU average



Denmark is outperforming both the EU28 and Cluster averages in all the indicators of this dimension but there are better performing countries in each indicator that could serve as benchmarks.

Ireland registered the best performance in ‘percentage of businesses submitting proposals in a public electronic tender system’ (5.4), performance which qualifies it as an outstanding benchmark in the area.

Sweden outperforms in 'average delay in payments from public authorities' (5.3) and in 'percentage of businesses participating in public tenders' (5.2), and it can be seen as the best practice to guide other countries' performances.

Lastly, Belgium could be considered a good benchmark in 'percentage SMEs account for in the total value of public contracts added' (5.4).

Table 19. Prioritization in Cluster 3, principle 'State aid & Public procurement'

Country	Priority area (# indicator)	Main strength (# indicator)
Austria	5.2	5.1(**); 5.3
Belgium	5.4; 5.2; 5.3	5.1(**)
Denmark		5.1(**); 5.2; 5.3; 5.4
Finland	5.4; 5.2	5.3
Ireland	5.1(**); 5.2	5.3; 5.4
The Netherlands	5.1(**); 5.2	5.3
Portugal	5.1(**); 5.2; 5.3	5.4
Sweden	5.1(**)	5.2; 5.3; 5.4
United Kingdom	5.1(**); 5.2	5.3

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

3.4.4 Analysis of 'State aid & Public procurement' for Cluster 4

Countries in Cluster 4 are characterized by an overall strength in this dimension, in which they generally report high values and increasing trends with the exception of Bulgaria (low values and negative trend) and Slovakia (low values and ascending trend).

Czech Republic is the best performer of its Cluster, outperforming the EU28 averages in all the indicators constituting the dimension. Poland and Romania are following with a 75% outperforming indicators and Greece and Hungary with 50%. The worst performer in this aspect is Bulgaria which outperforms the EU28 average in only 1 out of 4 indicators (25%).

The main recommendations that emerge from the analysis of the country, Cluster and EU28 averages are the following.

Bulgaria scores less than both the EU28 and Cluster averages in 3 dimensions, namely 'percentage of businesses submitting proposals in a public electronic tender system' (5.4), 'average delay in payments from public authorities' (5.3) and 'percentage of businesses participating in public tenders' (5.2).

Croatia's weakness is in 'average delay in payments from public authorities' (5.3), where it obtains values lower than its Cluster average even though it outperforms the EU28 average.

Czech Republic's priority area is related to its lower than the Cluster average value in 'percentage SMEs account for in the total value of public contracts added' (5.4).

Greece performs worse than the EU28 and Cluster averages in 'percentage of businesses submitting proposals in a public electronic tender system' (5.4) and 'average delay in payments from public authorities' (5.3), these two indicators constituting main priority areas.

Hungary's weaknesses are related to the low 'percentage of businesses submitting proposals in a public electronic tender system' (5.4) and 'average delay in payments from public authorities' (5.3), areas in which it exhibits values lower than both the EU28 and the Cluster averages.

Poland's main priority area is constituted by 'percentage SMEs account for in the total value of public contracts added' (5.4) where it reported values slightly lower than the EU28 average but significantly lower than the Cluster one. To a lesser extent, 'average delay in payments from public authorities' (5.3) and 'percentage of businesses participating in public tenders' (5.2) might represent possible areas of interest as its Cluster is capable of much better achievements.

Romania has values lower than the EU28 and Cluster averages in 'percentage of businesses participating in public tenders' (5.2). Also it reports values lower than its Cluster in 'percentage of businesses submitting proposals in a public electronic tender system' (5.4) and 'percentage SMEs account for in the total value of public contracts added' (5.4).

Slovakia's main priority area is represented by 'percentage SMEs account for in the total value of public contracts added' (5.4) in which it reports values slightly lower than the EU28 average and considerably lower than its Cluster average.

Czech Republic is outperforming the EU28 averages in all the dimensions and can constitute a benchmark for the rest of the Cluster's countries relating the 'percentage of businesses participating in public tenders' (5.2).

Following, Poland's results in 'percentage of businesses submitting proposals in a public electronic tender system' (5.4) recommend it as a benchmark in the area.

Romania can serve as a benchmark in 'average delay in payments from public authorities' (5.3).

Lastly, 'percentage SMEs account for in the total value of public contracts added' (5.4) could be benchmarked by Hungary due to its outstanding performance in this indicator.

Figure 31. Indicators in 'State aid & Public procurement' for countries in Cluster 4 compared to cluster and EU average

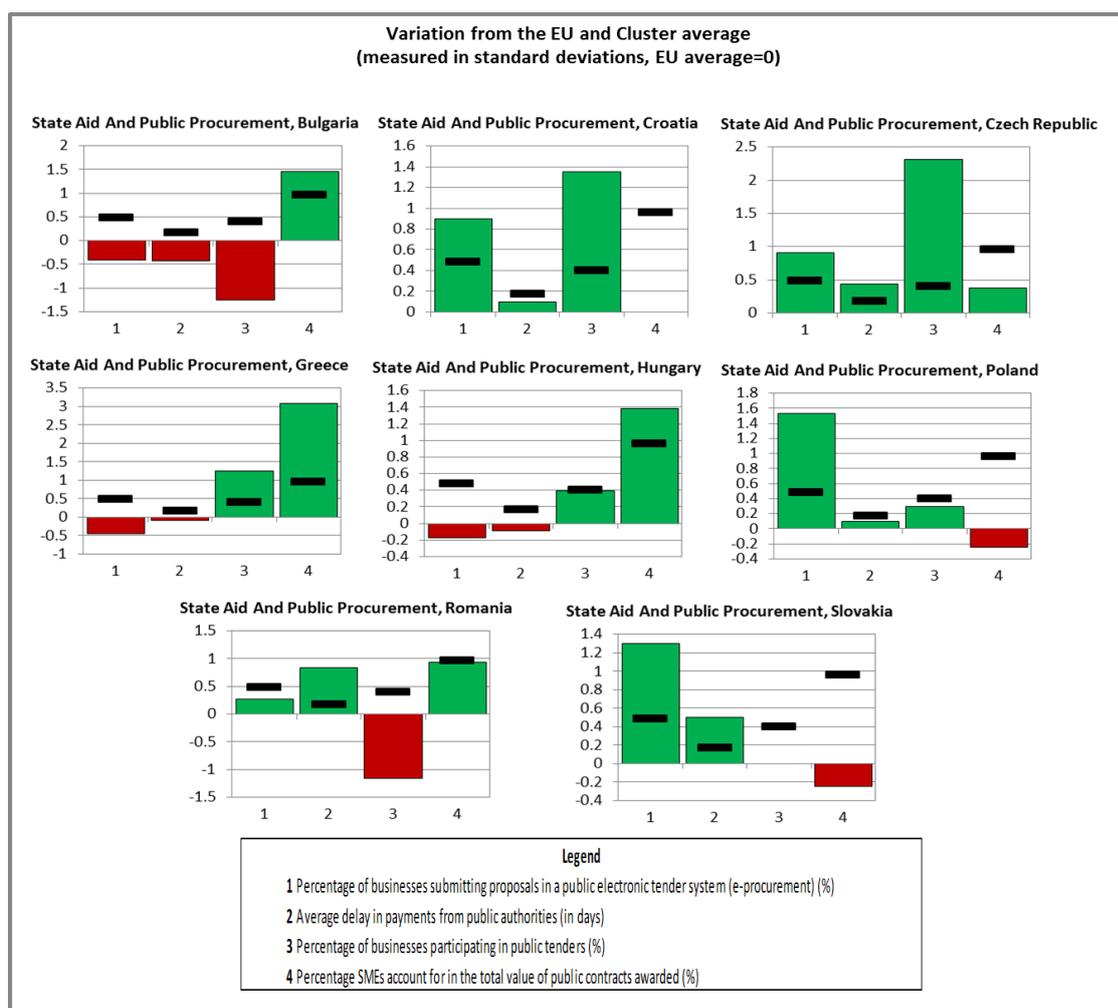


Table 20. Prioritization in Cluster 4, principle 'State aid & Public procurement'

Country	Priority area (# indicator)	Main strength (# indicator)
Bulgaria	5.2; 5.3; 5.4	5.1(**)
Croatia		5.2; 5.4
Czech Republic	5.1(**)	5.2; 5.3; 5.4
Greece	5.3; 5.4	5.1(**); 5.2
Hungary	5.3; 5.4	5.1(**)
Poland	5.1(**)	5.4
Romania	5.2	5.3
Slovakia	5.1(**)	5.3; 5.4

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

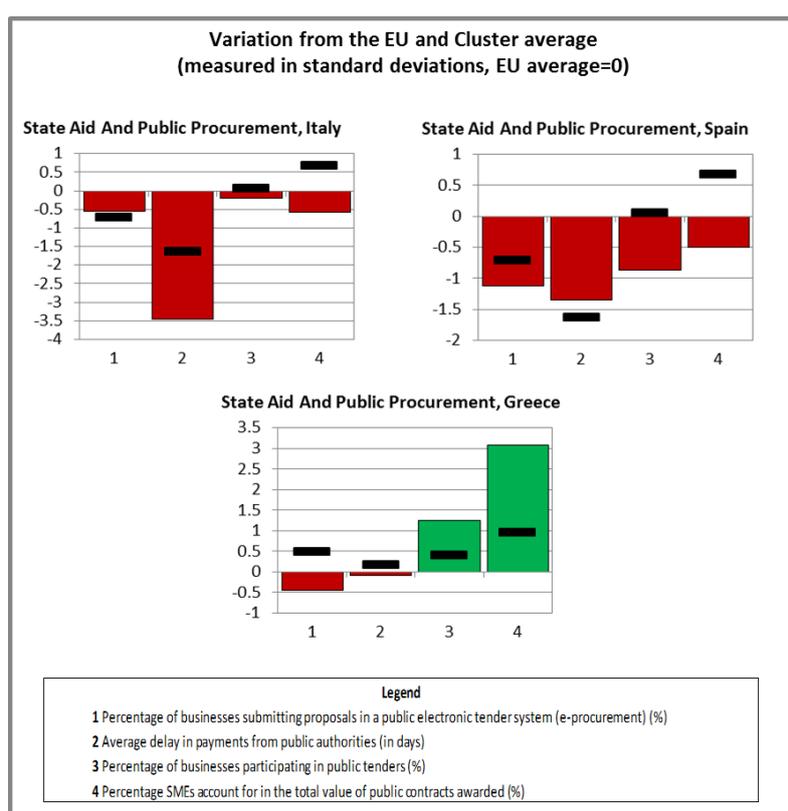
(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

3.4.5 Analysis of 'State aid & Public procurement' for Cluster 5

Both countries composing this small cluster, i.e Italy and Spain, are underperforming the EU28 averages in this dimension.

From the analysis of the country, Cluster and EU28 averages it emerges that both countries should focus on improving all the indicators composing the State aid & Public procurement' dimension given that their values underperform the EU28 averages and most of the Cluster averages.

Figure 32. Indicators in 'State aid & Public procurement' for countries in Cluster 5 compared to cluster and EU average



In this case benchmarking within the cluster is not possible given the bad performance of both Italy and Spain. Given the closeness of Greece to this countries and its good performance in 'percentage of businesses participating in public tenders' (5.2) and 'percentage SMEs account for in the total value of public contracts added' (5.4) its achievements could be used as a benchmark by the two countries.

Table 21. Prioritization in Cluster 5, principle 'State aid & Public procurement'

Country	Priority area (# indicator)	Main strength (# indicator)
Italy	5.1(**); 5.2; 5.3; 5.4	
Spain	5.1(**); 5.2; 5.3; 5.4	

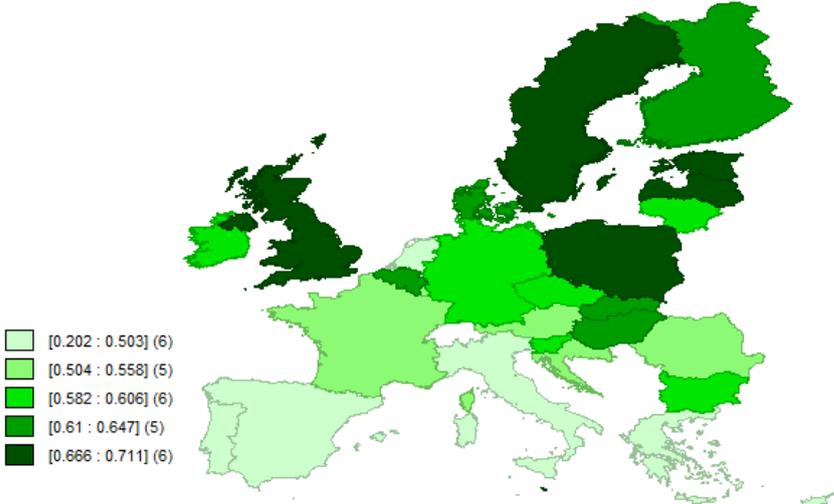
Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

3.5 Analysis of 'Access to Finance'

Countries' scores recorded in principle 'Access to Finance' are distributed as reported in the map in Figure 33, which shows the quantile distribution of those scores. The map ranges values from the 6 countries coloured in the lightest green (Cyprus, Portugal, Spain, Greece, Italy, and the Netherlands) representing the worst performing ones in this dimension, to the ones in dark green, which are the best performing ones (Estonia, Latvia, Malta, Poland, Sweden and United Kingdom).

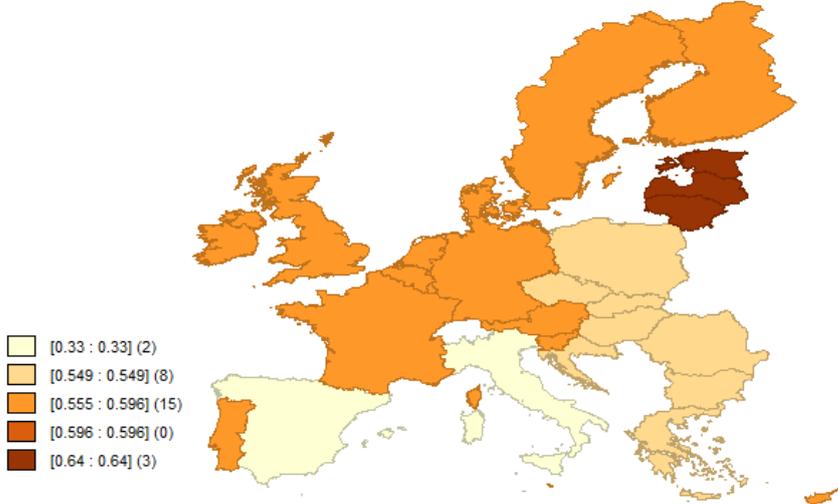
Figure 33. Quantile distribution of 'Access to Finance' by country



As found in Figure 33 a large range of variation across countries and across Clusters characterizes this principle.

Clusters' average values in the same principle are reported in Figure 34. This map shows that the lowest Cluster average is found for Cluster 5, while the highest Cluster average is obtained by Cluster 1.

Figure 34. Cluster averages for 'Access to Finance'



Given the evidence outlined so far, next subsection aims to discuss the areas of improvements in this principle by clusters.

3.5.1 Analysis of 'Access to Finance' for Cluster 1

Cluster 1 is the best performing in this principle. Trends in this principle show a very homogeneous picture for the three countries in the Cluster: Estonia, Latvia and Lithuania all report a high performance combined with a positive trend of progress over time.

This is confirmed when analysing the indicators and how they relate to the EU28 average, as they are well above this average in the majority of them, from the 89% of positive cases in Latvia to the 66% of Lithuania (6 on the 9 available indicators).

Estonia's main priority areas are in 'cost of borrowing for small loans' (6.5) and 'business angels funding for new and growing firms' (6.10), where it performs worse than both EU28 and its cluster average.

Latvia's main priority area is 'bad debt loss' (6.4), where it performs worse than both EU28 and its cluster average.

Lithuania's main priority areas are in 'bad debt loss' (6.4), 'rejected loans applications and loans offers' (6.6) and 'equity funding for new and growing firms' (6.9), where it performs worse than both EU28 and its cluster average.

Estonia is the best performing country in 'bad debt loss' (6.4), 'rejected loans applications and loans offers' (6.6), 'access to public financial support' (6.7) and 'equity funding for new and growing firms' (6.9) and it can be a benchmark for the remaining countries in the Cluster.

Latvia is the best performing country in 'strength of legal rights' (6.2) and it can be a benchmark for the remaining countries in the Cluster.

Figure 35. Indicators in 'Access to Finance' for countries in Cluster 1 compared to cluster and EU average

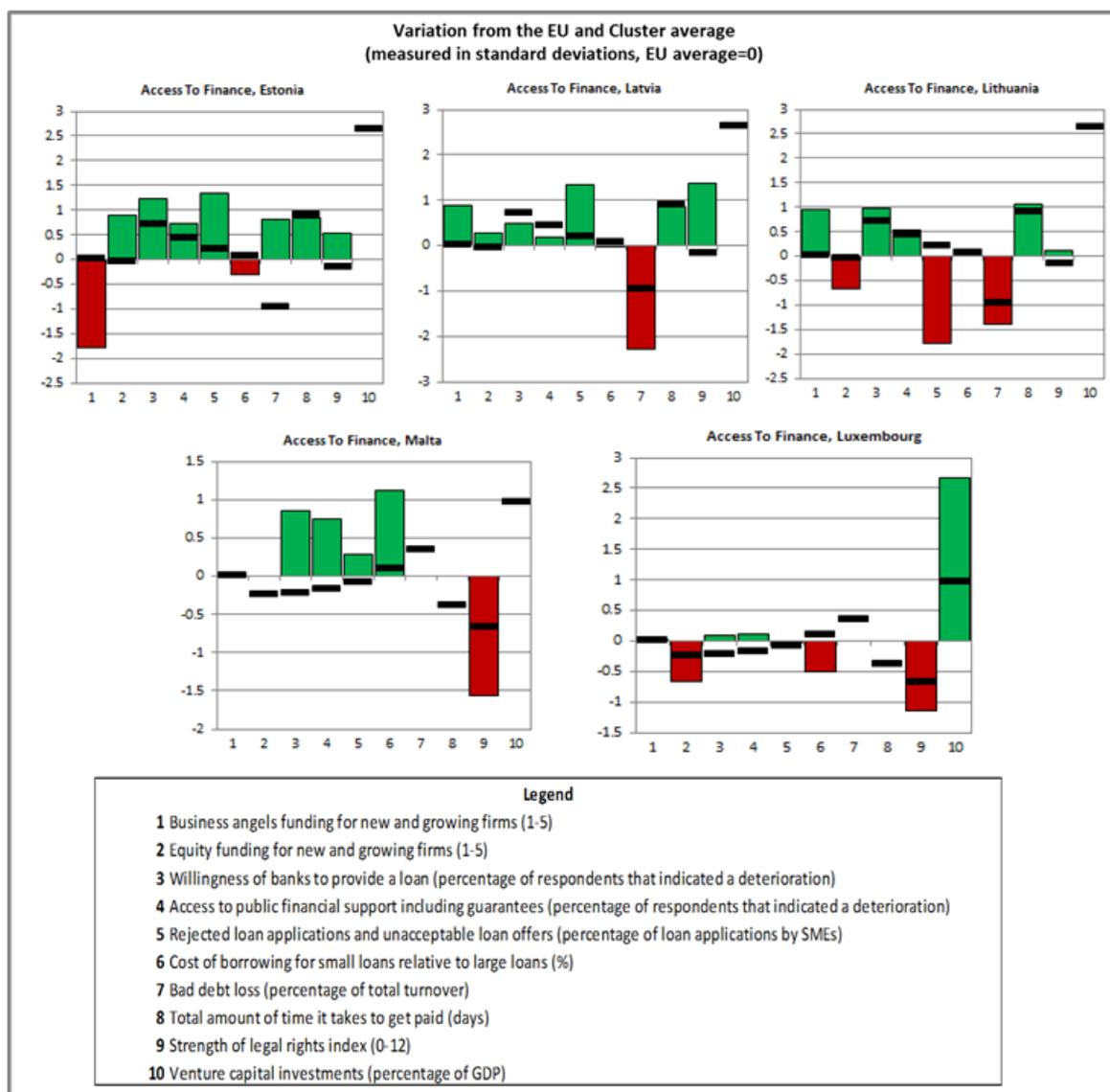


Table 22. Prioritization in Cluster 1, principle 'Access to Finance'

Country	Priority area (# indicator)	Main strength (# indicator)
Estonia	6.5; 6.10	6.4; 6.6(***); 6.7(*);6.9
Latvia	6.4	6.2; 6.6(***); 6.10
Lithuania	6.4; 6.6(***); 6.9	6.10

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

(***) The indicator is strongly unstable over time. This can affect the interpretation of the finding, as outlined in Annex 1.

3.5.2 Analysis of 'Access to Finance' for Cluster 2

The Cluster is quite heterogeneous when analysing the performance and its evolution over time. Most of the countries in the Cluster are characterized by a stationarity trend in this principle over time, but Cyprus and Slovenia report a significant deterioration in the principle over time. Furthermore, the Cluster is split in a group characterized by above EU28 average performance (Malta, Germany and Slovenia) and a group facing a below EU28 average performance (Luxembourg, France and Cyprus).

This picture is confirmed when analysing the indicators and how they relate to the EU28 average. Most of the countries are better than EU28 average in close to 50% of the indicators. As this dimension is suffering of severe raw data missing data, many bars of country based indicators are missing. Malta is for instance missing half of the indicators covered for this principle.

Malta's main weakness is identified in 'strength of legal rights' (6.2). In this indicator it is far worse than both EU28 average and Cluster average.

Cyprus's priority areas are in 'total duration to get paid' (6.3), 'rejected loans applications and loans offers' (6.6), 'access to public financial support' (6.7) and 'willingness of banks to provide loans' (6.8). In all these indicators it is worse than EU28 average and far from its Cluster average.

France's main weaknesses are in 'strength of legal rights' (6.2), 'total duration to get paid' (6.3), 'rejected loans applications and loans offers' (6.6), 'access to public financial support' (6.7) and 'willingness of banks to provide loans' (6.8), where it is worse than both EU28 average and its Cluster average.

Similarly, Germany's main weaknesses are in 'venture capital investments' (6.1), 'cost of borrowing for small loans' (6.5), 'equity funding for new and growing firms' (6.9) and 'business angels funding for new and growing firms' (6.10).

Luxembourg's main weaknesses are in 'strength of legal rights' (6.2), 'cost of borrowing for small loans' (6.5) and 'equity funding for new and growing firms' (6.9).

Slovenia's main weaknesses are in 'strength of legal rights' (6.2), 'access to public financial support' (6.7) and 'willingness of banks to provide loans' (6.8).

Luxembourg is outperforming in 'venture capital investments' (6.1) and it can serve as a proper benchmark for the countries in its Cluster.

Cyprus is the best performing in 'strength of legal rights' (6.2) and can serve as a benchmark for the Cluster. Similarly, Germany is the best performing in 'total duration to get paid' (6.3), France in 'bad debt loss' (6.4) and Slovenia in 'rejected loans applications and loans offers' (6.6) and 'business angels funding for new and growing firms' (6.10) and Malta in 'cost of borrowing for small loans' (6.5), 'access to public financial support' (6.7) and 'willingness of banks to provide loans' (6.8).

Figure 36. Indicators in 'Access to Finance' for countries in Cluster 2 compared to cluster and EU average

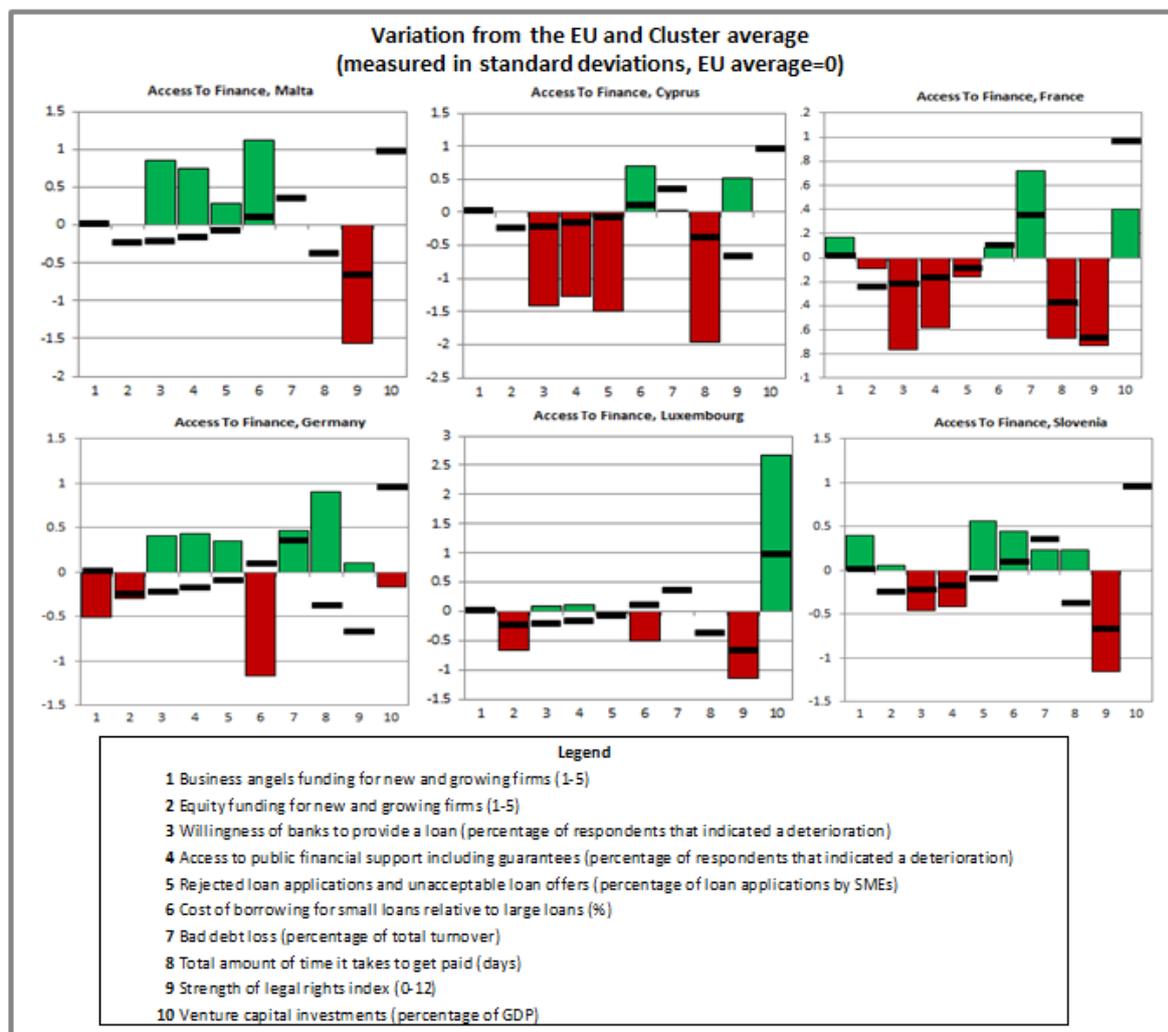


Table 23. Prioritization in Cluster 2, principle 'Access to Finance'

Country	Priority area (# indicator)	Main strength (# indicator)
Malta	6.2	6.5; 6.7(*); 6.8
Cyprus	6.3; 6.6(**); 6.7(*); 6.8	6.2; 6.5
France	6.2; 6.3; 6.6(**); 6.7(*); 6.8	6.4; 6.10
Germany	6.1(**); 6.5; 6.9; 6.10	6.3; 6.6(**); 6.7(*); 6.8
Luxembourg	6.2; 6.5; 6.9	6.1(**)
Slovenia	6.2; 6.7(*); 6.8	6.5; 6.6(**); 6.10

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

(**) The indicator is strongly unstable over time. This can affect the interpretation of the finding, as outlined in Annex 1.

3.5.3 Analysis of 'Access to Finance' for Cluster 3

Cluster 3 is very heterogeneous in this principle. It can be split into 3 equally populated groups: high performance and progress over time (Ireland, Sweden and United Kingdom), high performance but deterioration over time (Belgium, Denmark and Finland) and the last group with low performance and deterioration over time (Austria, the Netherlands and Portugal).

This picture is reflected once single indicators are compared to EU average. Whereas United Kingdom is better than EU28 average values in 100% of the cases, Sweden in 90% of cases, Belgium, Denmark and Finland in 80% of cases and Ireland in 60% of cases, there are countries like the Netherlands and Portugal that are better than EU28 average in only 50% of the indicators and Austria only for 40% of the indicators.

Austria is thus weak in most of the indicator. This leads to the evidence that the main priority areas for the country are in 'venture capital investments' (6.1), 'strength of legal rights' (6.2), 'access to public financial support' (6.7), 'equity funding for new and growing firms' (6.9), as well as in 'business angels funding for new and growing firms' (6.10). In all these indicators it performs worse than EU28 average and far worse than its Cluster average.

Belgium's priority areas are instead only two: 'strength of legal rights' (6.2) and 'total duration to get paid' (6.3), as in both areas it is worse than both Cluster and EU28 average. Similarly, Denmark's priority areas are 'cost of borrowing for small loans' (6.5) and 'rejected loans applications and loans offers' (6.6), while Finland's are 'rejected loans applications and loans offers' (6.6) and 'access to public financial support' (6.7), Sweden's is 'business angels funding for new and growing firms' (6.10) and the United Kingdom's is 'bad debt loss' (6.4).

Ireland is particularly weak (worse than both EU28 and Cluster average) in 'bad debt loss' (6.4), 'cost of borrowing for small loans' (6.5) and 'rejected loans applications and loans offers' (6.6). The Netherlands is particularly weak instead in 'strength of legal rights' (6.2), 'cost of borrowing for small loans' (6.5), 'rejected loans applications and loans offers' (6.6) and 'willingness of banks to provide loans' (6.8). Portugal is another country in the Cluster with many identifiable weaknesses in this principle. Those are in 'strength of legal rights' (6.2), 'total duration to get paid' (6.3), 'rejected loans applications and loans offers' (6.6), 'equity funding for new and growing firms' (6.9) and 'business angels funding for new and growing firms' (6.10).

Denmark is outperforming in 'venture capital investments' (6.1) and can serve as a benchmark for the remaining countries in the Cluster. It is also the best performing country in 'strength of legal rights' (6.2).

Belgium is the best performing country in 'cost of borrowing for small loans' (6.5), an indicator in which most of the countries in the Cluster face a priority area. It can thus serve as a proper benchmark for those countries.

Finland is the best performing country in 'rejected loans applications and loans offers' (6.6), and it is thus a valuable benchmark for the countries in the Cluster. Similarly, Sweden is the best performing country in 'access to public financial support' (6.7) and 'willingness of banks to provide loans' (6.8) and Belgium is the best performing country in 'business angels funding for new and growing firms' (6.10).

Figure 37. Indicators in 'Access to Finance' for countries in Cluster 3 compared to cluster and EU average

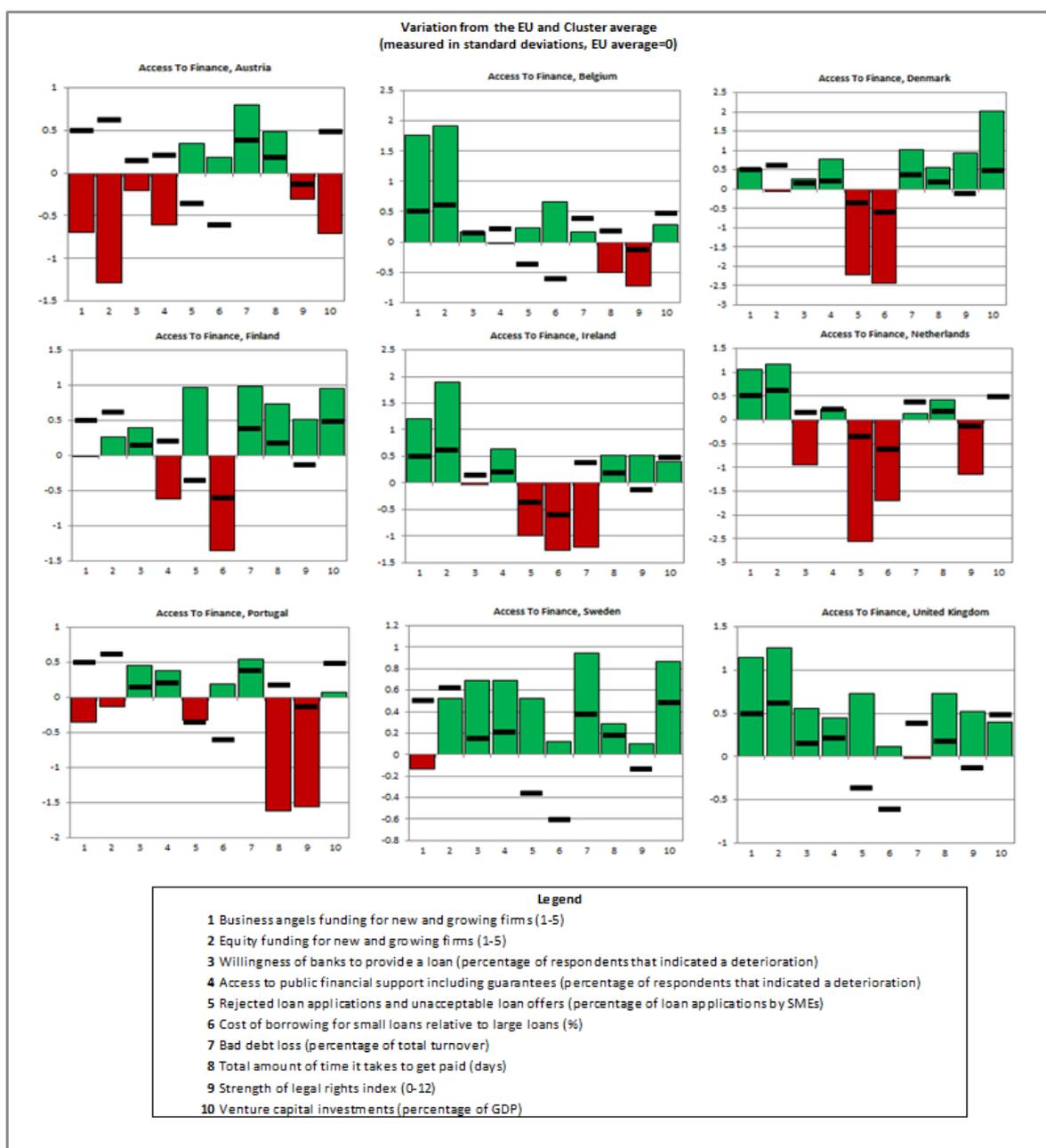


Table 24. Prioritization in Cluster 3, principle 'Access to Finance'

Country	Priority area (# indicator)	Main strength (# indicator)
Austria	6.1(**); 6.2; 6.7(*); 6.9; 6.10	6.3; 6.4; 6.5
Belgium	6.2; 6.3	6.5; 6.9; 6.10
Denmark	6.5; 6.6(***)	6.1(**); 6.2; 6.4

Finland	6.5; 6.7(*)	6.1(***); 6.2; 6.3; 6.4; 6.6(***)
Ireland	6.4; 6.5; 6.6(***)	6.2; 6.7(*); 6.9; 6.10
The Netherlands	6.2; 6.5; 6.6(***); 6.8	6.9; 6.10
Portugal	6.2; 6.3; 6.6(***); 6.9; 6.10	6.4; 6.8
Sweden	6.10	6.1(***); 6.4; 6.5; 6.6(***); 6.7(*); 6.8
United Kingdom	6.4	6.2; 6.3; 6.6(***); 6.9; 6.10

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

(***) The indicator is strongly unstable over time. This can affect the interpretation of the finding, as outlined in Annex 1.

3.5.4 Analysis of 'Access to Finance' for Cluster 4

Countries in Cluster 4 present an interesting pattern. Half of them are having a high performance and a progress over time (Bulgaria, Czech Republic, Hungary and Poland). Three of them have instead experienced deterioration, for Slovenia particularly relevant. Finally Romania is close to EU28 average and slightly improving in time.

A great variation is depicted within the Cluster with respect to the relative performance in the indicators when compared to EU28 average. Percentage varies from Greece, which is the worst performing country with only one out of 10 indicators better than EU28 average (10%), to the 90% of positive indicators found for Poland.

Bulgaria's main weaknesses can be identified in those indicators in which it performs worse than both EU28 average and its Cluster average. Those are 'venture capital investments' (6.1), 'bad debt loss' (6.4), 'cost of borrowing for small loans' (6.5) and 'business angels funding for new and growing firms' (6.10).

Similarly, Croatia's main weaknesses are found in 'strength of legal rights' (6.2), 'total duration to get paid' (6.3), 'cost of borrowing for small loans' (6.5), 'equity funding for new and growing firms' (6.9) and 'business angels funding for new and growing firms' (6.10).

Czech Republic's priority areas are found in 'venture capital investments' (6.1), 'bad debt loss' (6.4), 'cost of borrowing for small loans' (6.5) and 'equity funding for new and growing firms' (6.9).

Greece is really weak throughout the whole dimensions. The only areas to which it does not face a strong weakness are 'total duration to get paid' (6.3) and 'cost of borrowing for small loans' (6.5).

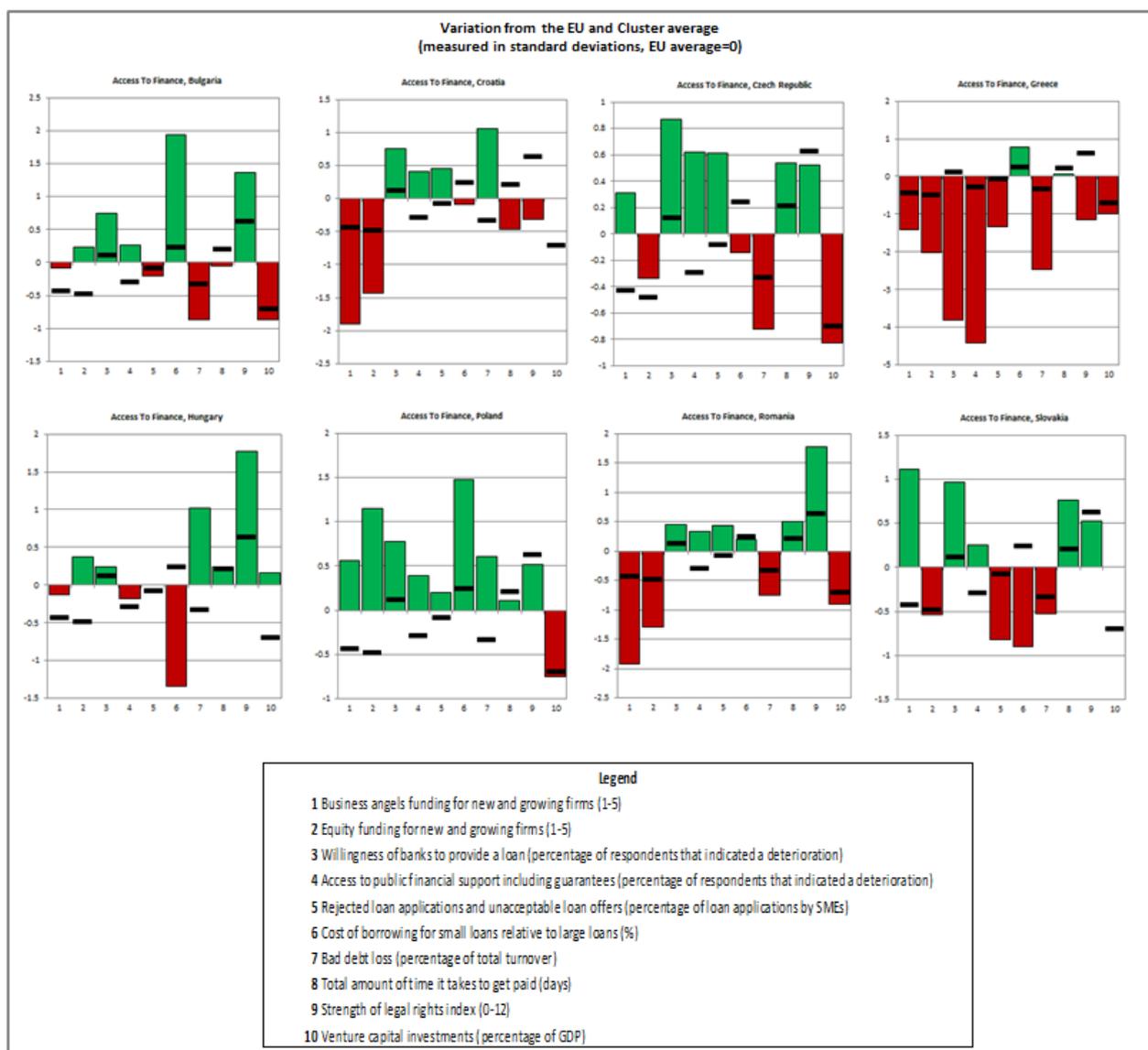
Hungary's main weaknesses are found in 'cost of borrowing for small loans' (6.5), 'access to public financial support' (6.7) and 'business angels funding for new and growing firms' (6.10).

Poland's only weakness is related to 'venture capital investments' (6.1), where it scores close to its Cluster average but worse than EU18 average.

Romania's priority areas are 'venture capital investments' (6.1), 'bad debt loss' (6.4), 'equity funding for new and growing firms' (6.9) and 'business angels funding for new and growing firms' (6.10).

Slovakia's main weaknesses are in 'bad debt loss' (6.4), 'cost of borrowing for small loans' (6.5), 'rejected loans applications and loans offers' (6.6) and 'equity funding for new and growing firms' (6.9).

Figure 38. Indicators in 'Access to Finance' for countries in Cluster 4 compared to cluster and EU average



Bulgaria is outperforming in 'cost of borrowing for small loans' (6.5), and it is thus a valuable benchmark for the countries in the Cluster.

Czech Republic is the best performing country in 'rejected loans applications and loans offers' (6.6) and 'access to public financial support' (6.7), thus positioning as a valuable benchmark for the countries in the Cluster. Similarly, Slovakia is the best performing country in 'willingness of banks to provide loans' (6.8) and 'business angels funding for new and growing firms' (6.10), while Poland in 'equity funding for new and growing firms' (6.9).

Table 25. Prioritization in Cluster 4, principle 'Access to Finance'

Country	Priority area (# indicator)	Main strength (# indicator)
Bulgaria	6.1(***) ; 6.4 ; 6.5 ; 6.10	6.2 ; 6.5 ; 6.8
Croatia	6.2 ; 6.3 ; 6.5 ; 6.9 ; 6.10	6.4 ; 6.6(***) ; 6.7(*) ; 6.8
Czech Republic	6.1(***) ; 6.4 ; 6.5 ; 6.9	6.3 ; 6.4 ; 6.6(***) ; 6.7(*) ; 6.8
Greece	All indicators excluding 6.3 and 6.5	6.5
Hungary	6.5 ; 6.7(*) ; 6.10	6.1(***) ; 6.2 ; 6.4
Poland	6.1(***)	6.4 ; 6.5 ; 6.7(*) ; 6.9 ; 6.10
Romania	6.1(***) ; 6.4 ; 6.9 ; 6.10	6.2 ; 6.7(*)
Slovakia	6.4 ; 6.5 ; 6.6(***) ; 6.9	6.3 ; 6.7(*) ; 6.8 ; 6.10

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

(***) The indicator is strongly unstable over time. This can affect the interpretation of the finding, as outlined in Annex 1.

3.5.5 Analysis of 'Access to Finance' for Cluster 5

Cluster 5 is very small, however not so homogeneous in this principle as both countries are characterized by a low performance in this principle, but Spain is slightly improving while Italy has faced a weak deterioration trend.

Whereas Italy is better than EU28 average only in 1 indicator out of 10 (10%), Spain is better than EU28 values in 30% of the indicators.

Italy is very weak in most of the indicators in the dimension. Its priority areas would be all the indicators excluding 'bad debt loss' (6.4). Similarly, Spain is very weak in most of the indicators. Its main weakness can be identified in 'venture capital investments' (6.1), 'strength of legal rights' (6.2), 'total duration to get paid' (6.3), 'cost of borrowing for small loans' (6.5), 'equity funding for new and growing firms' (6.9) and 'business angels funding for new and growing firms' (6.10).

Spain can be a proper benchmark for Italy in 'bad debt loss' (6.4) and 'willingness of banks to provide loans' (6.8), where it outperforms.

Figure 39. Indicators in 'Access to Finance' for countries in Cluster 5 compared to cluster and EU average

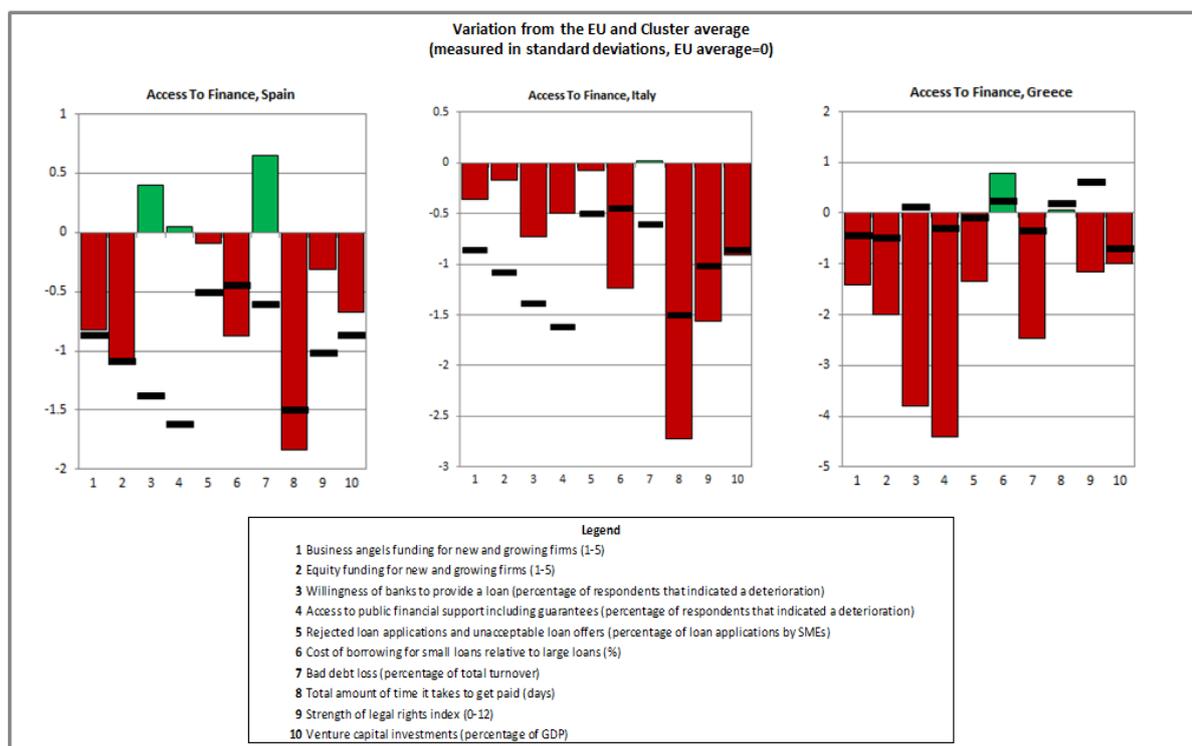


Table 26. Prioritization in Cluster 5, principle 'Access to Finance'

Country	Priority area (# indicator)	Main strength (# indicator)
Italy	All indicators excluding 6.4	
Spain	6.1(***); 6.2; 6.3; 6.5; 6.9; 6.10	6.4; 6.8

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

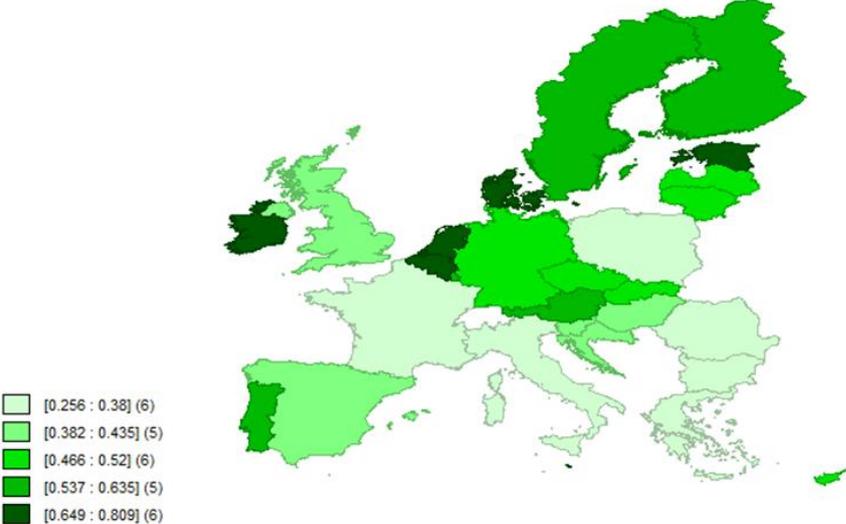
(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

(***) The indicator is strongly unstable over time. This can affect the interpretation of the finding, as outlined in Annex 1.

3.6 Analysis of 'Single Market'

Countries' scores recorded in principle 'Single Market' are distributed as reported in the map in Figure 40 which shows the quantile distribution of those scores. The map ranges values from the 6 countries coloured in the lightest green (Bulgaria, France, Italy, Greece, Poland, Romania) representing the worst performing ones in this dimension, to the ones in dark green, which are the best performing ones (Belgium, Denmark, Estonia, Ireland, Malta and the Netherland).

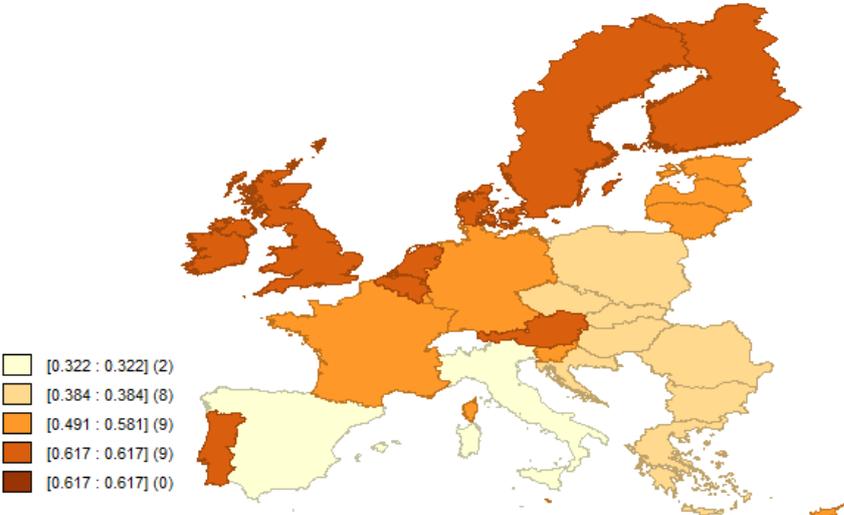
Figure 40. Quantile distribution of 'Single Market' by country



As found in Figure 40 a large range of variation across countries and across Clusters characterizes this principle.

Clusters' average values in the same principle are reported in Figure 41. This map shows that the lowest Cluster average is found for Cluster 5, while the highest Cluster average is obtained by Cluster 3.

Figure 41. Cluster averages for 'Single Market'



Given the evidence outlined so far, next subsection aims to discuss the area of improvements in this principle by Clusters.

3.6.1 Analysis of 'Single Market' for Cluster 1

Trends in this principle show a very homogeneous picture for the three countries in the Cluster: Estonia, Latvia and Lithuania all report a high performance combined with a positive trend of progress over time.

The high performance is confirmed when comparing the indicators and the EU28 average, as the majority of them are above this average, from the 78% of positive cases in Estonia and Latvia to the 56% of Lithuania.

Estonia's main priority areas are in 'public contracts secured abroad' (7.4) and 'selling online cross-border to other EU countries' (7.7), where it performs worse than both EU28 and its cluster average.

Latvia's main priority area are 'selling online cross-border to other EU countries' (7.7) and 'easy market access for new and growing firms' (7.8), where it performs worse than both EU28 and its cluster average, as well as 'public contracts secured abroad' (7.4), where it is performing better than EU28 average but its Cluster shows far greater achievements.

Lithuania's main priority areas are 'public contracts secured abroad' (7.4), 'SMEs with intra-EU imports' (7.5), 'SMEs with intra-EU exports' (7.6) and 'easy market access for new and growing firms' (7.8), where it performs worse than both EU28 and its cluster average. Moderate priority can be given to 'market access for new and growing firms without being unfairly blocked by established firms' (7.9) as well as, where it is performing better than EU28 average but its Cluster shows a greater average.

Lithuania is outperforming in 'outstanding single market directives' (7.1) and 'selling online cross-border to other EU countries' (7.7) and it can thus serve as a benchmark for improvements by Estonia and Latvia.

Estonia is outperforming in 'SMEs with intra-EU imports' (7.5) and 'outstanding single market directives' (7.1): it can thus serve as a benchmark for improvements by the remaining countries in the Cluster. It is also the best performing country in 'SMEs with intra-EU exports' (7.6).

Figure 42. Indicators in 'Single Market' for countries in Cluster 1 compared to cluster and EU average

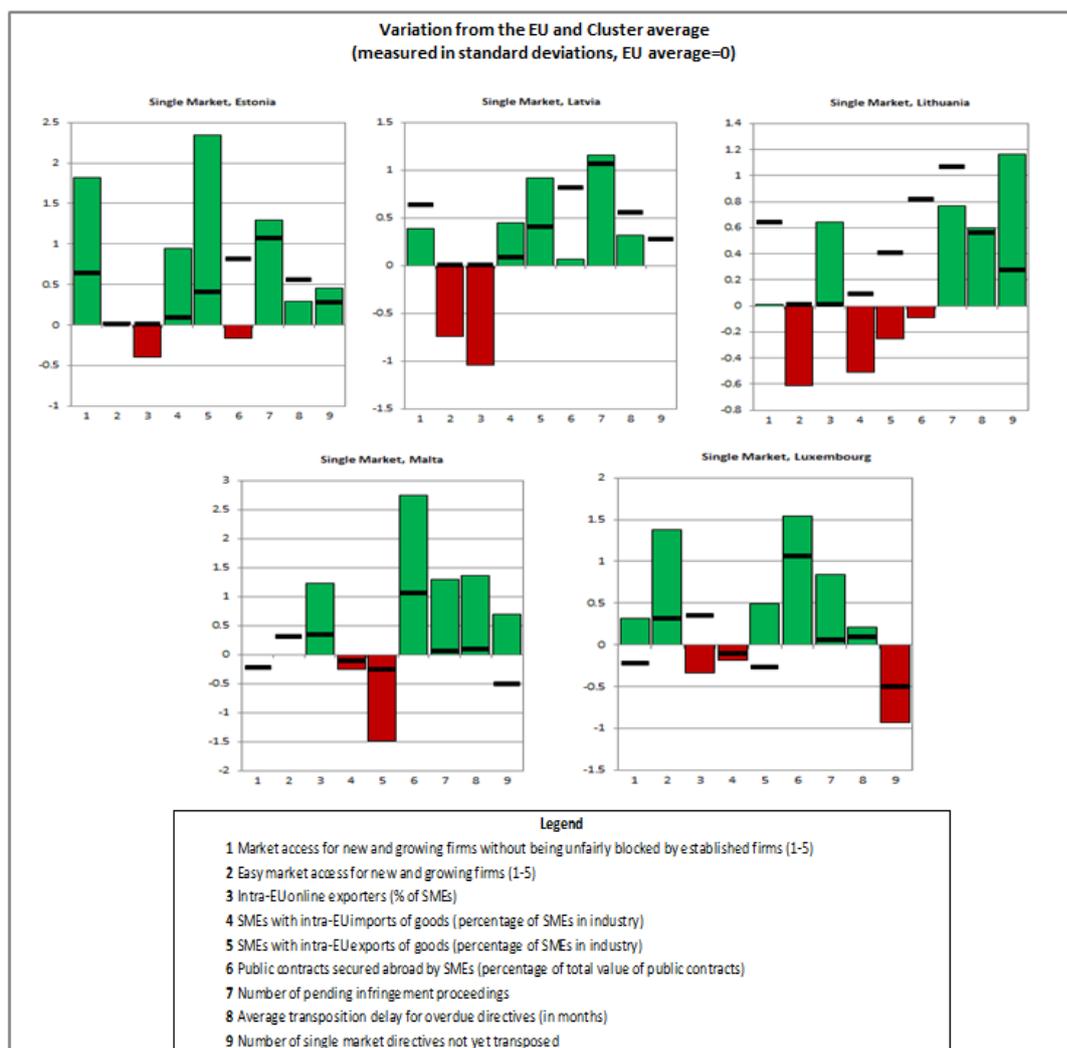


Table 27. Prioritization in Cluster 1, principle 'Single Market'

Country	Priority area (# indicator)	Main strength (# indicator)
Estonia	7.4(**); 7.7	7.3; 7.5; 7.6; 7.10
Latvia	7.4(**); 7.7; 7.8	7.5
Lithuania	7.4(**); 7.5; 7.6; 7.8	7.1(*); 7.7

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

3.6.2 Analysis of 'Single Market' for Cluster 2

Countries in Cluster 2 are characterized by close to EU28 average performances and quite stationary trend over time. France seems to be the only exception to these characteristics, as the country performs worse than EU28 average but has experienced a significantly fast trend of progress in time.

This is mostly confirmed when looking at the specific indicators. Most of the countries (4 out of 6) are better than EU28 average in more than half of the indicators. France and Slovenia are instead the worst performing in the cluster, with, respectively only 22% and 33% of indicators with above EU28 performance.

All countries in the Cluster excluding Malta share a weakness in 'outstanding single market directives' (7.1), where they are weaker both than EU28 and Cluster average. This constitutes a priority area to all of them.

In addition to this, Cyprus's main weakness is in 'SMEs with intra-EU imports' (7.5) where it is far worse than both EU28 and Cluster average. Moderate priority has to be given to 'SMEs with intra-EU exports' (7.6), where it is close to Cluster average, which is a bit worse than EU28 average. Malta has the same priority areas as Cyprus, i.e. in 'SMEs with intra-EU imports' (7.5) and 'SMEs with intra-EU exports' (7.6) (moderately).

France is generally very weak in this principle, even more when compared to its Cluster. In all the indicators 'average transposition delay-overdue directives' (7.2), 'number of pending infringement proceedings' (7.3), 'public contracts secured abroad' (7.4), 'SMEs with intra-EU imports' (7.5), 'SMEs with intra-EU exports' (7.6) and 'market access for new and growing firms without being unfairly blocked by established firms' (7.9) it is far worse than both EU28 and Cluster averages. Those indicators constitute its priority areas.

Germany's main weaknesses are in 'average transposition delay-overdue directives' (7.2), 'number of pending infringement proceedings' (7.3) and 'easy market access for new and growing firms' (7.8), where it is worse than both EU28 and Cluster average.

Luxembourg's priority area is also 'selling online cross-border to other EU countries' (7.7). Moderate priority can be given to 'SMEs with intra-EU exports' (7.6), where it is close to its Cluster average which is slightly worse than EU28 average.

Slovenia's priority areas are 'average transposition delay-overdue directives' (7.2), 'public contracts secured abroad' (7.4) and 'easy market access for new and growing firms' (7.8), where it is far worse than either EU28 or Cluster average. In 'public contracts secured abroad' (7.4) in particular, Slovenia is very close to EU28 average. However it is evident the far better performance of its cluster in this indicator. This suggests there is a realistic margin of improvement for the country. Finally, moderate priority can be given to 'market access for new and growing firms without being unfairly blocked by established firms' (7.9) where it is better than its Cluster but still slightly worse than EU28 average.

Malta is outperforming in 'outstanding single market directives' (7.1) and 'public contracts secured abroad' (7.4), and it is the only country in the Cluster capable of achieving an above EU28 average performance with respect to the first ('outstanding single market directives' (7.1)). It can thus serve as a benchmark for the other countries in the Cluster. Furthermore, it is the best performing country in 'average transposition delay-overdue directives' (7.2)

Germany is outperforming in 'SMEs with intra-EU imports' (7.5) and it is the best performing in 'SMEs with intra-EU exports' (7.6), thus serving as a benchmark for the countries in its Cluster.

Similarly, Luxembourg is the best performing country in 'easy market access for new and growing firms' (7.8).

Figure 43. Indicators in 'Single Market' for countries in Cluster 2 compared to cluster and EU average

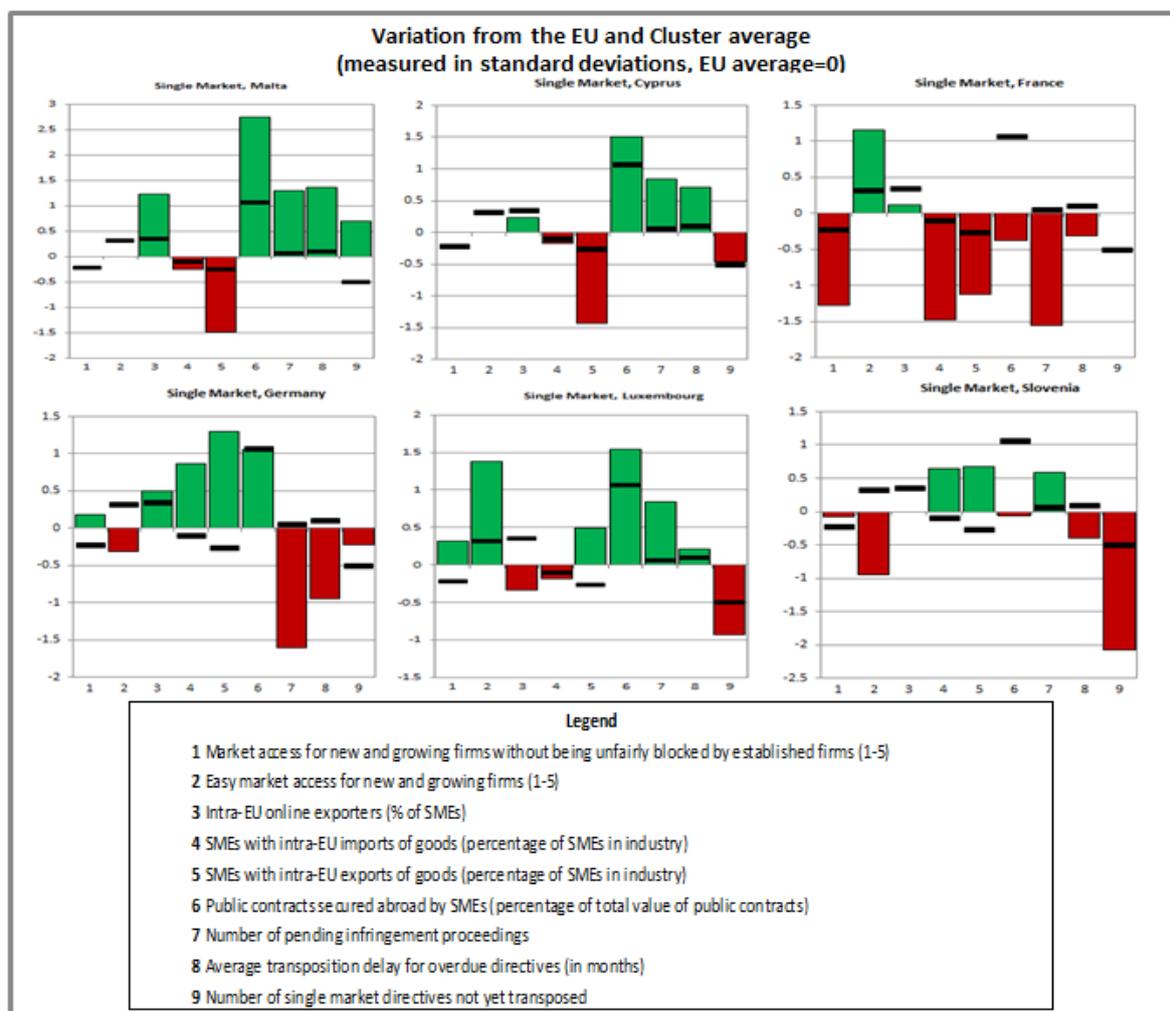


Table 28. Prioritization in Cluster 2, principle 'Single Market'

Country	Priority area (# indicator)	Main strength (# indicator)
Malta	7.5; 7.6	7.1(*); 7.2; 7.3; 7.4(**); 7.7
Cyprus	7.1(*); 7.5; 7.6	7.2; 7.3; 7.4(**)
France	7.2; 7.3; 7.4(**); 7.5; 7.6; 7.9	7.8
Germany	7.1(*); 7.2; 7.3; 7.8	7.5; 7.6; 7.7
Luxembourg	7.1(*); 7.7	7.3; 7.4(**); 7.5; 7.8
Slovenia	7.1(*); 7.2; 7.4(**); 7.8	7.3; 7.5; 7.6

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

3.6.3 Analysis of 'Single Market' for Cluster 3

Cluster 3 is the best performing in this principle. Contrarily to the previous principle ('Access to Finance'), in 'Single Market' Cluster 3 is strongly balanced and homogeneous. All the countries in the Cluster have experienced a progress in this principle over time, and all of them (with the only exception of United Kingdom) are reporting a high performance in this dimension.

This is reflected in the analysis of specific indicators, where 8 of the 9 countries in the cluster are better than the EU28 average in more than 66% of the indicators. The only exception is United Kingdom, better than EU28 average only in 44% of the indicators composing this principle.

Given the overall good performance of the Cluster in this principle, the Cluster analysis allows to shed areas of further improvements which would not emerge when analysing the sole EU28 average values, as most of the countries are performing already better than EU28 average in the majority of the indicators.

The only indicator in which Austria is performing worse than EU28 and Cluster average is 'average transposition delay-overdue directives' (7.2). This should be considered as its main priority indicator. As for the Cluster it is either very close or even better than Cluster average in the remaining indicators. A very similar picture emerges for Belgium, where the only priority areas identified are in 'outstanding single market directives' (7.1) and 'number of pending infringement proceedings' (7.3).

Denmark is instead far above EU28 average in all the indicators. However it can be noticed that regarding 'public contracts secured abroad' (7.4) and 'selling online cross-border to other EU countries' (7.7) its Cluster is capable of a far better performance. This would encourage Denmark to further improve its already good achievements in this indicator.

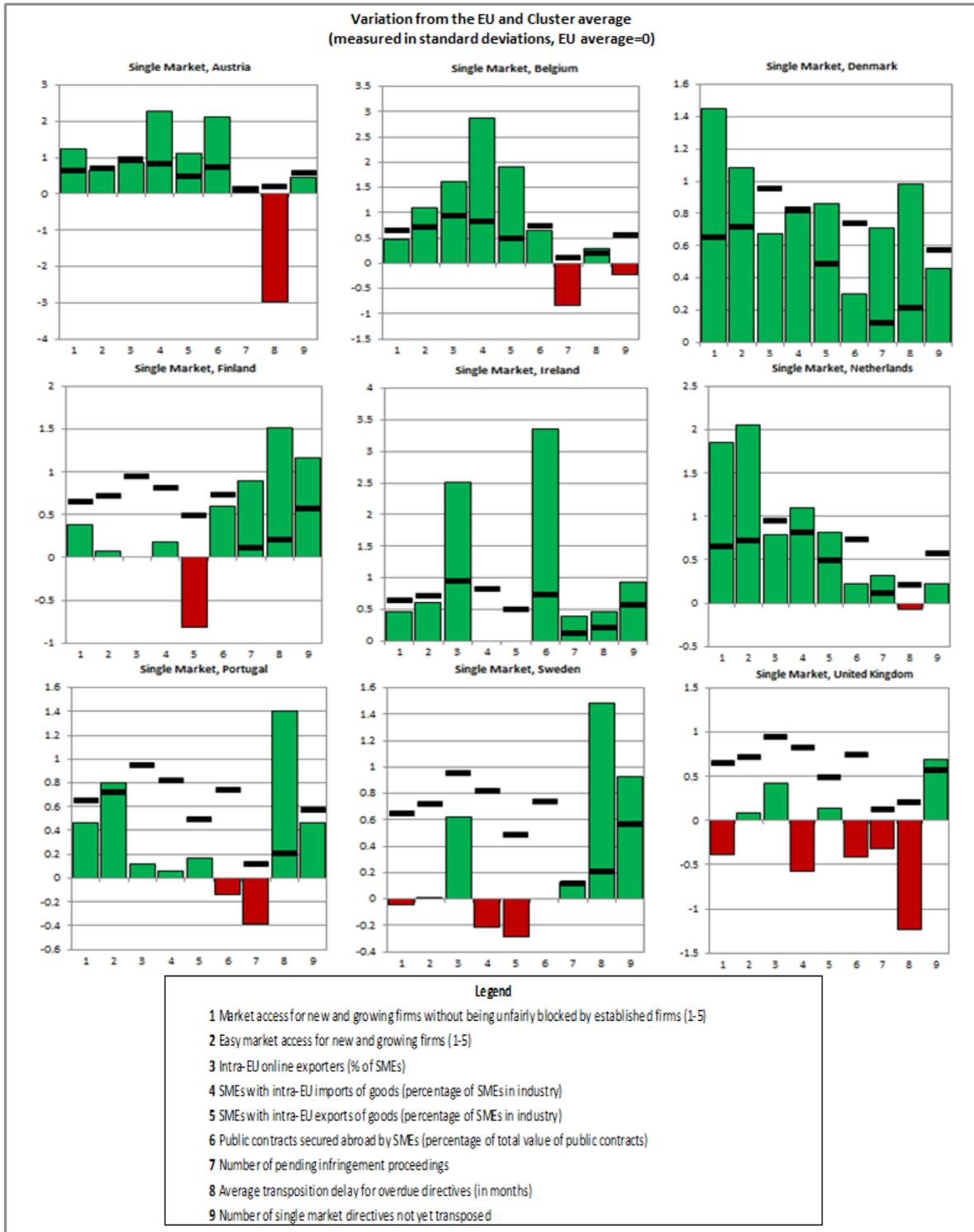
Finland's main weakness arises in 'SMEs with intra-EU imports' (7.5), where it is worse than both EU28 and its Cluster average. Further improvement can however been achieved even in 'SMEs with intra-EU exports' (7.6) and 'easy market access for new and growing firms' (7.8), as it is better than EU28 average, but its Cluster is capable of much better performance. Ireland is instead strong and not too far from its Cluster in any of the indicators considered, so no elements of further improvements can be identified.

As for the Netherland, it emerges as a priority area 'average transposition delay-overdue directives' (7.2) and 'public contracts secured abroad' (7.4), as in both cases the Cluster average shows a better and achievable target.

Portugal is worse than both EU28 and Cluster average in 'public contracts secured abroad' (7.4) and 'SMEs with intra-EU imports' (7.5). In addition to these, also 'SMEs with intra-EU imports' (7.5); 'SMEs with intra-EU exports' (7.6) and 'selling online cross-border to other EU countries' (7.7) should be considered areas with a moderate priority as, although a better than EU28 performance is achieved, its Cluster has on average a far better performance. Similarly, priority areas for Sweden would be 'SMEs with intra-EU imports' (7.5), 'SMEs with intra-EU exports' (7.6) and 'market access for new and growing firms without being unfairly blocked by established firms' (7.9), given the below EU28 and below Cluster performance, but also 'easy market access for new and growing firms' (7.8) given the gap it faces when compared to its Cluster average.

United Kingdom is overall worse than the countries in its Cluster. It is instead worse than its Cluster average in half of the indicators and those should be considered its priority areas, i.e. 'average transposition delay-overdue directives' (7.2), 'number of pending infringement proceedings' (7.3), 'public contracts secured abroad' (7.4), 'SMEs with intra-EU exports' (7.6) and 'market access for new and growing firms without being unfairly blocked by established firms' (7.9).

Figure 44. Indicators in 'Single Market' for countries in Cluster 3 compared to cluster and EU average



Finland is the best performing country in 'average transposition delay-overdue directives' (7.2) and in 'number of pending infringement proceedings' (7.3). It can serve as a benchmark for the remaining countries in the Cluster.

Ireland is outperforming in 'public contracts secured abroad' (7.4) and 'selling online cross-border to other EU countries' (7.7) and it can thus serve as a reference for

improvement for the remaining countries. Similarly, Belgium is outperforming in 'SMEs with intra-EU imports' (7.5) and in 'SMEs with intra-EU exports' (7.6) while the Netherlands are outperforming in 'easy market access for new and growing firms' (7.8) and 'market access for new and growing firms without being unfairly blocked by established firms' (7.9).

Table 29. Prioritization in Cluster 3, principle 'Single Market'

Country	Priority area (# indicator)	Main strength (# indicator)
Austria	7.2	7.4(**); 7.5; 7.7; 7.9
Belgium	7.1(*); 7.3	7.5; 7.6; 7.7; 7.8
Denmark	7.4(**); 7.7	7.2; 7.3; 7.5; 7.8; 7.9
Finland	7.5; 7.6; 7.8	7.1(*); 7.2; 7.3
Ireland		7.1(*); 7.2; 7.3; 7.4(**); 7.7
The Netherlands	7.2; 7.4(**)	7.5; 7.6; 7.8; 7.9
Portugal	7.3; 7.4(**); 7.5; 7.6; 7.7	7.2; 7.8
Sweden	7.5; 7.6; 7.8; 7.9	7.1(*); 7.2
United Kingdom	7.2; 7.3; 7.4(**); 7.6; 7.9	7.1(*)

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

3.6.4 Analysis of 'Single Market' for Cluster 4

Cluster 4 is strongly balanced and homogeneous in this principle. All the countries in the Cluster are reporting a weak performance in the principle. Furthermore, most of them have experienced a progress in this principle over time. The only exceptions are Slovenia and Bulgaria. Those 2 countries have slightly deteriorated in this principle instead.

This is reflected in the analysis of specific indicators, as all the countries (excluding Czech Republic) are worse than EU28 average in the majority of the indicators. Czech Republic is instead better than EU28 average in 66% of the indicators.

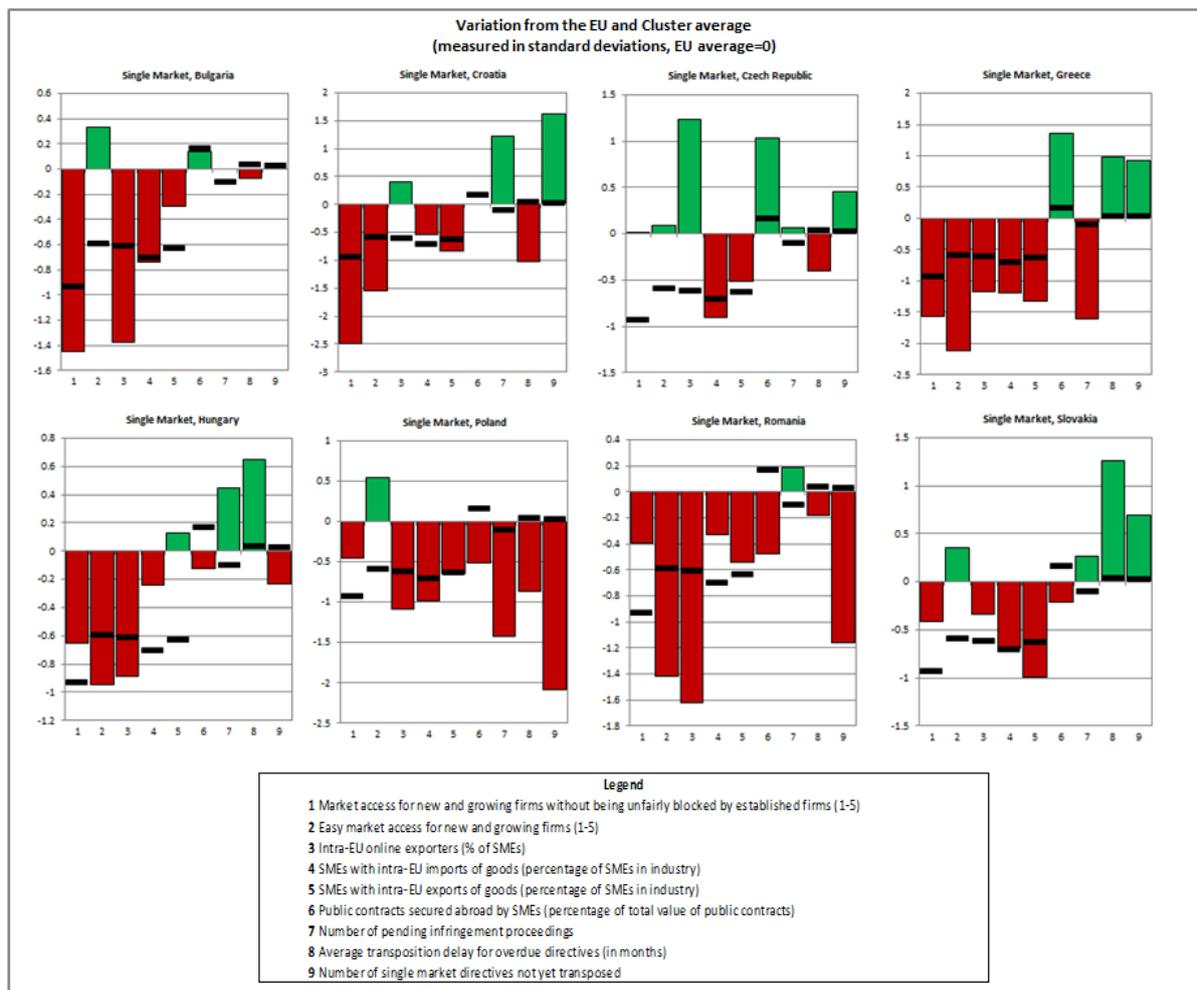
All countries in the cluster face severe weaknesses in 'SMEs with intra-EU exports' (7.6) in which they are all far worse than EU28 average value as well as in 'SMEs with intra-EU imports' (7.5), with the only exception of Hungary, in 'selling online cross-border to other EU countries' (7.7), with the exception of Croatia and Czech Republic and in 'market access for new and growing firms without being unfairly blocked by established firms' (7.9) with the only exception of Czech Republic.

In addition to these common weaknesses, Bulgaria needs to improve in 'average transposition delay-overdue directives' (7.2) as it stands below EU28 average. Croatia's main additional weaknesses are in 'average transposition delay-overdue directives' (7.2) and 'easy market access for new and growing firms' (7.8). Czech Republic's main additional weakness is in 'average transposition delay-overdue directives' (7.2), while

Slovakia's one in 'public contracts secured abroad' (7.4). Greece should prioritize its additional actions towards 'number of pending infringement proceedings' (7.3) and 'easy market access for new and growing firms' (7.8), while Hungary has big weaknesses in 'outstanding single market directives' (7.1), 'public contracts secured abroad' (7.4) and 'easy market access for new and growing firms' (7.8).

Poland is overall very weak in this principle, and its main weaknesses are in all the indicators with the only exclusion of 'easy market access for new and growing firms' (7.8). The same for Romania, which is only string in 'number of pending infringement proceedings' (7.3), while it faces big weaknesses in all the remaining indicators.

Figure 45. Indicators in 'Single Market' for countries in Cluster 4 compared to cluster and EU average



Croatia is the best performing country in 'outstanding single market directives' (7.1) and in 'number of pending infringement proceedings' (7.3). It can serve as a benchmark for the remaining countries in the Cluster.

Slovakia is the best performing country in 'average transposition delay-overdue directives' (7.2) it can thus serve as a reference for improvement for the remaining countries. Similarly, Greece is the best performing country in 'public contracts secured abroad' (7.4), Czech Republic is outperforming in 'selling online cross-border to other EU countries' (7.7), while Hungary is the only country with an above EU28 average value in 'SMEs with intra-EU imports' (7.5) and Czech Republic the only with a slightly above EU28 average in 'market access for new and growing firms without being unfairly blocked by established firms' (7.9).

Table 30. Prioritization in Cluster 4, principle 'Single Market'

Country	Priority area (# indicator)	Main strength (# indicator)
Bulgaria	7.2; 7.5; 7.6; 7.7; 7.9	7.8
Croatia	7.2; 7.5; 7.6; 7.8; 7.9	7.1(*); 7.3; 7.7
Czech Republic	7.2; 7.5; 7.6	7.1(*); 7.4(**); 7.7; 7.8; 7.9
Greece	7.3, 7.6; 7.7; 7.8; 7.9	7.1(*); 7.3; 7.4(**)
Hungary	7.1(*); 7.4(**), 7.6; 7.7; 7.8; 7.9	7.2; 7.3; 7.5
Poland	All excluding 7.8	7.8
Romania	All excluding 7.3	7.3
Slovakia	7.4(**); 7.5; 7.6; 7.7; 7.9	7.1(*); 7.2, 7.3; 7.8

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

3.6.5 Analysis of 'Single Market' for Cluster 5

Cluster 5 the worst performing in this principle. It is very small and thus easily homogeneous in this principle as both countries are characterized by a low but improving performance in this principle.

Similarly, both Italy and Spain are better than EU28 average only in 22% of the indicators, i.e. 2 out of 9 available indicators.

Given the overall weakness of the countries in this principle it is not surprising that a broad set of priority areas is identified for both countries. Common priority areas are: 'outstanding single market directives' (7.1), 'number of pending infringement proceedings' (7.3), 'SMEs with intra-EU exports' (7.6), 'selling online cross-border to other EU countries' (7.7) and 'easy market access for new and growing firms' (7.8). In addition to these, Italy's area is 'average transposition delay-overdue directives' (7.2) and Spain's area is 'SMEs with intra-EU imports' (7.5).

Given Spain's relatively good performance in 7.2 and 7.4, it can be a reference for Italy. Vice versa, Italy can be a proper benchmark for Spain in 7.5 and 7.9.

Figure 46. Indicators in 'Single Market' for countries in Cluster 5 compared to cluster and EU average

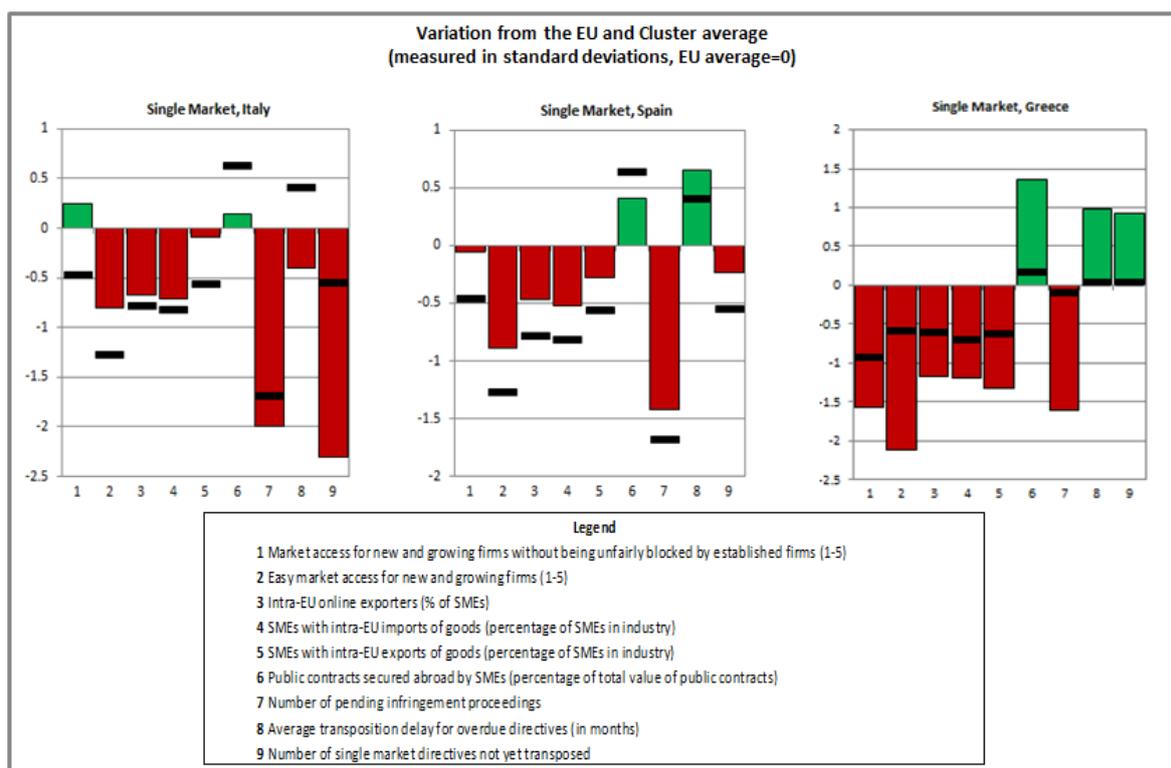


Table 31. Prioritization in Cluster 5, principle 'Single Market'

Country	Priority area (# indicator)	Main strength (# indicator)
Italy	7.1(*); 7.2; 7.3; 7.6; 7.7; 7.8	7.5; 7.9
Spain	7.1(*); 7.3; 7.5; 7.6; 7.7; 7.8	7.2; 7.4(**)

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

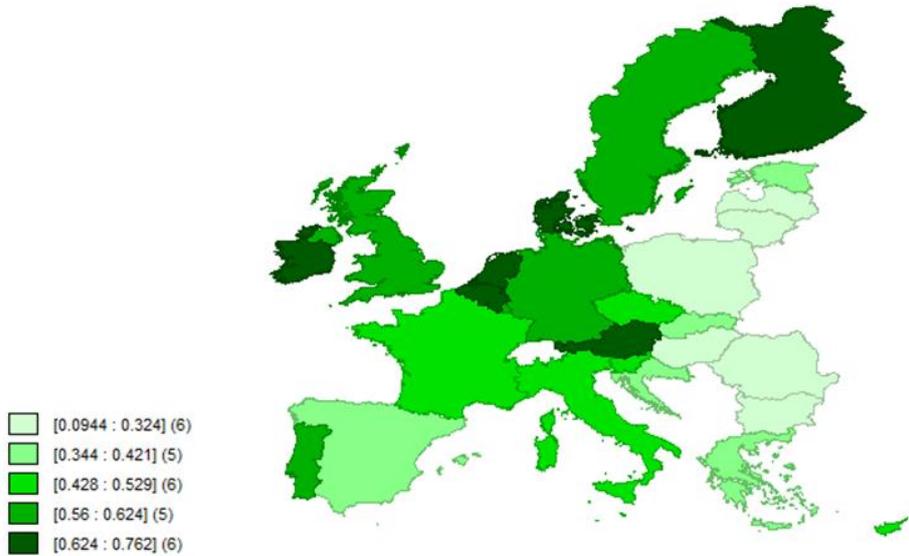
(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

3.7 Analysis of 'Skills & Innovation'

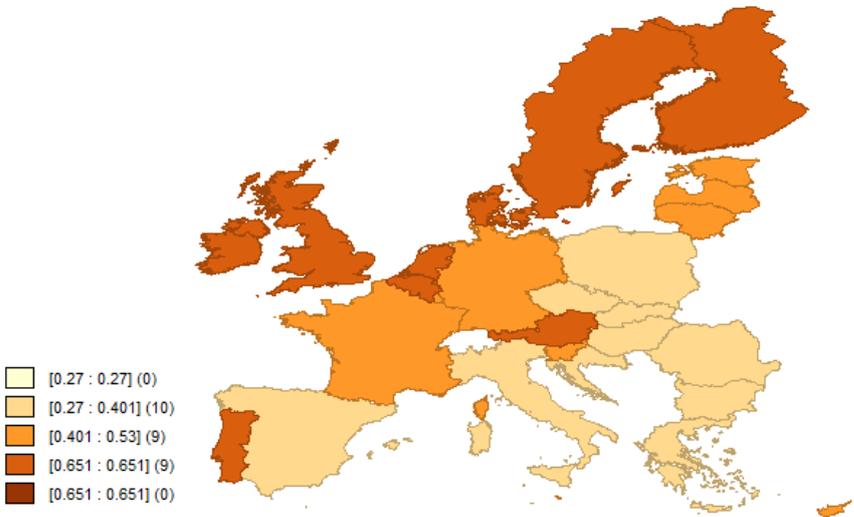
Countries' scores recorded in principle 'Skills & Innovation' are distributed as reported in the map in Figure 47, which shows the quantile distribution of those scores. The map ranges values from the 6 countries coloured in the lightest green, representing the worst performing ones in this dimension (Bulgaria, Hungary, Lithuania, Latvia, Poland and Romania), to the ones in darkest green, which are the best performing ones (Austria, Belgium, Denmark, Finland, Ireland and The Netherlands).

Figure 47. Quantile distribution of 'Skills & Innovation' by country



Clusters' average values in the same principle are reported in Figure 48. This map shows that the lowest Cluster average is found for Cluster 4 and 5, respectively while the highest Cluster average is obtained by Cluster 3.

Figure 48. Cluster averages for 'Skills & Innovation'



Given the evidence outlined so far, next subsection aims to discuss the area of improvements in this principle by clusters.

3.7.1 Analysis of 'Skills & Innovation' for Cluster 1

Trends in this area show a homogenous picture for the three countries in the Cluster. All the three Baltic countries exhibit low values with decreasing trends.

Overall, countries in the Cluster perform worse than EU28 average with Latvia underperforming in all the indicators and Estonia and Lithuania outperforming in only one third of them.

The main weaknesses envisaged for Estonia are in 'percentage of enterprises providing ICT skills training to their employees' (8.11), 'percentage of persons employed that have ICT specialist skills' (8.10), 'percentage of SMEs purchasing online' (8.7), 'percentage of SMEs selling online' (8.6) and 'percentage of SMEs introducing marketing or organisational innovations' (8.4), where it performs worse than both the EU28 and Cluster average. Also, it scores less than the EU28 average, but better than its Cluster average in 'turnover from e-commerce' (8.9), 'sales of new-to-market and new-to-firm innovations' (8.5) and 'percentage of SMEs innovating in-house' (8.1).

As for Latvia, the country is underperforming both the EU28 and the Cluster average in all indicators except for 'turnover from e-commerce' (8.9) in which case it performs worse than the EU average, but outperforms its Cluster.

Lithuania's weaknesses stand in 'percentage of enterprises providing ICT skills training to their employees' (8.11), 'percentage of persons employed that have ICT specialist skills' (8.10), 'percentage of all enterprises that train their employees' (8.8), 'sales of new-to-market and new-to-firm innovations' (8.5), 'percentage of innovative SMEs collaborating with others' (8.2), 'percentage of SMEs innovating in-house' (8.1), 'percentage of SMEs introducing marketing or organisational innovations' (8.4) and 'percentage of SMEs introducing product or process innovations' (8.3), where it is below both the EU28 and the Cluster averages. Also, 'national R&D available to SMEs' (8.12) could constitute moderate priority areas given Lithuania's underperformance compared to the Cluster averages.

Estonia could constitute a benchmark for its Cluster in 'national R&D available to SMEs' (8.12), 'percentage of all enterprises that train their employees' (8.8), 'percentage of innovative SMEs collaborating with others' (8.2) and 'percentage of SMEs introducing product or process innovations' (8.3).

Lithuania could stand as a Cluster benchmark in 'turnover from e-commerce' (8.9), 'percentage of SMEs purchasing online' (8.7) and 'percentage of SMEs selling online' (8.6).

In the rest of the indicators, Baltic countries could take example of Luxembourg which outperforms in most of areas.

Figure 49. Indicators in 'Skills & Innovation' for countries in Cluster 1 compared to cluster and EU average

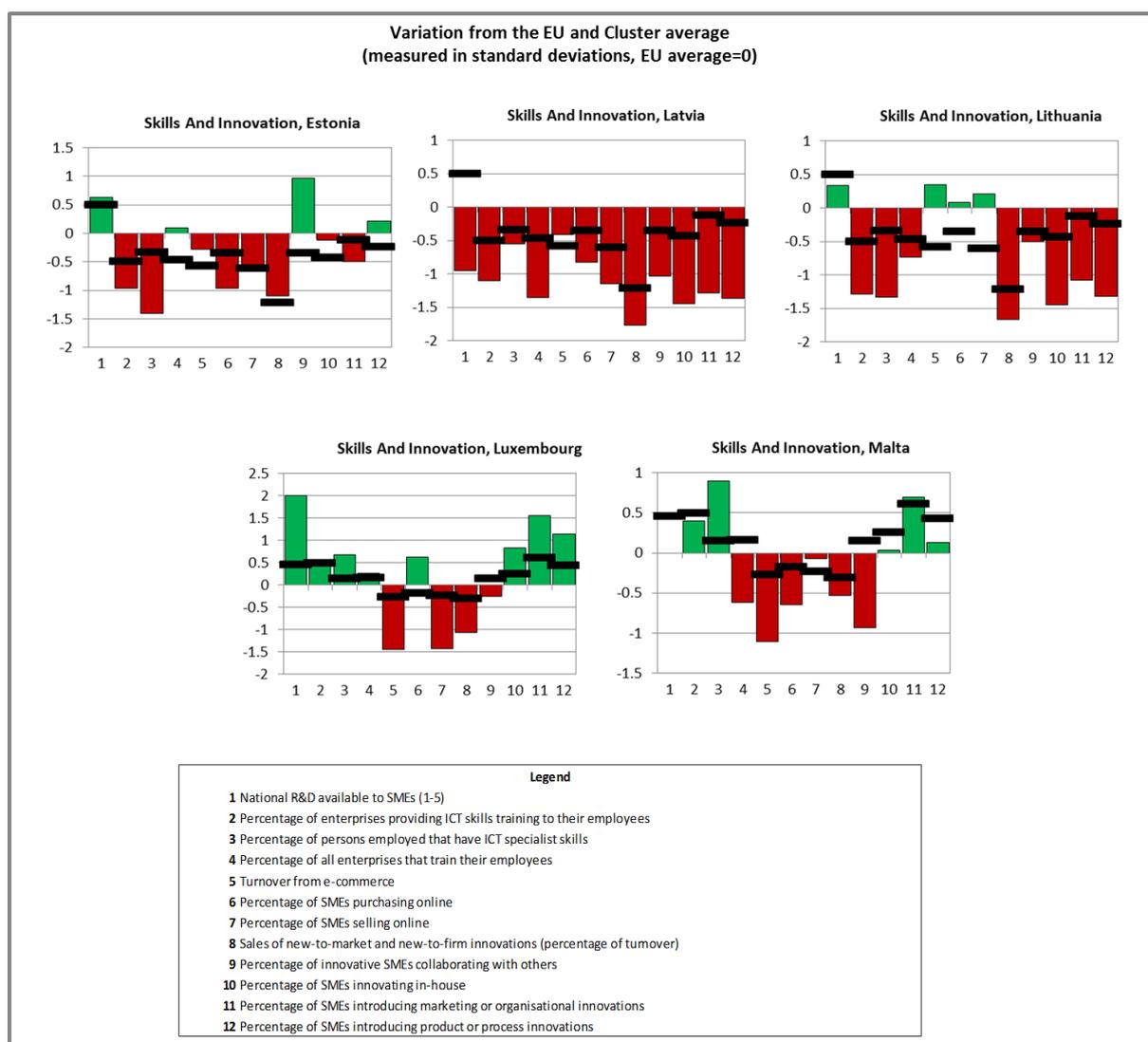


Table 32. Prioritization in Cluster 1, principle 'Skills & Innovation'

Country	Priority area (# indicator)	Main strength (# indicator)
Estonia	8.1(*); 8.4; 8.5; 8.6; 8.9(**); 8.10; 8.11	8.2; 8.3; 8.8(**); 8.12
Latvia	8.1(*); 8.2; 8.3; 8.4; 8.5; 8.6; 8.7; 8.8(**); 8.9(*); 8.10; 8.11; 8.12	
Lithuania	8.1(*); 8.2; 8.3; 8.4; 8.5; 8.8(**); 8.10; 8.11; 8.12	8.6; 8.7; 8.9(*)

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

3.7.2 Analysis of 'Skills & Innovation' for Cluster 2

Cluster 2 exhibits a less homogenous picture for the six countries composing it with Malta having low performance, but ascending trend, France having high performance and ascending trend and the rest of the countries having high performance, but descending trend.

Cyprus' priority areas lay in 'turnover from e-commerce' (8.9), 'percentage of SMEs purchasing online' (8.7), 'percentage of SMEs selling online' (8.6), 'sales of new-to-market and new-to-firm innovations' (8.5), 'percentage of SMEs innovating in-house' (8.1), 'percentage of SMEs introducing marketing or organisational innovations' (8.4) and 'percentage of SMEs introducing product or process innovations' (8.3), where it underperforms both the EU28 and Cluster averages.

Luxembourg's main areas of concern are 'turnover from e-commerce' (8.9), 'percentage of SMEs selling online' (8.6), 'sales of new-to-market and new-to-firm innovations' (8.5) and 'percentage of innovative SMEs collaborating with others' (8.2), where it is worse than both the EU28 and Cluster averages.

8.2; 8.5; 8.6; 8.7; 8.8(**); 8.9(*)

Malta's main weaknesses are related to 'percentage of all enterprises that train their employees' (8.8), 'turnover from e-commerce' (8.9), 'percentage of SMEs purchasing online' (8.7) as well as 'sales of new-to-market and new-to-firm innovations' (8.5) and 'percentage of innovative SMEs collaborating with others' (8.2), where it performs worse than both the EU28 and Cluster averages. The country is slightly underperforming the EU28 average but performs better than its Cluster in 'percentage of SMEs selling online' (8.6). Additional areas of concern are represented by 'percentage of SMEs innovating in-house' (8.1) and 'percentage of SMEs introducing product or process innovations' (8.3) in which it underperforms its Cluster even though it performs better than the EU28 average.

The main priority areas identified for France are in 'percentage of enterprises providing ICT skills training to their employees' (8.11), 'percentage of persons employed that have ICT specialist skills' (8.10) and 'percentage of SMEs selling online' (8.6) provided it scores worse than both the EU28 and Cluster average. In addition, the country has lower values compared to its Cluster in 'percentage of SMEs innovating in-house' (8.1), 'percentage of SMEs introducing marketing or organisational innovations' (8.4) and 'percentage of SMEs introducing product or process innovations' (8.3).

Germany's main weaknesses relate to the 'national R&D available to SMEs' (8.12) and 'percentage of persons employed that have ICT specialist skills' (8.10) where it scores less than both the EU28 and its Cluster averages.

Slovenia is underperforming both the EU28 and the Cluster averages in 'national R&D available to SMEs' (8.12), 'percentage of persons employed that have ICT specialist skills' (8.10), 'percentage of SMEs purchasing online' (8.7), 'percentage of SMEs selling online' (8.6), 'sales of new-to-market and new-to-firm innovations' (8.5), 'percentage of SMEs innovating in-house' (8.1) and 'percentage of SMEs introducing marketing or organisational innovations' (8.4). It outperforms the EU28 values, but scores worse in the Cluster averages in 'percentage of SMEs introducing product or process innovations' (8.3).

Germany can serve as a benchmark for the remaining countries of its Cluster in most of the indicators. Luxembourg can serve as Cluster benchmark in 'national R&D available to SMEs' (8.12) and Cyprus is the best performer in 'percentage of persons employed that have ICT specialist skills' (8.10).

Figure 50. Indicators in 'Skills & Innovation' for countries in Cluster 2 compared to cluster and EU average

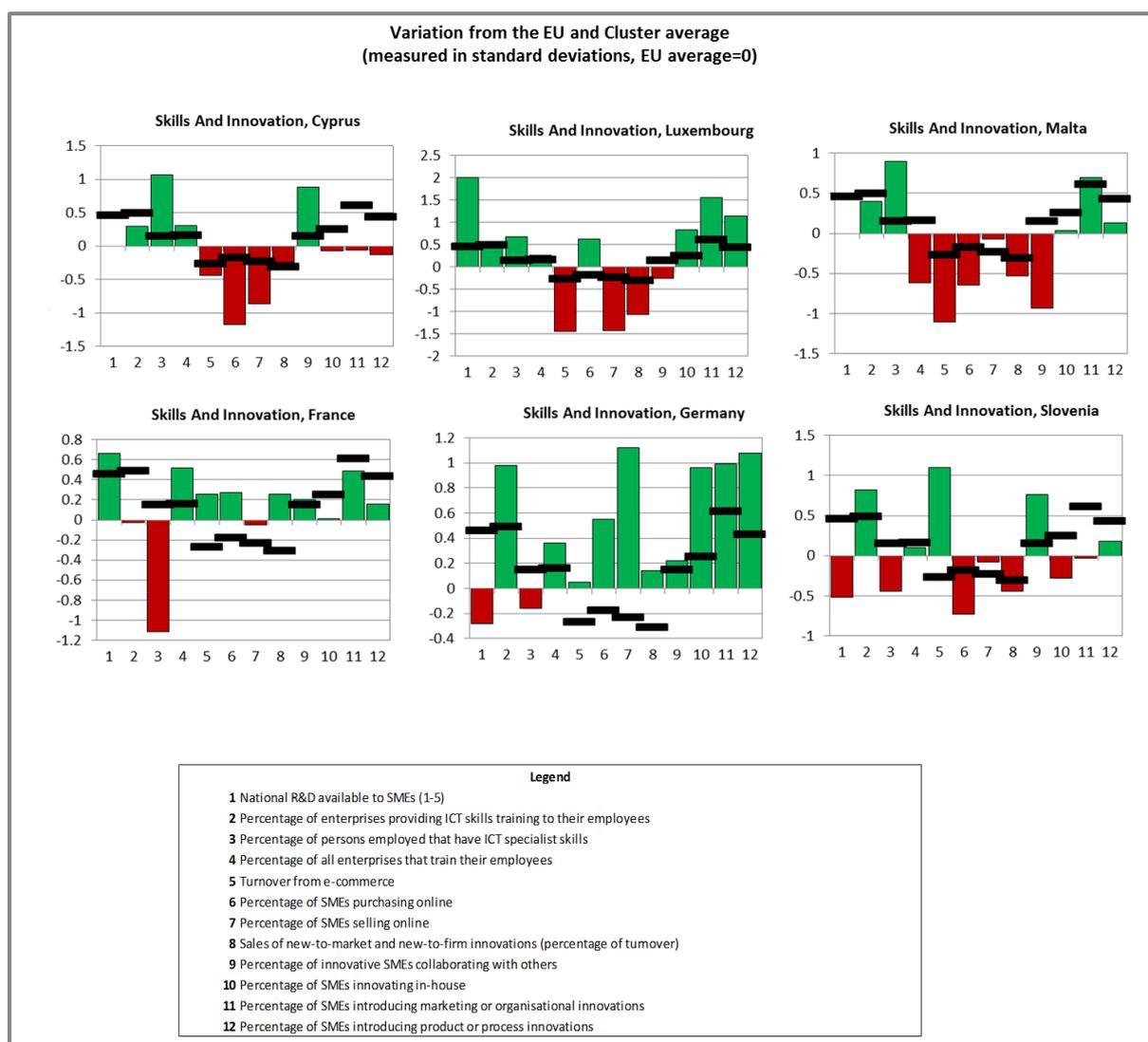


Table 33. Prioritization in Cluster 2, principle 'Skills & Innovation'

Country	Priority area (# indicator)	Main strength (# indicator)
Cyprus	8.1(*); 8.3; 8.4; 8.5; 8.6; 8.7; 8.9(*)	8.2; 8.8(**); 8.10
France	8.6; 8.10; 8.11	8.4; 8.5; 8.7; 8.8; 8.9(*); 8.12
Germany	8.10; 8.12	8.1(*); 8.2; 8.3; 8.4; 8.5; 8.6; 8.7; 8.8(**); 8.9(*); 8.11
Luxembourg	8.2; 8.5; 8.6; 8.9(*)	8.1(*); 8.3; 8.4; 8.7; 8.10; 8.12

Malta	8.2; 8.5; 8.6; 8.7; 8.8(**); 8.9(*)	8.4; 8.10
Slovenia	8.1(*); 8.4; 8.5; 8.6; 8.7; 8.10; 8.12	8.2; 8.9(*); 8.11

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

3.7.3 Analysis of 'Skills & Innovation' for Cluster 3

Performance and trends of countries in Cluster 3 in the 'Skills & Innovation' dimension generally point out high performances and decreasing trends, except for Denmark and Ireland which exhibit high performances and increasing trends.

Moving to the main recommendations that emerge from the analysis of the combination of country, Cluster and EU28 averages, several considerations may be drawn.

Austria's weaknesses are reported in 'turnover from e-commerce' (8.9), 'percentage of SMEs selling online' (8.6) and 'sales of new-to-market and new-to-firm innovations' (8.5) where it performs worse than both the EU28 and the Cluster average.

Belgium is performing worse than both EU28 and Cluster average in 'percentage of SMEs purchasing online' (8.7) and 'sales of new-to-market and new-to-firm innovations' (8.5).

Denmark is performing better than the EU28 averages in all of the indicators.

Finland's main weaknesses are found in 'national R&D available to SMEs' (8.12), 'percentage of SMEs selling online' (8.6) and 'sales of new-to-market and new-to-firm innovations' (8.5) where it scores lower than both the EU28 and the Cluster averages.

Ireland is underperforming both the EU28 and Cluster averages in 'sales of new-to-market and new-to-firm innovations' (8.5).

The Netherlands show values below EU28 and Cluster averages in 'percentage of enterprises providing ICT skills training to their employees' (8.11), 'turnover from e-commerce' (8.9) and 'percentage of SMEs introducing marketing or organisational innovations' (8.4) and those should be identified as the main priority area for the country in this dimension.

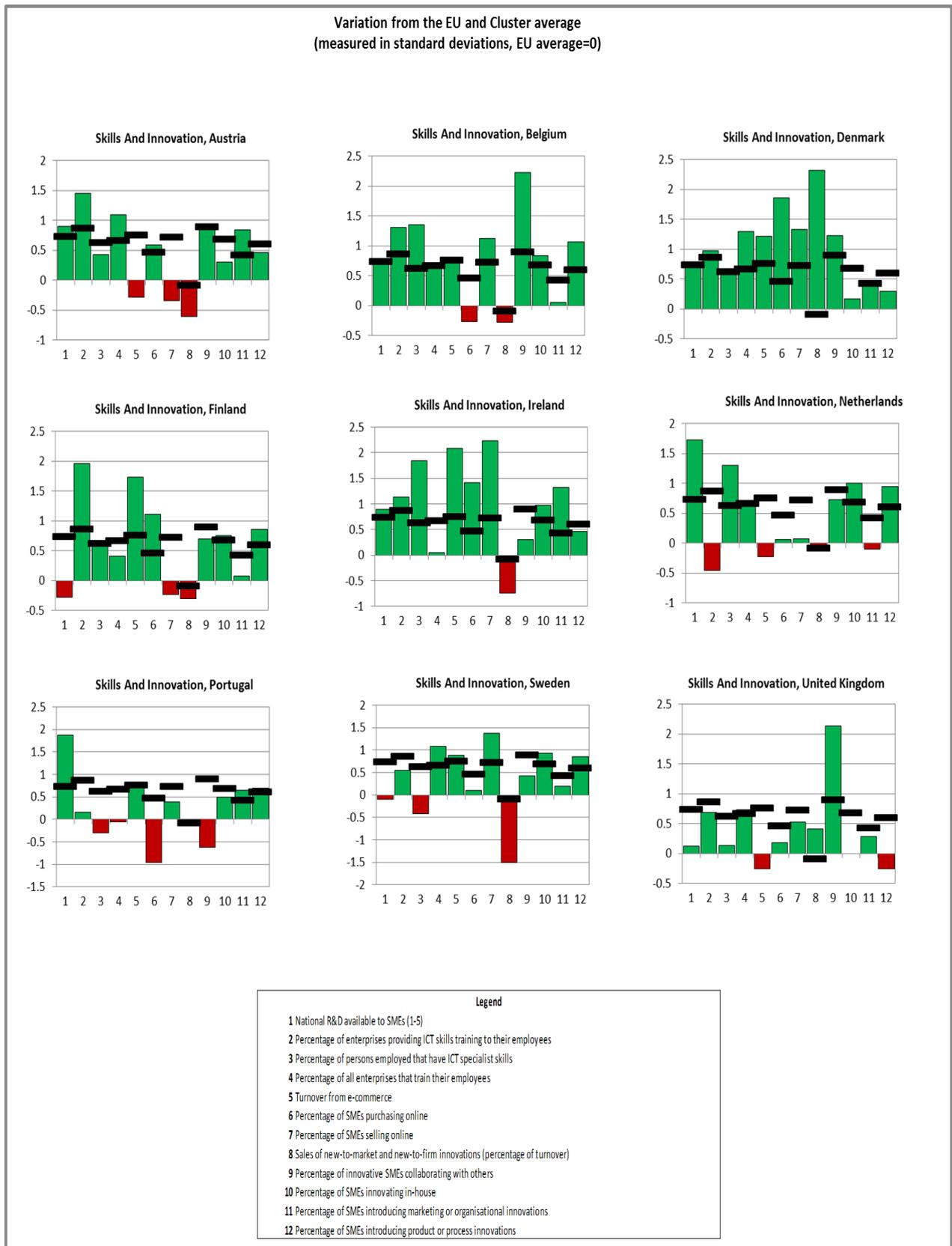
Portugal's main priority areas are identified in 'percentage of persons employed that have ICT specialist skills' (8.10), 'percentage of all enterprises that train their employees' (8.8), 'percentage of SMEs purchasing online' (8.7) and 'percentage of innovative SMEs collaborating with others' (8.2) in which it underperforms both the EU28 and the Cluster averages.

Sweden's weaknesses are related to 'national R&D available to SMEs' (8.12), 'percentage of persons employed that have ICT specialist skills' (8.10) and 'sales of new-to-market and new-to-firm innovations' (8.5) provided it scores worse than both the EU28 and Cluster average.

United Kingdom shows below EU28 and Cluster averages in 'turnover from e-commerce' (8.9) and 'percentage of SMEs introducing product or process innovations' (8.3) and this should be identified as its main priority areas.

Denmark is outperforming both the EU28 and Cluster averages in most of the indicators of this dimension thus serving as benchmark for the other countries in the Cluster.

Figure 51. Indicators in 'Skills & Innovation' for countries in Cluster 3 compared to cluster and EU average



Portugal registered the best performance in 'national R&D available to SMEs' (8.12), performance which qualifies it as an outstanding benchmark in the area.

Also, Finland's outperformances in 'percentage of enterprises providing ICT skills training to their employees' (8.11) make it suitable for benchmarking the two indicators for the analysed Cluster.

Ireland could serve as benchmark in 'percentage of persons employed that have ICT specialist skills' (8.10), 'turnover from e-commerce' (8.9), 'percentage of SMEs selling online' (8.6)

Belgium and UK outperformed in 'percentage of innovative SMEs collaborating with others' (8.2). Belgium also outperformed in 'percentage of SMEs introducing product or process innovations' (8.3).

The Netherlands could benchmark the 'percentage of SMEs innovating in-house' (8.1).

Lastly, Austria outperformed in 'percentage of SMEs introducing marketing or organisational innovations' (8.4).

Table 34. Prioritization in Cluster 3, principle 'Skills & Innovation'

Country	Priority area (# indicator)	Main strength (# indicator)
Austria	8.5; 8.6; 8.9(*)	8.4; 8.7; 8.8(*); 8.11; 8.12
Belgium	8.5; 8.7	8.1(*); 8.2; 8.3; 8.6; 8.10; 8.11
Denmark		8.2; 8.5; 8.6; 8.7; 8.8(**); 8.9(*)
Finland	8.5; 8.6; 8.12	8.3; 8.7; 8.9(*); 8.11
Ireland	8.5	8.1(*); 8.4; 8.6; 8.7; 8.9(*); 8.10; 8.11; 8.12
The Netherlands	8.4; 8.9(*); 8.11	8.1(*); 8.3; 8.10; 8.12
Portugal	8.2; 8.7; 8.8(**); 8.10	8.4; 8.12
Sweden	8.5; 8.10; 8.12	8.1(*); 8.3; 8.6; 8.8(**); 8.9(*)
United Kingdom	8.3; 8.9(*)	8.2

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

3.7.4 Analysis of 'Skills & Innovation' for Cluster 4

Countries in Cluster 4 are characterized by an overall weakness in this dimension, in which they generally report low values and descending trends with the exception of Bulgaria and Romania (low values and ascending trend) and Czech Republic (high values, but descending trend).

The main recommendations that emerge from the analysis of the country, Cluster and EU28 averages are following in the next paragraphs.

Bulgaria is underperforming both the EU28 and Cluster averages in most of the indicators except for 'national R&D available to SMEs' (8.12) and 'percentage of persons employed that have ICT specialist skills' (8.10) in which cases it performs better than its Cluster averages.

Croatia's main weaknesses are in 'national R&D available to SMEs' (8.12) and 'percentage of SMEs purchasing online' (8.7), where it reports values lower than both the EU28 and Cluster averages. Also, it scores lower than the EU28 in 'percentage of persons employed that have ICT specialist skills' (8.10), 'percentage of all enterprises that train their employees' (8.8), 'turnover from e-commerce' (8.9), 'percentage of innovative SMEs collaborating with others' (8.2), 'percentage of SMEs innovating in-house' (8.1), 'percentage of SMEs introducing marketing or organisational innovations' (8.4) and 'percentage of SMEs introducing product or process innovations' (8.3).

Czech Republic's main priority area is related to its lower than the EU28 and Cluster average value in 'percentage of persons employed that have ICT specialist skills' (8.10). It also underperforms the EU28 average in 'national R&D available to SMEs' (8.12), 'percentage of SMEs innovating in-house' (8.1), 'percentage of SMEs introducing marketing or organisational innovations' (8.4).

Greece performs worse than the EU28 and Cluster averages in 'percentage of all enterprises that train their employees' (8.8), 'turnover from e-commerce' (8.9), 'percentage of SMEs purchasing online' (8.7) and 'percentage of SMEs selling online' (8.6), these indicators constituting main priority areas. In addition, it underperforms the EU28 average in 'national R&D available to SMEs' (8.12), 'percentage of enterprises providing ICT skills training to their employees' (8.11), 'sales of new-to-market and new-to-firm innovations' (8.5), 'percentage of SMEs innovating in-house' (8.1) and 'percentage of SMEs introducing product or process innovations' (8.3).

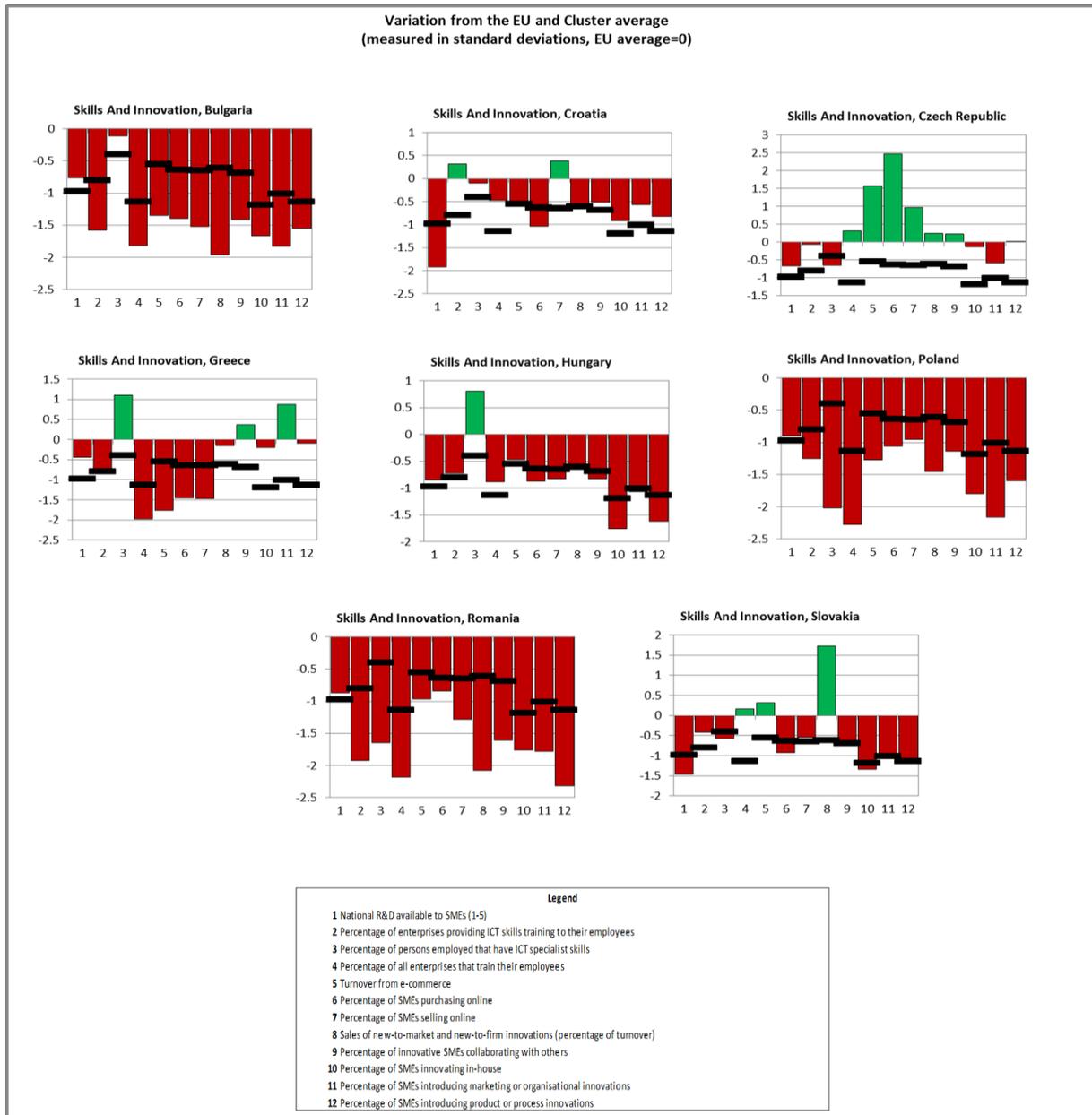
Hungary has values lower than EU28 and Cluster averages in 'percentage of SMEs purchasing online' (8.7), 'percentage of SMEs selling online' (8.6), 'percentage of SMEs innovating in-house' (8.1) and 'percentage of SMEs introducing product or process innovations' (8.3). Additionally, the country underperforms the EU28 average in 'national R&D available to SMEs' (8.12) and 'percentage of all enterprises that train their employees' (8.8).

Poland performs worse than both the EU28 and Cluster average in most of indicators except for 'national R&D available to SMEs' (8.12) in which case it slightly outperforms the Cluster average. Same observation holds true for Romania also.

Slovakia's main priority areas are represented by 'national R&D available to SMEs' (8.12), 'percentage of persons employed that have ICT specialist skills' (8.10), 'percentage of SMEs purchasing online' (8.7) and 'percentage of SMEs innovating in-house' (8.1) in which it reports values lower than both the EU28 and Cluster averages. To a lesser extent, 'percentage of enterprises providing ICT skills training to their employees' (8.11), 'percentage of SMEs selling online' (8.6), 'percentage of innovative SMEs collaborating with others' (8.2), 'percentage of SMEs introducing marketing or organisational innovations' (8.4) and 'percentage of SMEs introducing product or process innovations'

(8.3) might represent possible areas of interest as they score less than the EU28 averages.

Figure 52. Indicators in 'Skills & Innovation' for countries in Cluster 4 compared to cluster and EU average



Czech Republic is the best performer in Cluster 4 and could thus generally constitute a benchmark for the rest of the Cluster's countries.

All countries underperform relative to the EU28 values, the lowest underperformance being registered by Greece. Greece could also serve as benchmark for the rest of the countries in its cluster in 'percentage of persons employed that have ICT specialist skills' (8.10), 'percentage of innovative SMEs collaborating with others' (8.2) and 'percentage of innovative SMEs collaborating with others' (8.2).

Following, Croatia could serve as benchmark in 'percentage of enterprises providing ICT skills training to their employees' (8.11)

Lastly, 'sales of new-to-market and new-to-firm innovations' (8.5) could be benchmarked by Hungary due to its outstanding performance in this indicator.

Table 35. Prioritization in Cluster 4, principle 'Skills & Innovation'

Country	Priority area (# indicator)	Main strength (# indicator)
Bulgaria	8.1(*); 8.2; 8.3; 8.4; 8.5; 8.6; 8.7; 8.8(**); 8.9(*); 8.10; 8.11; 8.12	
Croatia	8.1(*); 8.2; 8.3; 8.4; 8.5; 8.7; 8.8(**); 8.9(*); 8.10; 8.11; 8.12	8.6; 8.11
Czech Republic	8.1(*); 8.4; 8.10; 8.12	8.2; 8.5; 8.6; 8.7; 8.8(**); 8.9(*)
Greece	8.1(*); 8.3; 8.5; 8.6; 8.7; 8.8(**); 8.9(*); 8.11; 8.12	8.2; 8.4; 8.10
Hungary	8.1(*); 8.2; 8.4; 8.5; 8.6; 8.7; 8.8(**); 8.9(*); 8.11; 8.12	8.10
Poland	8.1(*); 8.2; 8.3; 8.4; 8.5; 8.6; 8.7; 8.8(**); 8.9(*); 8.10; 8.11; 8.12	
Romania	8.1(*); 8.2; 8.3; 8.4; 8.5; 8.6; 8.7; 8.8(**); 8.9(*); 8.10; 8.11; 8.12	
Slovakia	8.1(*); 8.2; 8.3; 8.4; 8.6; 8.7; 8.10; 8.11; 8.12	8.5; 8.8(**);8.9(*)

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

3.7.5 Analysis of 'Skills & Innovation' for Cluster 5

Both countries composing this small cluster, i.e Italy and Spain, are exhibiting low performances and ascending trends in the dimension.

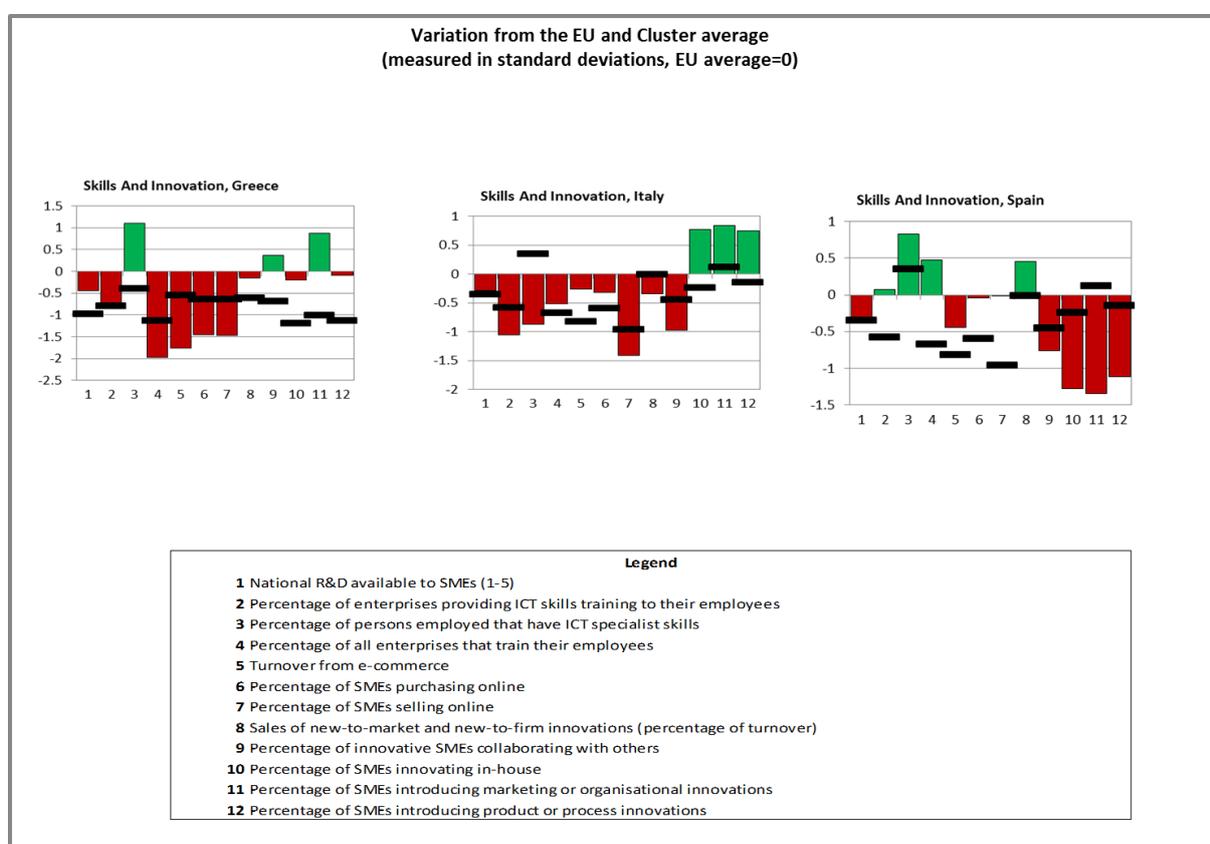
An analysis of the country, Cluster and EU28 averages is provided in the further paragraphs.

Italy's main weaknesses emerge from 'percentage of enterprises providing ICT skills training to their employees' (8.11), 'percentage of persons employed that have ICT specialist skills' (8.10), 'percentage of SMEs selling online' (8.6), 'sales of new-to-market and new-to-firm innovations' (8.5) as well as 'percentage of innovative SMEs collaborating with others' (8.2), where it stands below the EU28 and Cluster averages.

Additionally it scores less than the EU28 averages in 'national R&D available to SMEs' (8.12), 'percentage of all enterprises that train their employees' (8.8), 'turnover from e-commerce' (8.9), 'percentage of SMEs purchasing online' (8.7).

Spain's focus areas should be 'percentage of innovative SMEs collaborating with others' (8.2), 'percentage of SMEs innovating in-house' (8.1), 'percentage of SMEs introducing marketing or organisational innovations' (8.4) and 'percentage of SMEs introducing product or process innovations' (8.3), where it stands below the EU28 and Cluster averages. To a lesser extent, 'national R&D available to SMEs' (8.12), 'turnover from e-commerce' (8.9) and 'percentage of SMEs purchasing online' (8.7) could constitute priority areas given their underperformance relative to the EU28 averages.

Figure 53. Indicators in 'Skills & Innovation' for countries in Cluster 5 compared to cluster and EU average



Italy could serve as benchmark in 'percentage of SMEs innovating in-house' (8.1), 'percentage of SMEs introducing marketing or organisational innovations' (8.4) and 'percentage of SMEs introducing product or process innovations' (8.3).

Spain could serve as benchmark in 'percentage of enterprises providing ICT skills training to their employees' (8.11), 'percentage of persons employed that have ICT specialist skills' (8.10) and 'percentage of all enterprises that train their employees' (8.8).

Given the closeness of Greece to these countries and its good performance 'percentage of innovative SMEs collaborating with others' (8.2) its achievements could be used as a benchmark by the two countries.

Table 36. Prioritization in Cluster 5, principle 'Skills & Innovation'

Country	Priority area (# indicator)	Main strength (# indicator)
Italy	8.2; 8.5; 8.6; 8.7; 8.8(**); 8.9(*); 8.10; 8.11; 8.12	8.1(*); 8.3; 8.4
Spain	8.1(*); 8.2; 8.3; 8.4; 8.6; 8.7; 8.9(*); 8.12	8.5; 8.8(**); 8.10; 8.11

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

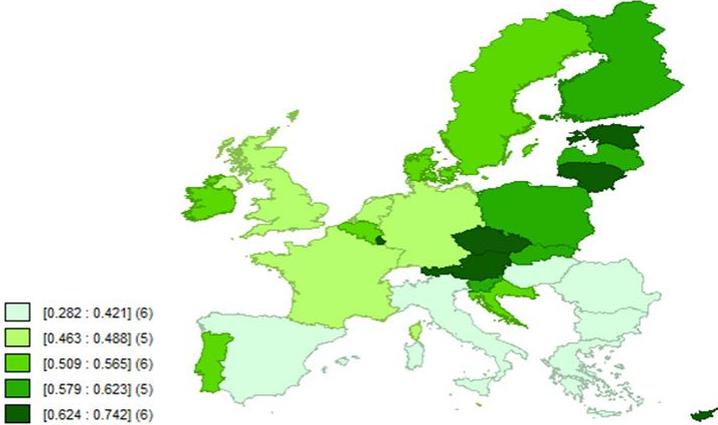
(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

3.8 Analysis of 'Environment'

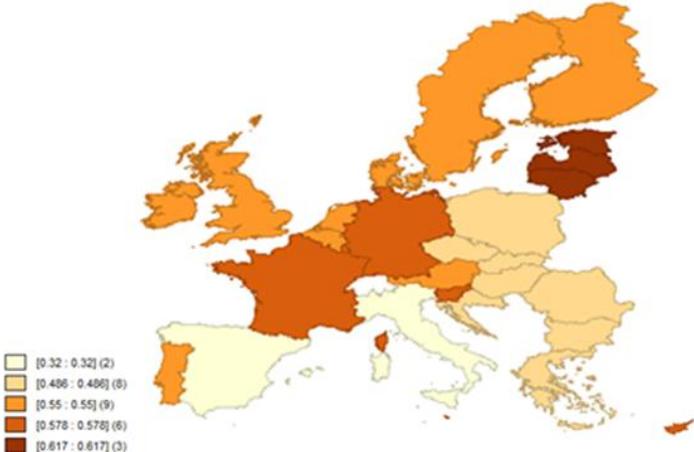
Countries' scores recorded in principle 'Environment' are distributed as reported in the map in Figure 54, which shows the quantile distribution of those scores. It ranges values from the six countries coloured in the lightest green, which represent the worst performing ones in this dimension (Spain, Italy, Greece, Romania, Hungary, Bulgaria), to the six ones in dark green, which are the best performing ones (Luxembourg, Cyprus, Czech Republic, Austria, Lithuania, Estonia).

Figure 54. Quantile distribution of 'Environment' by country



Clusters' average values in the same principle are reported in Figure 55. This map shows that the lowest Cluster average in 'Environment' is found for Cluster 5, while the highest Cluster average is obtained by Cluster 1. A large range of variation across countries and across Clusters characterizes this principle. This would call for the need to cautiously use the simple EU average for a benchmarking exercise and for the possibility to explore a more realistic alternative of Cluster averages. Next subsections will thus provide a Cluster specific analysis for this principle.

Figure 55. Cluster averages for 'Environment'



The coming sections discuss the main weaknesses and strengths of countries in this principle based on the five reported figures, one for each Cluster.

3.8.1 Analysis of 'Environment' for Cluster 1

Countries of Cluster 1 all performs better than the EU28 average in the principle 'Environment', as it emerged in the published SBA Fact Sheets.

However, Estonia and Latvia experiences a decreasing trend in this principle in time, mainly explained by the reduction in public support measures. The only country in the Cluster facing a positive trend in time is Lithuania that, on the contrary, increased public support for companies' efforts towards resource efficiency measures.

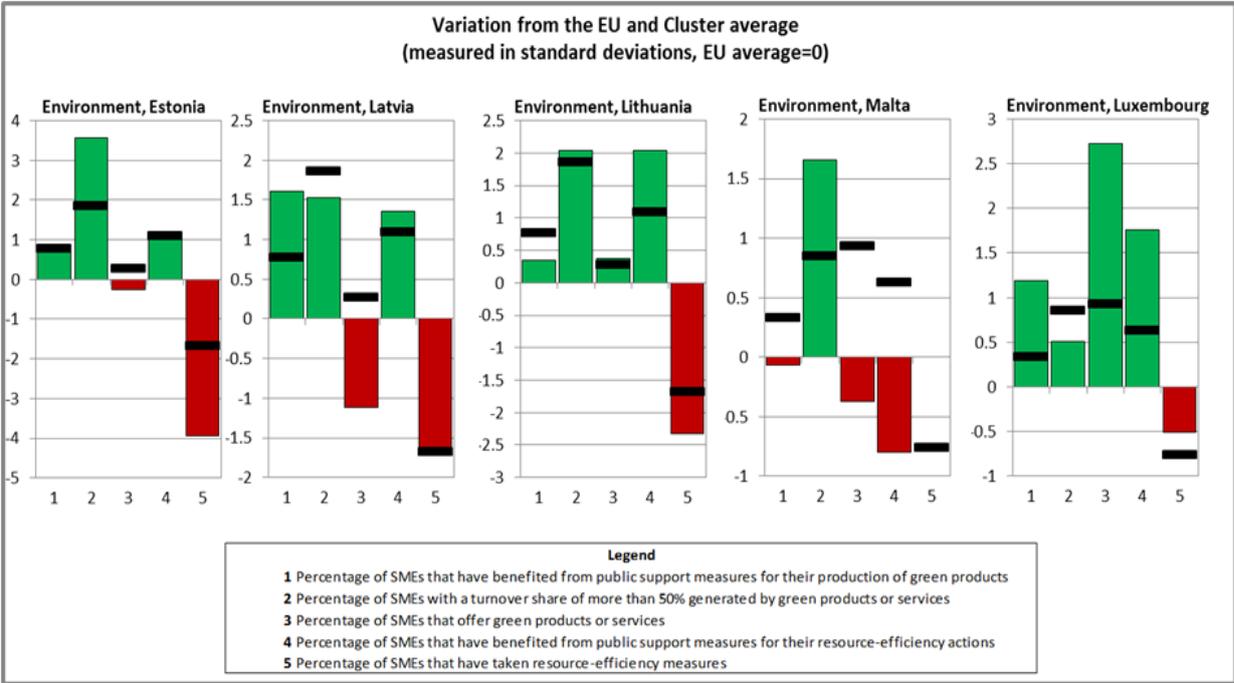
All the countries are capable of achieving better than EU28 performance in the majority of the indicators, from the 60% by Estonia and Latvia, to the 80% by Lithuania.

Although the overall positive performance in this principle, Figure 56 allows disentangling some areas of further improvement, by reporting the scores in the five indicators building the principle with EU average set to zero.

The main weakness for all the tree countries comes from a weak 'share of SMEs that adopted resource efficiency measures' (9.1) in which they all perform worse than both EU and Cluster 1 average.

Estonia and Latvia show a further weakness in the 'share of SMEs that offer green products or services' (9.3), as their Cluster average is higher and above the EU28 average. Given such Cluster performance, it is reasonable to assume this to be a valid benchmark for future improvements.

Figure 56. Indicators in 'Environment' for countries in Cluster 1 compared to cluster and EU average



Estonia can serve as a benchmark for the remaining countries of its Cluster in 'SMEs extracting high share of turnover generated by green products and services' (9.4), as it scores better than both EU28 and Cluster 1 average.

Latvia can serve as a benchmark for the remaining countries of its Cluster in the 'public support measures for producing green products' (9.5), as it scores better than both EU28 and Cluster 1 average.

Lithuania can serve as a benchmark for the remaining countries of its Cluster in the 'public support measures for resource efficiency actions' (9.2), as it scores better than both EU28 and Cluster 1 average.

Table 37. Prioritization in Cluster 1, principle 'Environment'

Country	Priority area (# indicator)	Main strength (# indicator)
Estonia	9.1; 9.3	9.4
Latvia	9.1; 9.3	9.5 (*)
Lithuania	9.3	9.2

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

3.8.2 Analysis of 'Environment' for Cluster 2

Trends in this area by countries belonging to Cluster 2 are heterogeneous. Malta and France have a stable and close to the EU28 average performance, Germany is close to EU28 average but experienced deterioration, Cyprus has had a limited improvement and it is above the EU average, Slovenia is better than EU28 average but experienced deterioration, while Luxembourg has improved its trend and is experiencing a high performance.

Half of the countries in the Cluster are better than EU28 average in 80% of the indicators (Cyprus, Luxembourg and Slovenia), Germany in 60% of the indicators, while France and Malta in less than half of the indicators.

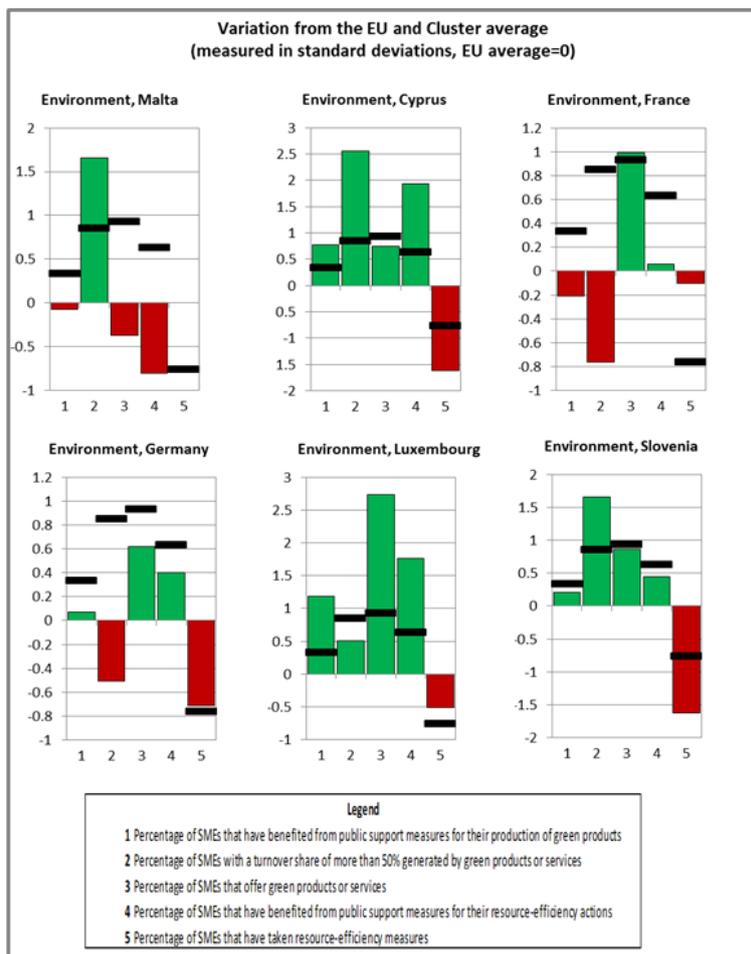
Countries in Cluster 2 all face the main weakness in the 'share of SMEs that adopted resource efficiency measures' (9.1), in which they all perform worse than EU28 average.

In addition to this, France's priority areas are depicted for those indicators, in which it is worse than EU28 average and far from the Cluster average, i.e. 'SMEs extracting high share of turnover generated by green products and services' (9.4) and 'public support measures for the production of green products' (9.5).

Malta's priority areas are depicted for those indicators in which it is worse than EU28 average and far from the Cluster average, i.e. in 'public support measures for resource efficiency actions' (9.2); 'share of SMEs that offer green products or services' (9.3) and 'public support measures for the production of green products' (9.5).

Germany needs a substantial improvement, as it stands below the Cluster average in all the indicators considered. It is however possible to signal a priority for those in which it performs also worse than EU28 average, i.e. 'SMEs extracting high share of turnover generated by green products and services' (9.4).

Figure 57. Indicators in 'Environment' for countries in Cluster 2 compared to cluster and EU average



Luxembourg can serve as a benchmark for the Cluster in the indicators 'public support measures for resource efficiency actions' (9.2); 'share of SMEs that offer green products or services' (9.3) and 'public support measures for the production of green products' (9.5), where it is the best performing country of the cluster.

Cyprus can be the benchmark for 'SMEs extracting high share of turnover generated by green products and services' (9.4), in which it is the best performing country in the Cluster.

Table 38. Prioritization in Cluster 2, principle 'Environment'

Country	Priority area (# indicator)	Main strength (# indicator)
Malta	9.2; 9.3; 9.5(*)	9.4
Cyprus	9.1	9.2; 9.4; 9.5(*)
France	9.1; 9.4; 9.5(*)	
Germany	9.1; 9.4	
Luxembourg	9.1	9.2; 9.3; 9.5(*)

Slovenia	9.1	9.4
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Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

3.8.3 Analysis of 'Environment' for Cluster 3

Countries in Cluster 3 are quite homogeneous in the trend experienced for this area. Most countries have a high performance with a positive trend (Austria, Denmark, Sweden Belgium), or a close to stationarity trend and a close to EU28 value (The Netherlands, Portugal and Finland). The only exception is United Kingdom, facing deterioration and a low performance with respect to EU28 average.

The majority of the countries in the Cluster (6 over 9) are better than EU28 average in 60% or more indicators. Ireland, Sweden and United Kingdom are instead better than EU28 average only in 40% of the cases.

When analysing more specifically the values in the indicators for countries with respect to both Cluster and EU28 averages, it emerges that the majority of countries in the cluster are weak in the 'share of SMEs that adopted resource efficiency measures' (9.1), with the only exception of Ireland and United Kingdom.

In addition to this weakness, Belgium should act in the direction of improving the 'share of SMEs that offer green products or services' (9.3), as in this indicator it is worse than EU28 average and even far from its Cluster average. For the same logic, Denmark's and the Netherlands' additional priority area would be favouring 'public support measures for the production of green products' (9.5) and Finland's and Sweden's would be to improve the 'share of turnover generated by green products and services' (9.4).

Ireland's and United Kingdom's main weaknesses are instead in the 'share of turnover generated by green products and services' (9.4) and in 'public support measures for resource efficiency actions' (9.2), as in both indicators are worse than EU28 average and far from Cluster 3 average.

United Kingdom can be the benchmark in the 'share of SMEs that adopted resource efficiency measures' (9.1), in which it is the best performing country in the Cluster. Similarly, Belgium can serve as a benchmark for 'public support measures for resource efficiency actions' (9.2); Austria for the 'share of SMEs that offer green products or services' (9.3), Denmark for the 'share of turnover generated by green products and services' (9.4) and Finland for 'public support measures for the production of green products' (9.5).

Figure 58. Indicators in 'Environment' for countries in Cluster 3 compared to cluster and EU average

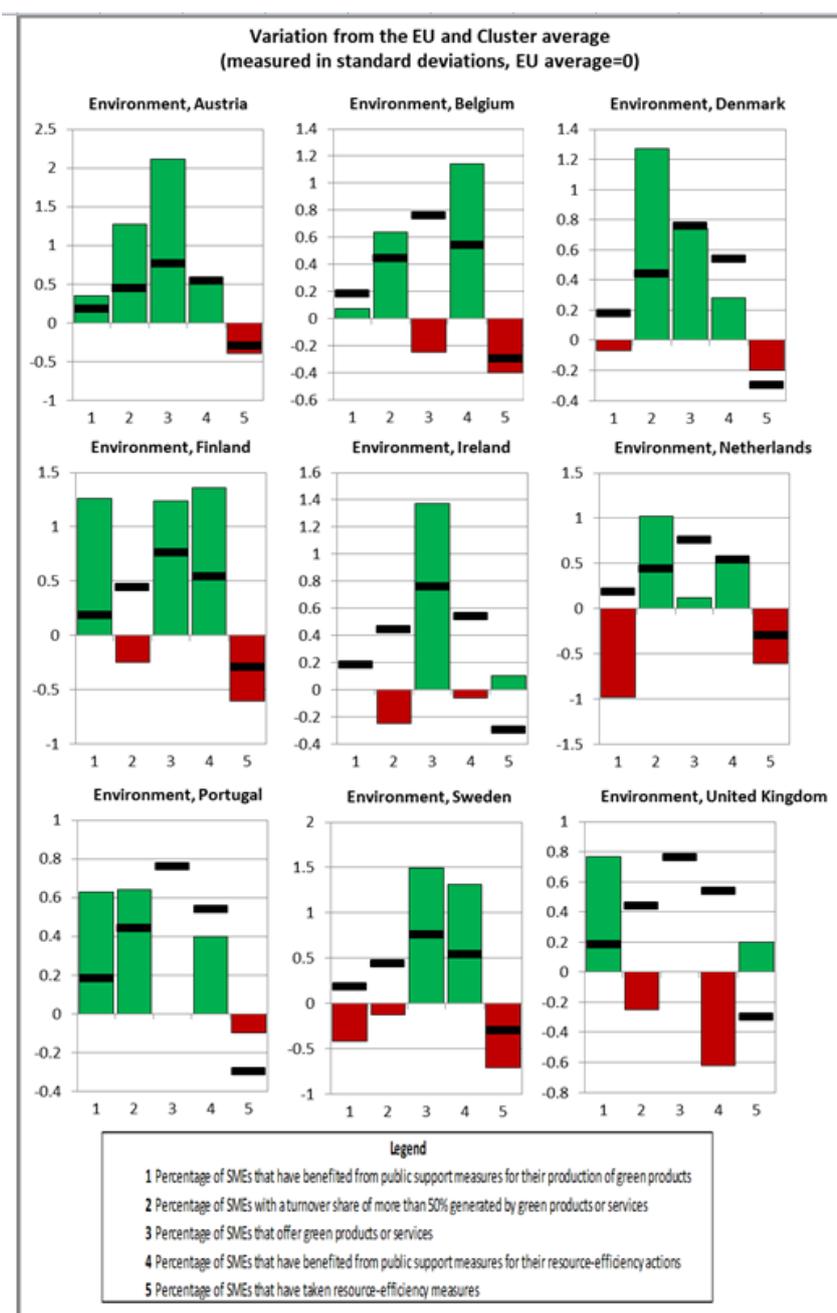


Table 39. Prioritization in Cluster 3, principle 'Environment'

Country	Priority area (# indicator)	Main strength (# indicator)
Austria	9.1	9.3; 9.4
Belgium	9.1; 9.3	9.2; 9.4
Denmark	9.1; 9.5(*)	9.4
Finland	9.1; 9.4	9.2; 9.3; 9.5(*)

Ireland	9.4; 9.2	9.3
The Netherlands	9.1; 9.5(*)	9.4
Portugal	9.1	9.4; 9.5(*)
Sweden	9.1; 9.4	9.2; 9.3
United Kingdom	9.4; 9.2	9.1; 9.5(*)

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

3.8.4 Analysis of 'Environment' for Cluster 4

Countries in Cluster 4 are on average bad performing in this area and are as well quite homogeneous in the trend experienced. Most countries have a low performance combined with a deterioration trend (Bulgaria, Greece, Hungary and Romania), or a stationarity trend with a low performance (Czech Republic, Poland and Slovakia).

Half of the countries in the Cluster have indeed a better than EU28 average performance in the majority of the indicators of the principle (Croatia, Czech Republic, Poland and Slovakia), while the remaining half is mostly worse than EU28 average (Bulgaria, Greece, Hungary and Romania).

When analysing more specifically the values in the indicators for countries with respect to both Cluster and EU28 averages, it emerges that all the countries in the cluster are weak in the 'share of SMEs that adopted resource efficiency measures' (9.1), and this is a priority area for all the countries considered.

Bulgaria's and Hungary's additional priority areas are suggested to be the 'share of SMEs that offer green products or services' (9.3) and 'public support measures for the production of green products' (9.5) as in both of which they perform worse than EU28 and Cluster 4 averages.

According to the same criteria, Croatia's and Czech Republic's additional priority area would be the 'share of SMEs that offer green products or services' (9.3), Romania's and Greece's additional priority areas would be 'public support measures for resource efficiency actions' (9.2) and 'public support measures for the production of green products' (9.5).

Czech Republic can be the benchmark for 'public support measures for the production of green products' (9.5) and for 'public support measures for resource efficiency actions' (9.2), in which it is the best performing country in the cluster. Similarly, Slovakia can serve as a benchmark for the 'share of SMEs that offer green products or services' (9.3) and Romania for the 'share of turnover generated by green products and services' (9.4).

Figure 59. Indicators in 'Environment' for countries in Cluster 4 compared to cluster and EU average

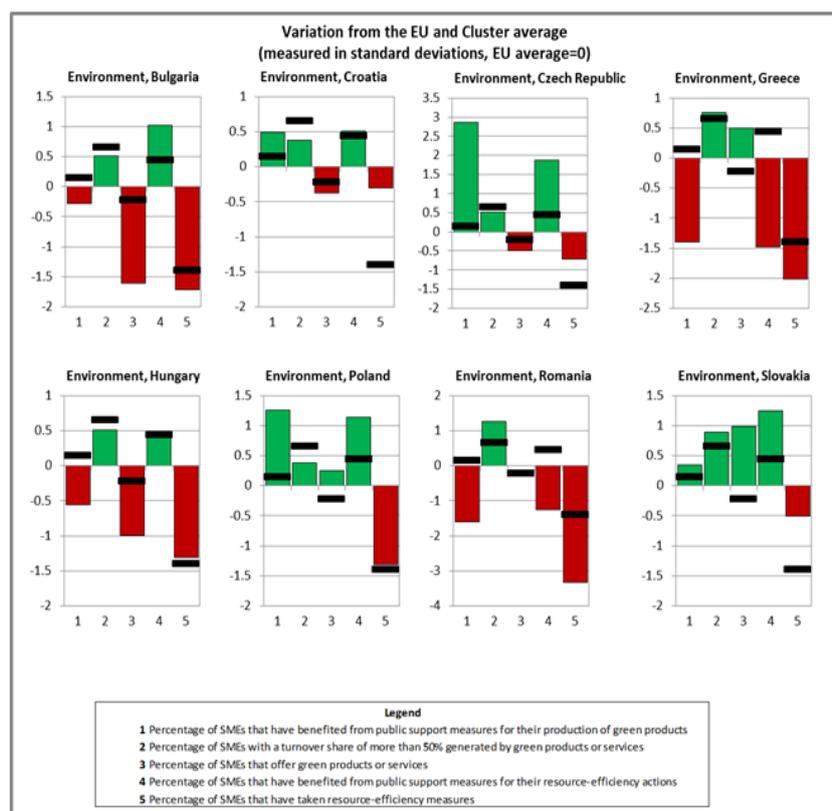


Table 40. Prioritization in Cluster 4, principle 'Environment'

Country	Priority area (# indicator)	Main strength (# indicator)
Bulgaria	9.1; 9.3; 9.5 (*)	9.2
Croatia	9.1; 9.3	9.5 (*)
Czech Republic	9.1; 9.3	9.2; 9.5 (*)
Greece	9.1; 9.2; 9.5(*)	9.3
Hungary	9.1; 9.3; 9.5 (*)	
Poland	9.1	9.4; 9.5 (*)
Romania	9.1; 9.2; 9.5 (*)	9.4
Slovakia	9.1	9.2; 9.3

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

3.8.5 Analysis of 'Environment' for Cluster 5

Both countries in Cluster 5 perform worse than EU28 average in the principle 'Environment'. However, country specific differences emerge when country are analysed with respect to the Cluster – rather than EU - average.

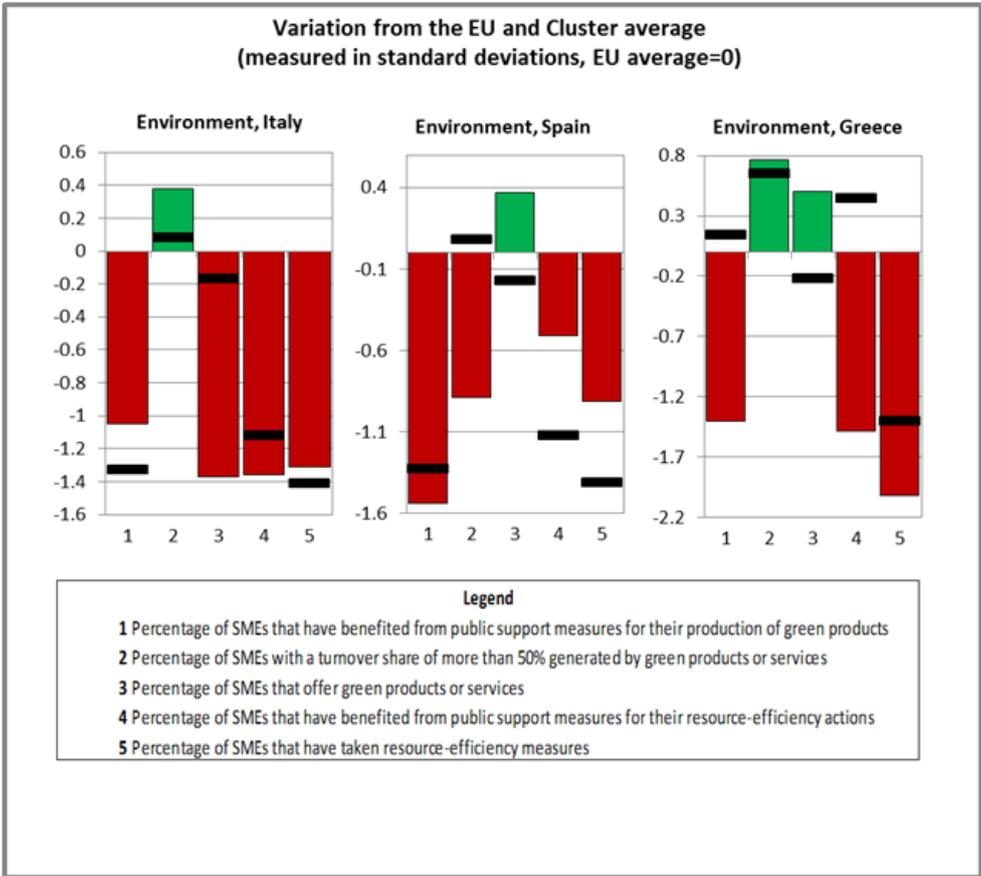
Cluster 5 is truly far from the performance in the remaining four clusters, as a big gap is depicted among the Cluster averages and EU average. Countries belonging to Cluster 5 share commonalities in behaviours with respect to the principle 'Environment', and those can be exploited to guide improvements in this principle.

Most importantly the performance in 'Environment' for all the countries in Cluster 5 has deteriorated from 2008 to 2006, as it emerged in the SBA Fact Sheet for Italy and Spain. A reduction in support measures towards green efficiency investments is associated with the absence of policy actions and SBA related recommendations' implementation by Member States.

Italy is the only country that strengthened its environmental legislation, however it seems that the two main policy actions ('Collegato ambientale' and 'POI Programme') did not display their effect on SMEs yet. This is plausible given that the main policy has been introduced in 2016, while data for this dimension refer to the year 2015.

A closer look into the indicators helps guiding the choice on how to prioritize Member States' actions towards an improvement in this principle. Figure 60 reports the scores in the five indicators building the principle with EU average set to zero.

Figure 60. Indicators in 'Environment' for countries in Cluster 5 compared to cluster and EU average



All countries in Cluster 5 perform worse than the EU average in the majority of the indicators that constitute the principle 'Environment': in 80% of the indicators Spain and Italy are worse than EU average.

When comparing country specific values in the indicators of this principle interesting evidences are found. Spain's main weaknesses with respect to both EU average and to the its Cluster values are found with respect to SMEs that gain economically from selling green products and services (9.4) and from the weak public support measures for such production of green products (9.5). Comparing Spain with its Cluster makes it explicit that these two indicators deserve to be a priority in this dimension, as similar countries, i.e. those in the same Cluster are capable of a better performance.

Spain's main strength in this principle comes from the high 'share of SMEs that offer green products and services' (9.3), which can serve as a benchmark for the remaining countries in the cluster.

Italy's areas of priority would instead be related to a too low percentage of 'SMEs that offer green products and services' (9.3) and a too weak 'public support to SMEs resource efficiency measures' (9.2). As for the first, it is evident that the country can be guided by Spain's higher achievements. Italy's main strength in this principle comes from the capability of SMEs to extract revenues from their green products and services (9.4).

Table 41. Prioritization in Cluster 5, principle 'Environment'

Country	Priority area (# indicator)	Main strength (# indicator)
Italy	9.3; 9.2	9.4
Spain	9.4; 9.5 (*)	9.3

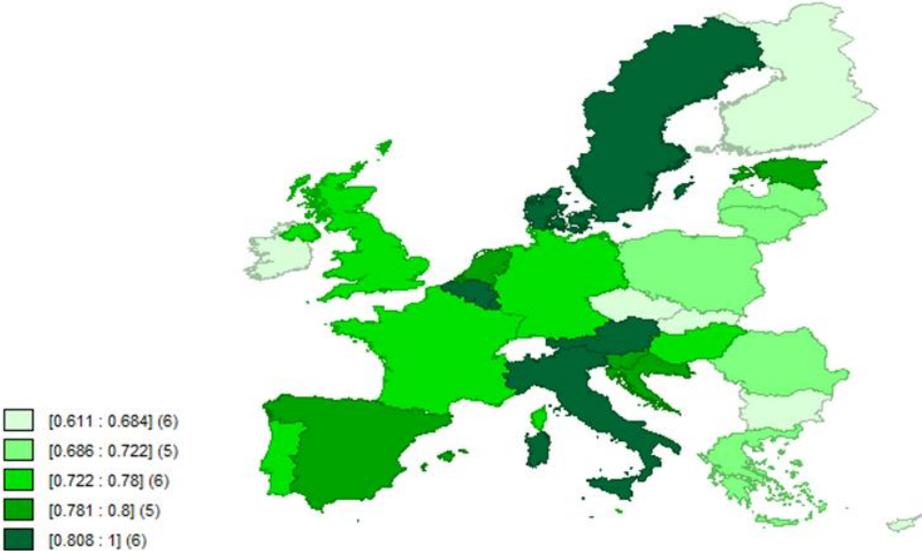
Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

3.9 Analysis of 'Internationalization'

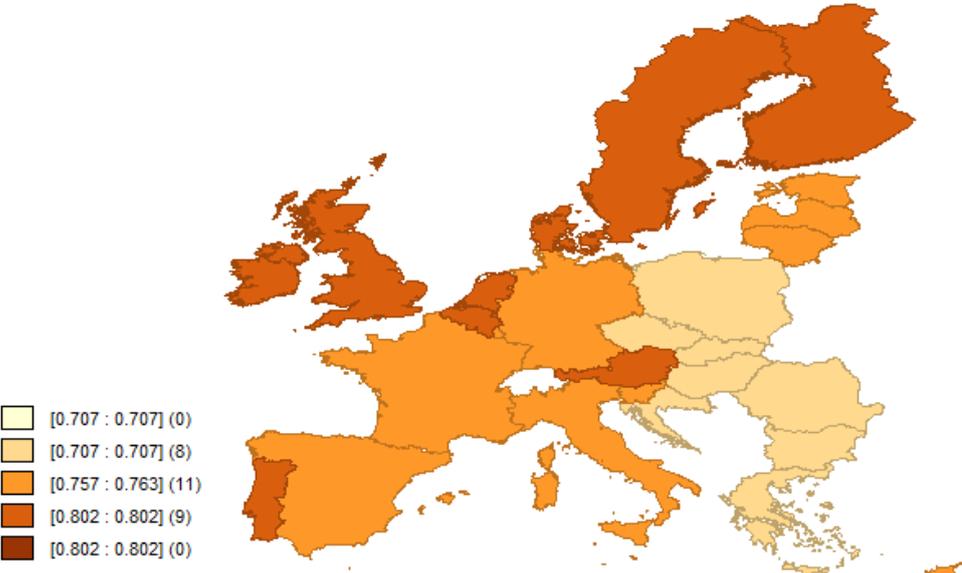
Countries' scores recorded in principle 'Internationalization' are distributed as reported in the map in Figure 61, which shows the quantile distribution of those scores. The map ranges values from the 6 countries coloured in the lightest green, representing the worst performing ones in this dimension (Bulgaria, Cyprus, Czech Republic, Finland, Ireland and Slovakia), to the ones in darkest green, which are the best performing ones (Austria, Belgium, Denmark, Italy, Luxembourg and Sweden).

Figure 61. Quantile distribution of 'Internationalization' by country



Clusters' average values in the same principle are reported in Figure 62. This map shows that the lowest Cluster average is found for Cluster 4, while the highest Cluster average is obtained by Cluster 3.

Figure 62. Cluster averages for 'Internationalization'



Given the evidence outlined so far, next subsection aims to discuss the area of improvements in this principle by clusters.

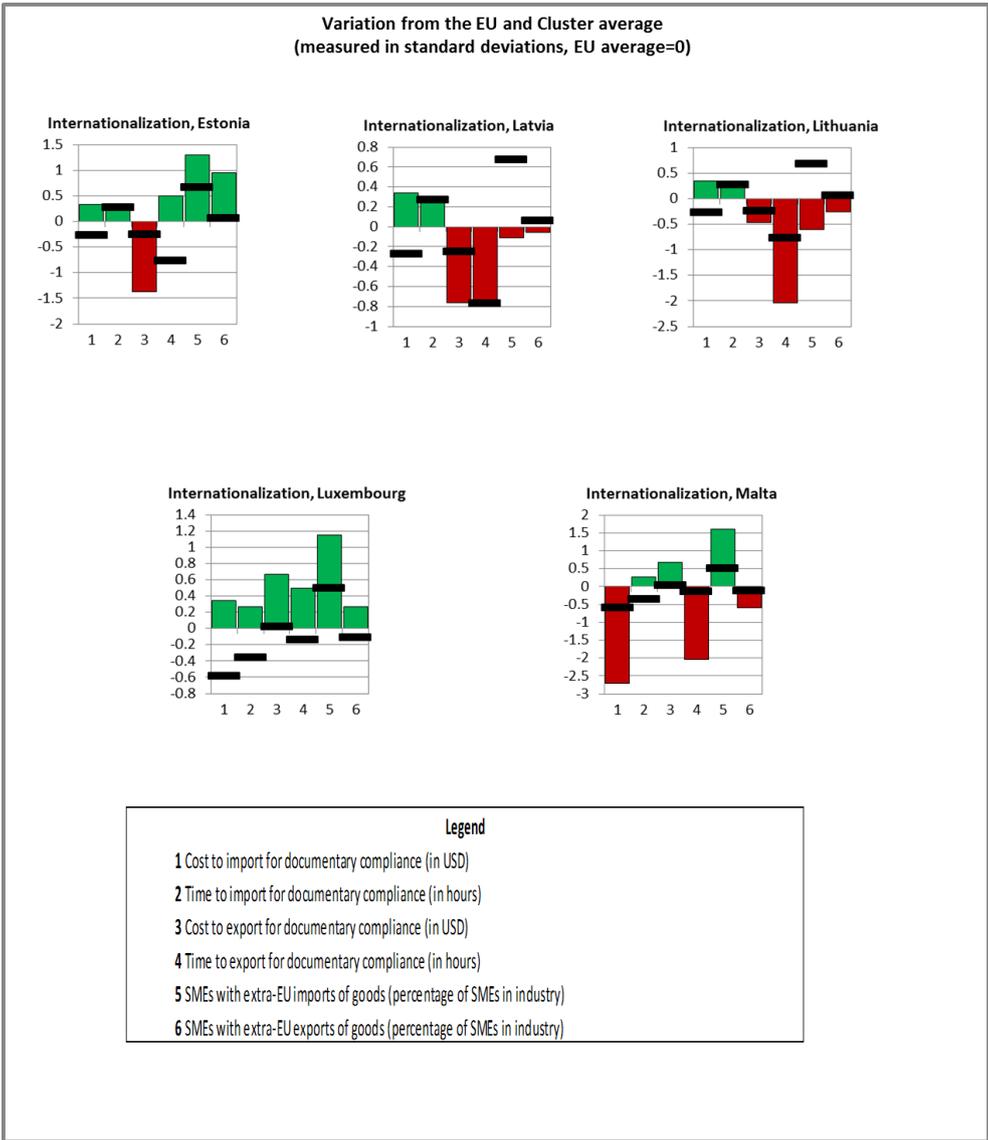
3.9.1 Analysis of 'Internationalization' for Cluster 1

In dimension 'Internationalization', low increasing performances are found for Lithuania and for Latvia, while Estonia exhibits a high decreasing performance. Most of the countries in Cluster 1 generally underperform relative to the EU28 averages, except for Estonia which outperforms in 5 out of 6 indicators; Latvia and Lithuania outperform in only 30% of the indicators.

The main weakness envisaged for Estonia is in 'cost to export for documentary compliance' (10.2) where it performs worse than both the EU28 and Cluster average.

As for Latvia, the country is underperforming both the EU28 and the Cluster average in 'cost to export for documentary compliance' (10.3), 'time to export for documentary compliance' (10.1), 'SMEs with extra-EU imports of goods' (10.6) and 'SMEs with extra-EU exports of goods' (10.5). Same observations hold true for Lithuania also.

Figure 63. Indicators in 'Internationalization' for countries in Cluster 1 compared to cluster and EU average



Estonia and Lithuania could constitute a benchmark for their Cluster in 'cost to import for documentary compliance' (10.4) and 'time to import for documentary compliance' (10.3).

In case of 'cost to export for documentary compliance' (10.2) all the Baltic countries could take the example of Luxembourg and Malta that are similar countries.

For the rest of indicators, Estonia serves as a good benchmark for its Cluster.

Table 42. Prioritization in Cluster 1, principle 'Internationalization'

Country	Priority area (# indicator)	Main strength (# indicator)
Estonia	10.2	10.1; 10.4(**); 10.5; 10.6
Latvia	10.1; 10.2; 10.5; 10.6	10.4(**)
Lithuania	10.1; 10.2; 10.5; 10.6	10.4(**)

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

3.9.2 Analysis of 'Internationalization' for Cluster 2

Cluster 2 exhibits a rather heterogeneous picture for the six countries composing it:

- Low performance and descending trend: Cyprus
- High performance and ascending trend: Germany, Slovenia, France
- High performance and descending trend: Luxembourg

Analysing the performance of countries in Cluster 2 relative to the EU28 averages, most of the countries have more than half outperforming indicators. It could be noted that Luxembourg outperforms in 100% of the indicators constituting the dimension, while Cyprus outperforms in only 15% of them. Otherwise, rates of outperformance span from 85% (Germany) to 50% (Malta), with France and Slovenia performing better than the EU28 averages in two-thirds of the indicators.

Cyprus underperforms both the EU28 and Cluster averages in most of the indicators except for 'SMEs with extra-EU imports of goods' (10.6).

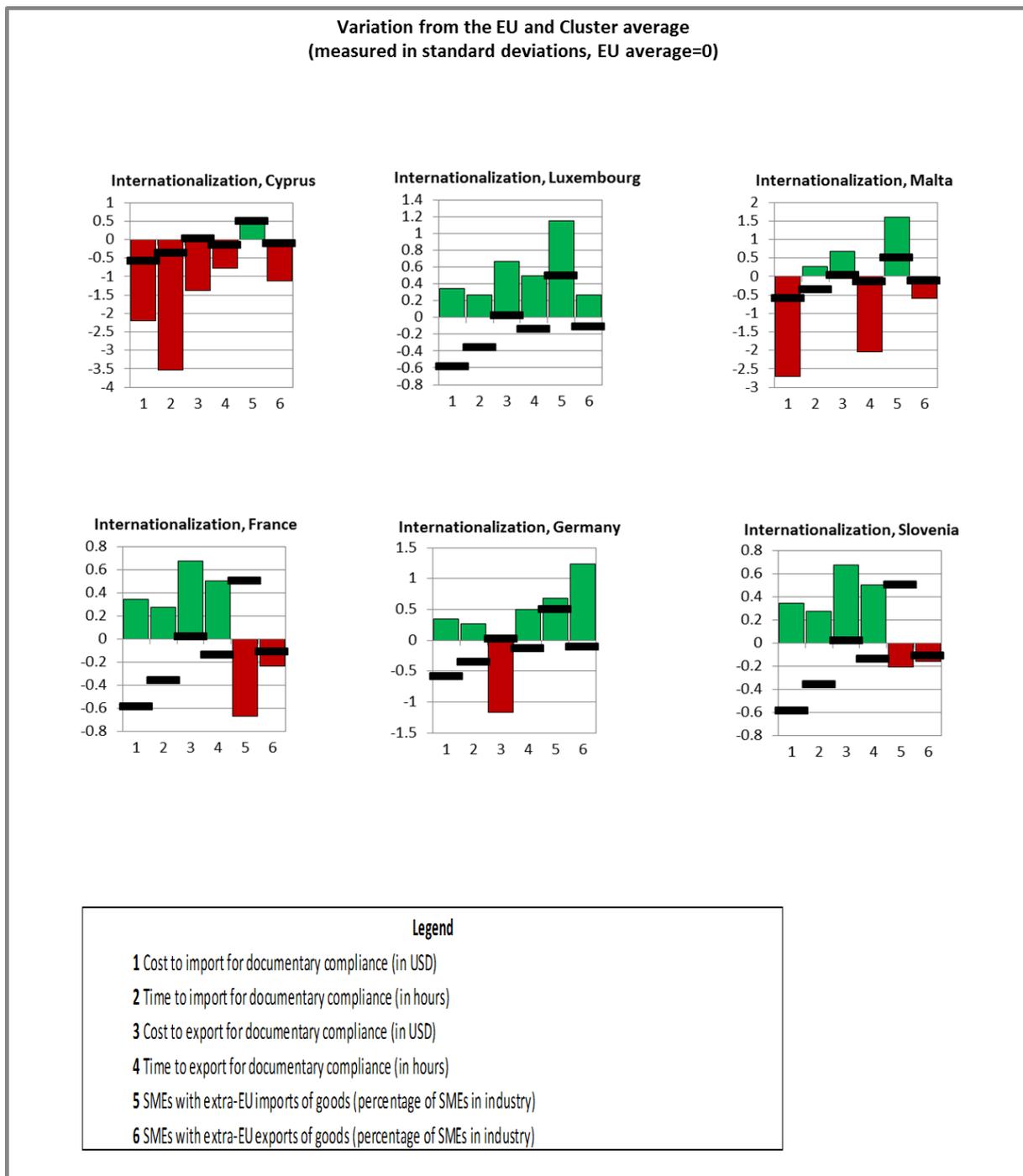
Malta's main weaknesses are related to 'cost to import for documentary compliance' (10.4), 'time to export for documentary compliance' (10.1) and 'SMEs with extra-EU exports of goods' (10.5), areas in which it performs worse than both the EU28 and Cluster averages.

The main priority areas identified for France are in 'SMEs with extra-EU imports of goods' (10.6) and 'SMEs with extra-EU exports of goods' (10.5) provided it scores worse than both the EU28 and Cluster average in these indicators.

Germany's main weakness relates to the 'cost to export for documentary compliance' (10.2) where it scores less than both the EU28 and its Cluster averages.

Slovenia is underperforming both the EU28 and the Cluster averages in 'SMEs with extra-EU imports of goods' (10.6) and 'SMEs with extra-EU exports of goods' (10.5).

Figure 64. Indicators in 'Internationalization' for countries in Cluster 2 compared to cluster and EU average



Luxembourg can serve as a benchmark for the remaining countries of its Cluster in most of the indicators given that it outperforms both the EU28 and Cluster averages. Germany can serve as Cluster benchmark in 'SMEs with extra-EU exports of goods' (10.5) in which it is the best performer of its Cluster.

Table 43. Prioritization in Cluster 2, principle 'Internationalization'

Country	Priority area (# indicator)	Main strength (# indicator)
Cyprus	10.1; 10.2(**); 10.3; 10.4(**); 10.5	
France	10.5; 10.6	10.1; 10.2(**); 10.3; 10.4(**)
Germany	10.2(**)	10.1; 10.3; 10.4(**); 10.5; 10.6
Luxembourg		10.1; 10.2(**); 10.3; 10.4(**); 10.5; 10.6
Malta	10.1; 10.4(**); 10.5	10.2(**); 10.3; 10.6
Slovenia	10.5; 10.6	10.1; 10.2(**); 10.3; 10.4(**)

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

3.9.3 Analysis of 'Internationalization' for Cluster 3

Performances and trends of countries in Cluster 3 exhibit a heterogeneous picture for the 9 countries composing it:

- Low performance and ascending trend: Ireland
- Low performance and descending trend: Finland
- High performance and ascending trend: Portugal, United Kingdom, Belgium, Austria, Denmark
- High performance and descending trend: The Netherlands, Sweden

Countries in Cluster 3 generally outperform the EU28 averages. Remarkable outperformances are obtained by Austria, Belgium, Denmark and Sweden (100% of the indicators), closely followed by the Netherlands and Portugal (85%). Highest underperformers are United Kingdom (50% outperforming indicators) and Finland (65% outperforming indicators).

Belgium underperforms the Cluster average in 'SMEs with extra-EU exports of goods' (10.5).

Finland's main weaknesses are to be found in 'cost to export for documentary compliance' (10.2) and 'time to export for documentary compliance' (10.1) where it scores lower than both the EU28 and the Cluster averages. To a lesser extent, 'SMEs with extra-EU imports of goods' (10.6) and 'SMEs with extra-EU exports of goods' (10.5) could also constitute a priority area given the higher performance of the other countries in the Cluster.

Ireland is underperforming both the EU28 and Cluster averages in 'cost to import for documentary compliance' (10.4) and 'cost to export for documentary compliance' (10.3).

The Netherlands show values below EU28 and Cluster averages in 'SMEs with extra-EU exports of goods' (10.5) and this should be identified as the main priority area for the

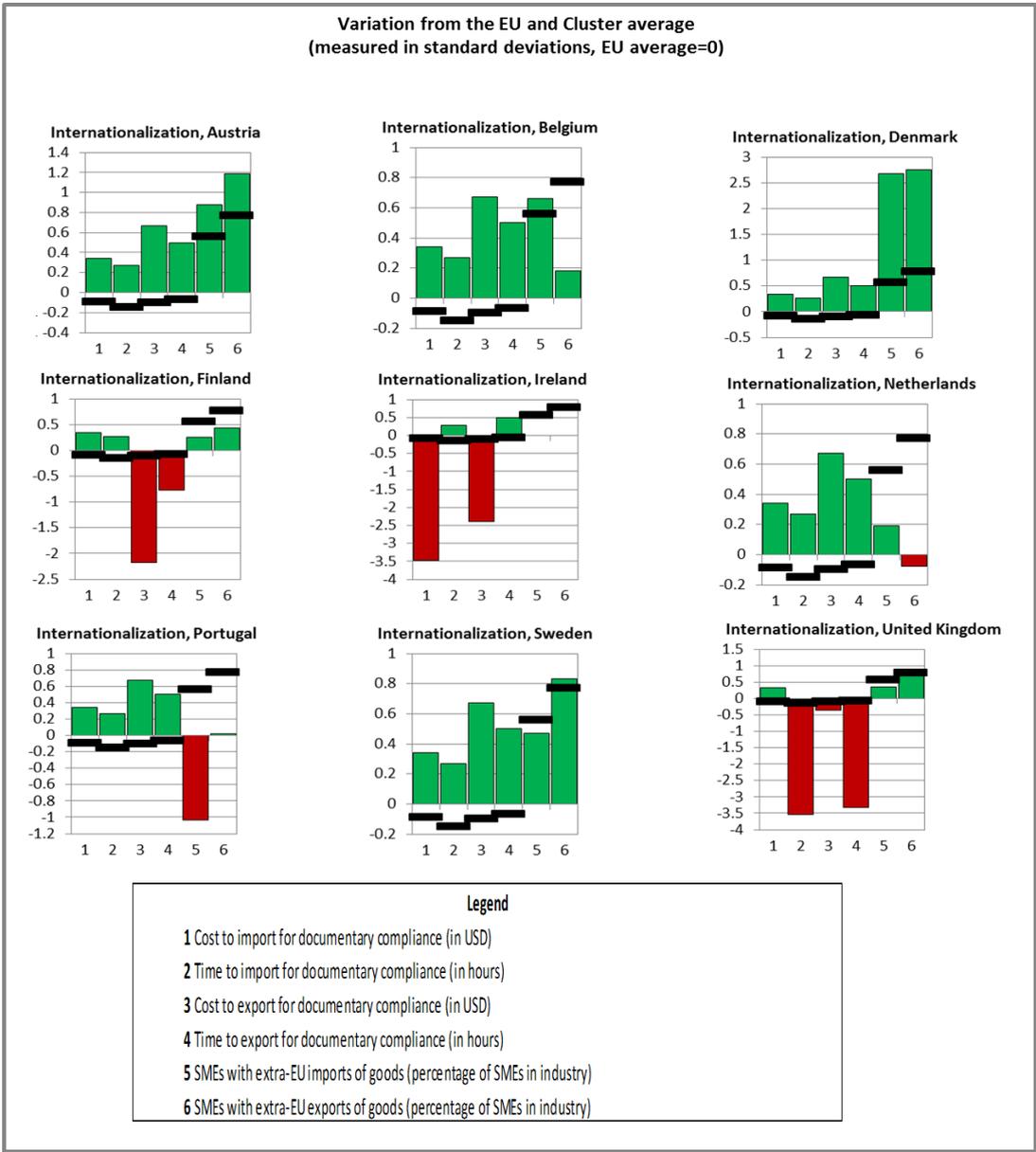
country in this dimension. In addition, it underperforms its Cluster in 'SMEs with extra-EU imports of goods' (10.6).

Portugal's main priority area is identified in 'SMEs with extra-EU imports of goods' (10.6), area in which it underperforms both the EU28 and the Cluster averages. Moreover, it reports lower than its Cluster's achievements in 'SMEs with extra-EU exports of goods' (10.5).

Sweden's weakness is related to 'SMEs with extra-EU imports of goods' (10.6), indicator in which it underperforms its Cluster average.

United Kingdom shows below EU28 and Cluster averages in 'time to import for documentary compliance' (10.3), 'cost to export for documentary compliance' (10.2) and 'time to export for documentary compliance' (10.1) and these should be identified as its main priority areas. Moreover, there is room for improvement in 'SMEs with extra-EU imports of goods' (10.6) considering similar countries obtained higher results in this indicator.

Figure 65. Indicators in 'Internationalization' for countries in Cluster 3 compared to cluster and EU average



Denmark is generally the most performing country in this dimension serving as a benchmark for its Cluster. In case of 'cost to export for documentary compliance' (10.3), Austria, Belgium, the Netherlands, Portugal and Sweden obtain similar values.

Table 44. Prioritization in Cluster 3, principle 'Internationalization'

Country	Priority area (# indicator)	Main strength (# indicator)
Austria		10.1; 10.2(**); 10.3; 10.4(**); 10.5; 10.6
Belgium	10.5	10.1; 10.2(**); 10.3; 10.4(**); 10.6
Denmark		10.1; 10.2(**); 10.3; 10.4(**); 10.5; 10.6
Finland	10.1; 10.2(**); 10.5; 10.6	10.3; 10.4(**)
Ireland	10.2(**);10.4(**)	10.1; 10.3
The Netherlands	10.5; 10.6	10.1; 10.2(**); 10.3; 10.4(**)
Portugal	10.5; 10.6	10.1; 10.2(**); 10.3; 10.4(**)
Sweden	10.6	10.1; 10.2(**); 10.3; 10.4(**); 10.5; 10.5
United Kingdom	10.1; 10.2(**); 10.3; 10.6	10.4(**)

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

3.9.4 Analysis of 'Internationalization' for Cluster 4

Performances and trends of countries in Cluster 4 exhibit a heterogeneous picture for the 9 countries composing it:

- Low performance and ascending trend: Greece, Bulgaria, Hungary
- Low performance and descending trend: Czech Republic, Poland, Romania, Slovakia
- High performance and ascending trend: Croatia

Most of the countries in Cluster 4 outperform the EU28 average in two-thirds of the indicators composing the dimension. Different performances are obtained by Croatia (100% outperforming indicators), Greece (50%) and Bulgaria (30%).

The main recommendations that emerge from the analysis of the country, Cluster and EU28 averages are following in the next paragraphs.

Bulgaria is underperforming both the EU28 and Cluster averages in 'cost to export for documentary compliance' (10.3), 'time to export for documentary compliance' (10.1),

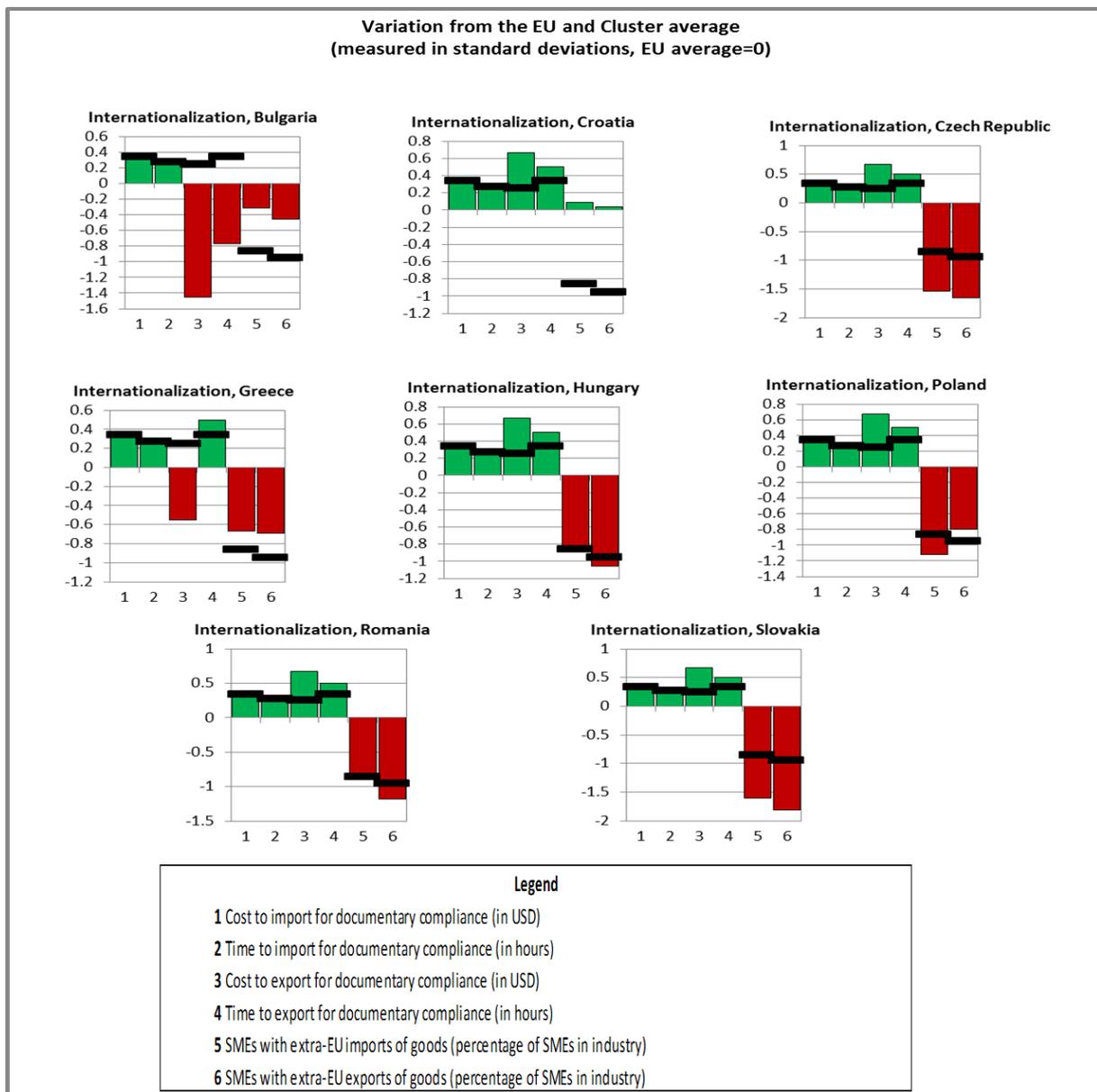
'SMEs with extra-EU imports of goods' (10.6) and 'SMEs with extra-EU exports of goods' (10.5).

Czech Republic's main priority areas are related to its lower than the EU28 and Cluster average value in 'SMEs with extra-EU imports of goods' (10.6) and 'SMEs with extra-EU exports of goods' (10.5). Same observation holds true for Hungary, Romania and Slovakia also.

Greece performs worse than the EU28 and Cluster averages in 'cost to export for documentary compliance' (10.3), 'SMEs with extra-EU imports of goods' (10.6) and 'SMEs with extra-EU exports of goods' (10.5), these indicators constituting its main priority areas.

Poland performs worse than both the EU28 and Cluster average in 'SMEs with extra-EU imports of goods' (10.6). In addition it underperforms the EU28 average, but obtains higher than Cluster values in 'SMEs with extra-EU exports of goods' (10.5).

Figure 66. Indicators in 'Internationalization' for countries in Cluster 4 compared to cluster and EU average



Croatia is the best performer of its Cluster serving as benchmark for its peers.

Table 45. Prioritization in Cluster 4, principle 'Internationalization'

Country	Priority area (# indicator)	Main strength (# indicator)
Bulgaria	10.1; 10.2(**); 10.5; 10.6	
Croatia		10.1; 10.2(**); 10.3; 10.4(**); 10.5; 10.6
Czech Republic	10.5; 10.6	10.1; 10.2(**); 10.3; 10.4(**)
Greece	10.2(**); 10.5; 10.6	10.1; 10.3; 10.4(**)
Hungary	10.5; 10.6	10.1; 10.2(**); 10.3; 10.4(**)
Poland	10.5; 10.6	10.1; 10.2(**); 10.3; 10.4(**)
Romania	10.5; 10.6	10.1; 10.2(**); 10.3; 10.4(**)
Slovakia	10.5; 10.6	10.1; 10.2(**); 10.3; 10.4(**)

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

3.9.5 Analysis of 'Internationalization' for Cluster 5

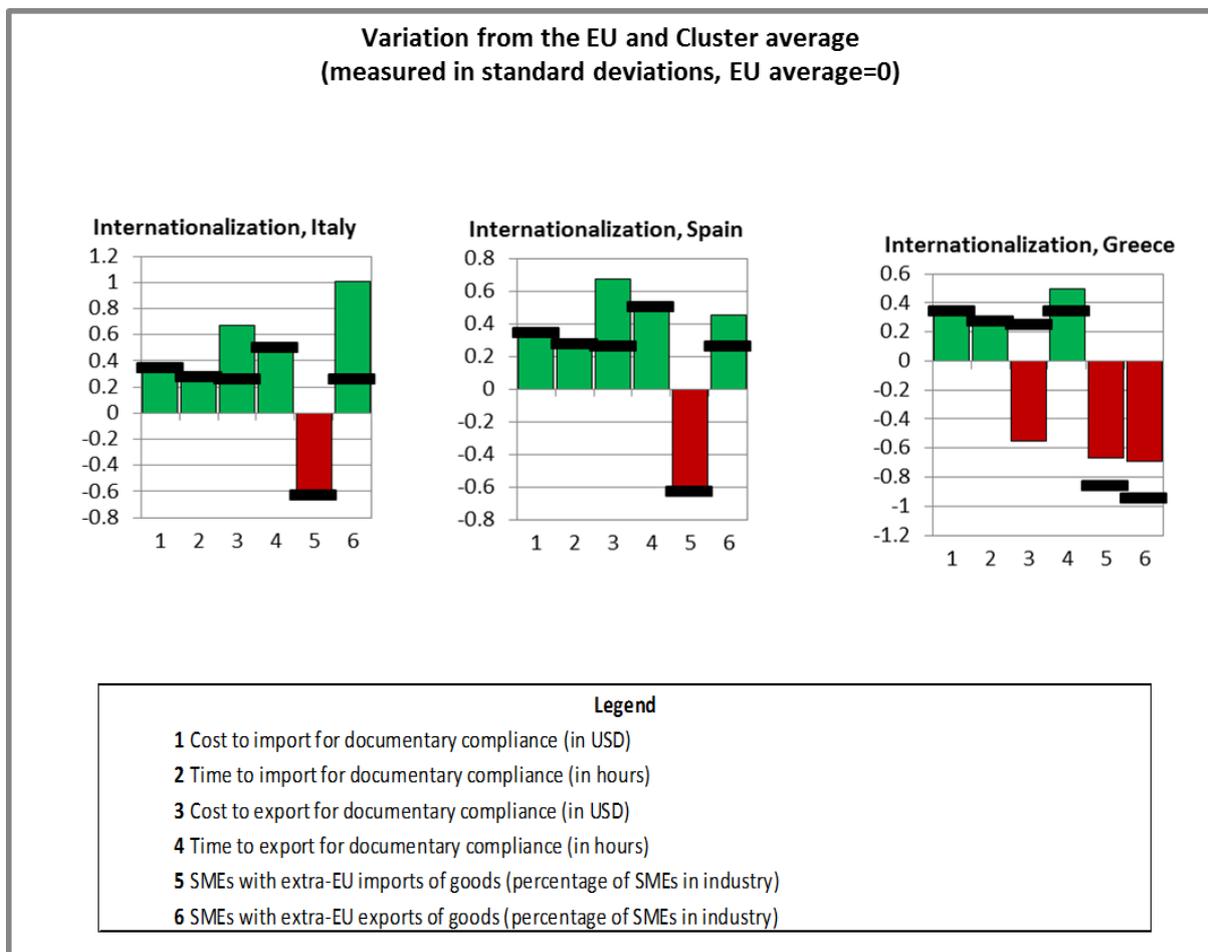
Considering Cluster's 5 performances and trends in the 'Internationalization' dimension, Italy exhibits high performance and an ascending trend while Spain exhibits a high performance and a descending trend.

The two countries in Cluster 5 are outperforming the EU28 averages in all the indicators except for 'SMEs with extra-EU imports of goods' (10.6).

An analysis of the country, Cluster and EU28 averages is provided in the further paragraphs.

Italy's main weakness emerges from 'SMEs with extra-EU imports of goods' (10.6) in which it obtains values lower than the EU28 average while equalling that of its Cluster. Same observation holds true for Spain as well.

Figure 67. Indicators in 'Internationalization' for countries in Cluster 5 compared to cluster and EU average



In general both countries showcase similar performances except for 'SMEs with extra-EU exports of goods' (10.5) in which case Italy might provide a benchmark for Spain.

Considering the 'SMEs with extra-EU imports of goods' (10.6) indicator the two countries scored lower than their counterpart Greece. As such, no benchmarking recommendations could be provided in this case.

Table 46. Prioritization in Cluster 5, principle 'Internationalization'

Country	Priority area (# indicator)	Main strength (# indicator)
Italy	10.6	10.1; 10.2(**); 10.3; 10.4(**); 10.5
Spain	10.6	10.1; 10.2(**); 10.3; 10.4(**); 10.5

Note: Annex 2 reports full names of the codes of the indicators listed in the Table.

(*) The indicator shows a moderate fluctuation over time, which can affect the interpretation of the finding, as outlined in Annex 1.

(**) It is not possible to assess the stability of the indicator over time and this can affect the interpretation of the finding, as outlined in Annex 1.

4 Conclusive remarks and future extensions

The SBA country fact sheets are produced each year, since 2008, by the European Commission's Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW), and since 2011, with the scientific support of the European Commission Joint Research Centre (JRC). The main goal of the fact sheets is to capture the performance of the SMEs across the EU28 MSs by a collection of quantitative indicators covering ten conceptual principles derived from the Small Business Act for Europe (SBA): (1) 'Entrepreneurship', (2) 'Second chance', (3) 'Think small first', (4) 'Responsive administration', (5) 'State aid & public procurement', (6) 'Access to finance', (7) 'Single market', (8) 'Skills and innovation', (9) 'Environment', and (10) 'Internationalisation'.

The JRC's Competence Centre on Composite Indicators and Scoreboards (COIN) at the Unit Modelling, Indicators & Impact Evaluation has calculated and analysed the 2016 SBA dimensions based on international standards and the in-house methodology in order to ensure their transparency and reliability. The aim of this analysis was to enable policymakers and other relevant stakeholders to derive accurate and in-depth conclusions from the available quantitative information.

In this report a robust consensus cluster methodology has been exploited to group EU28 countries into 5 Clusters of similar and comparable countries. Common features, differences as well as performance of these Clusters have been analysed in Section 2. Afterwards, principle by principle the Cluster average values in single indicators have been exploited to outline strengths and weaknesses of each country across the principles of the SBA. This has allowed providing EU28 Member States with a benchmarking tool, which is at the same time realistic and ambitious enough.

Overall, such an analysis can guide Member States in prioritizing their actions towards realistic but ambitious enough improvements throughout the principles.

In addition to these, a closer conceptual look into the indicators of selected principles can guide a better understanding on how public policies can drive improvements in selected principles of the Small Business Act, by accounting for the main risks of policy failures and sub-optimal outcomes that may arise in the absence of a coherent intervention.

4.1 Insights on 'Entrepreneurship'

As pointed out by Baumol, innovative entrepreneurs are the exceptions rather than the rule (the so-called 'superstars', see Baumol, Schilling and Wolff, 2009), and most new firm founders belong to what Schumpeter called the "cluster of followers".

Furthermore, the category of 'opportunity-motivated' entrepreneurs (those motivated by progressive drivers) has to be paired the one of those driven by necessity, i.e. entrepreneurs that have started their own firms as a consequence of the following personal situation (Reynolds et al., 2005). While to the first category belong both innovative and replicative entrepreneurs, to the "necessity driven" ones belong a vast majority of sole replicative entrepreneurs. Not surprisingly, only when 'opportunity entrepreneurs' are singled-out from 'necessity entrepreneurs', economic development is positively related to entrepreneurship (see Carree et al., 2007; Acs, Desai and Hessels, 2008; Acs, 2008).

When combining this evidence, with the one that more than 50% of new firms exit the market within the first five years of activity (see Geroski, 1995; Mata, Portugal and Guimaraes, 1995; Audretsch and Mahmood, 1995; Audretsch, Santarelli and Vivarelli, 1999; Johnson, 2005), it can be concluded that increasing the entry of new firms cannot be considered *a priori* a proper target for economic policy.

On the contrary as stated by Shane (2009), the myth that start-ups automatically create jobs, innovate and lead to economic growth is unreal as "the typical start-up is not innovative, creates few jobs, and generates little wealth." (Shane, 2009)

In suggesting the need to intervene when countries face a major weakness, it should be stressed that any economic or industrial policies that aim to deal with "entrepreneurship" faces an important trade-off. The non-intervention can allow market selection to single out real entrepreneurs from "revolving door" founders and mere "followers", therefore picking up those new-born firms which really can contribute to technological upgrading and economic growth. In contrast, an intervention, such as an entry subsidy, may reduce the intrinsic differentials between new-born firms. This will distort market selection and support replicative and defensive entrepreneurs who would have been correctly wiped out by market selection, and who are not necessarily contributing to innovation or economic growth.

All in all, an entry subsidy may generate either "deadweight" or a "substitution" effect. The first effect occurs when the beneficiary from the subsidy is a new-born entrepreneurial firm which would have survived and grown in any case; in this case the policy is simply a waste from a collective point of view.

The second effect arises when the incentive supports a "revolving door" firm which would have exited the market in absence of the subsidy. In this latter case, the intervention creates a distortion: it implies the substitution of a potentially more efficient entrant by a subsidized inefficient firm. Once the subsidy expires, the "bad entrepreneur" becomes aware of his/her inefficiency and leaves the market, cancelling the temporary effect of the policy in terms of new firm formation and job creation (see Santarelli and Vivarelli, 2002 and 2007).

On the other hand economic policy may provide some "guidelines" to make market selection more efficient. For example, one possibility is that survival rates and post-entry performances in terms of sales and employment vary across industrial sectors, being greater in high-tech industries characterized by more innovative entrepreneurship. Accordingly, new firm formation should be stimulated in those sectors where the technological and incubator conditions are more likely to generate real entrepreneurial activities rather than replicators and revolving door initiatives.

However, while these strategies minimize the risk of possible substitution effects, they maximise the occurrence of widespread deadweight effects. In addition, the practical design of selective entry policies might turn out to be extremely risky and complicated (see Vivarelli, 2013).

In a nutshell, entry subsidies should be allowed only in exceptional situations, while in "normal times" policy makers should refrain from artificially supporting new firm formation.

As a viable alternative to entry subsidies, policy makers might design proper "post-entry policies" which would help newborn firm to grow and enter the core of the market. Post-entry subsidies should benefit young firms which have already proved themselves able to cope with market selection, and this would minimize the risk of waste and the possible substitution effect of the subsidy. On the other hand, a possible deadweight effect should be avoided by the identification of those firms which are good enough to survive but not strong enough to grow, possibly because of severe financial constraints due to imperfections in the financial markets (see Cressy, 2006).

Consistently, only if lower rates of entrepreneurship revealed by countries in Clusters 4 and 5 would be proven to be due to market failures that can be demonstrated and measured (such as obvious imperfections in the financing of the new ventures), then specific policy measures could be adopted. At any rate, subsidies should be conditional on an obvious and unambiguous occurrence of a market failure which prevents otherwise efficient firms from becoming established and growing.

However, a shift to targeted measures addressed to the more promising potential entrepreneurs (such as those characterized by a superior human capital or by interesting and feasible innovative ideas) and to post-entry policies is also advisable.

By transposing these points to the indicators that constitute the principle 'Entrepreneurship', interesting hints can be derived. Whereas all indicators are descriptively contributing to the dimension and do play a crucial role in measuring it (as for the second column in Table 47), not all of them should be automatically considered as desirable policy targets, even in the presence of a depicted weakness.

In particular, rough indicators of entrepreneurial entry (1.1, 1.2 and 1.5) are not indicative of the quality of "entrepreneurship". Given the heterogeneous nature of the new entrants just described, favouring the mere entry rate might be inefficient and it can simply lead to the "substitution" or "deadweight" undesired effects. Rather than low entry rates, policy priority should be given to low rates of survival and innovativeness of their new-born companies. In this respect, tailored post-entry policies should help the young firms in entering a balanced and innovative growth pattern, able to generate stable and qualified additional employment.

Indicator 1.4 is instead a certain policy target, as it allows targeting economic policies to the category of opportunity-driven entrepreneurs.

Similarly indicators 1.8 and 1.9 should be valuable policy targets taken into account, as policy should be shaped to distinguish qualitatively entrepreneurship and to foster the most innovative and opportunity-driven entrepreneurs.

Consistently, Table 47 assesses how indicators in this dimension can i) help in describing the dimension, including in singling out strengths and weaknesses of a given country, and ii) help in being considered as a possible policy target. Plus (double plus) indicates that the indicator is important (very important) in the perspective indicated by the column title, while a minus means that the indicator is useless or even counter-productive (with regard to the policy perspective).

Table 47. Indicators and policy targets, principle 'Entrepreneurship'

INDICATOR	DESCRIPTIVE and SWOT ANALYSIS	POLICY TARGET
1.1 Total early-stage Entrepreneurial Activity	++	-
1.2 Total early-stage Entrepreneurial Activity for Female Working Age Population	+	-
1.3 Established Business Ownership	+	-
1.4 Improvement-driven opportunity entrepreneurial activity	++	++
1.5 Entrepreneurial intention	+	-
1.6 Entrepreneurship as desirable career choice	+	-
1.7 High-status to successful entrepreneurship	+	+
1.8 Media attention for entrepreneurship	+	+
1.9a Entrepreneurship Education (the extent to which training in creating or managing SMEs is incorporated within the education and training system at basic school)	+	+
1.9b Entrepreneurship Education (the extent to which training in creating or managing SMEs is incorporated within the education and training system at post-secondary levels)		

4.2 Insights on 'State aid & Public procurement'

Public procurement accounts for almost one-sixth of the total GDP of the EU (Arrowsmith, 2009; European Commission, 2011a) and it is a powerful tool to favour the efficient use of public resources (European Commission, 2016).

Nonetheless, public sector supply contracts are awarded disproportionately by large firms, even if, from a SME perspective, the public sector can be an attractive customer. SMEs are often subcontractors to larger corporations in public procurement and, consequently, do not receive the full financial compensation from contracts, meanwhile direct contracting might be financially more rewarding (The Procurement Innovation Group, 2009). Flynn et al. (2015), indeed, show that firm size has a positive influence on SME tendering resources, activity, and success rate in public procurement, suggesting the systematic disadvantage of SMEs in tendering.

The increase in SMEs participation in public tendering is thus needed (European Commission, 2011b). Many barriers however hamper SMEs to access to public procurement: their removal might be a policy need.

The greatest barrier hindering SME participation in public procurement is a lack of information (Fee et al. 2002): firms may not be aware of opportunities to supply the public sector or they can have difficulties in finding the information or the right contacts (Loader, 2005; The Procurement Innovation Group, 2009). However, generally, these pieces of information are available to all firms who are proactively willing to reach them. The entrepreneurial orientation in SMEs (Baker and Sinkula, 2009) can positively affect both the willingness and the ability of SMEs to participate in public tendering and it can lower barriers to public procurement.

Innovativeness, pro-activeness and risk-taking attitudes are all crucial elements that favour firm's participation in winning tenders (Reijonen et al., 2016). As SMEs largely suffer of financial constraints their survival might be reduced by too late payments. This suggests for the need of introducing deterrents such as penalties to late payments (Bovis, 1998; Bovis, 2016).

e-Procurement is a valuable tool for decreasing acquisition costs and increasing process efficiency from the buyer and the supplier point of view, whose major benefits include: transaction costs reduction (Karthik and Kumar, 2013); contracting time reduction (Tavares, 2010); increased transparency (Croom and Brandon-Jones, 2007); increased competitiveness (by means of procedures publication via electronic platform, a larger number of competitors bid in the procedures and increase competitiveness - see Johnson, 2011).

Although EU directives regulate public procurement and thus the wider institutional framework is set, the evidence suggests that institutional cultural attitude, country specificities and rules as well as sectoral peculiarities matter: targeted policies should thus take into account national specificities. These different results are represented by the performance of the Clusters in this dimension:

- 1) Cluster 4 and Cluster 1 are very close to each other and substantially above the EU average;
- 2) Cluster 2 ranks just below the EU average;
- 3) Cluster 3 ranks below the EU average;
- 4) Cluster 5 is dramatically below the EU average.

Eastern European countries and the Northern continental European countries are relatively new nations which have more recently defined their public and institutional structure. Those were able to reach a more efficient and dynamic public procurement framework. On the contrary, 'old' institutional structures reveal a less virtuous achievement, with the exception of the France. The remaining 'old' continental countries and UK show a worse than EU performance.

In terms of policy suggestions, SMEs policies should be directed towards selective and tailored instruments able to take into account entrepreneurial, technological and sectoral aspects. Looking specifically at the indicators building this dimension allows identifying which indicators should be considered as un-equivocal policy targets (++), as relevant policy targets (+) or as controversial (-).

Indicator 5.1 (SMEs' share in the total value of public contracts awarded) measures the relevance the SME sector in the overall value generated by public procurement: policies able to increase this indicator should be supported and encouraged.

As a complement to this, indicator 5.2 (Share of businesses having taken part in a public tender of public procurement procedure) assesses the variety and the competitiveness of a market. This might be a precondition to receive more offers, but it does not necessarily foster SMEs participation. It allows testing whether market rules are functioning in the country.

Indicator 5.3 (Average delay in payments by public authorities) is crucial especially for SMEs who might be negatively and irreversibly affected by timely payments (Bovis, 1998 and 2016). Any policy able to support this indicator is highly recommended.

Finally, indicator 5.4 (Enterprises submitting a proposal in a public electronic tender system (eProcurement)) signals the existence of an adequate endowment of technologies and skills to shift from public procurement to P e-P. Policies improving this indicator should be encouraged.

Table 48. Indicators and policy targets, principle 'State aid & Public Procurement'

INDICATOR	DESCRIPTIVE and SWOT ANALYSIS	POLICY TARGET
5.1 SMEs' share in the total value of public contracts awarded	++	++
5.2 Share of businesses having taken part in a public tender of public procurement procedure (%)	++	++
5.3 Average delay in payments - public authorities	++	++
5.4 Enterprises submitting a proposal in a public electronic tender system (eProcurement)	++	++

All in all, all the four indicators that are building the 'State Aid & Public Procurement' dimension are very relevant for the dimension and are all crucial in shaping an effective policy that is able to sustain the contribution of SMEs to the public procurement performance of a given EU country.

4.3 Insights on 'Access to Finance'

SMEs' financial preferences are based on internal funds that are preferred to debt and debt is, in turn, preferred to equity (Watson and Wilson, 2002; Beck et al., 2008; Daskalakis and Psillaki, 2008; Serrasqueiro, 2011; Degryse et al., 2012; Mateeva et al., 2013). Unlike large firms, SMEs do not have access to the capital markets and thus have a much more limited menu of alternative sources of external finance. This makes the access to finance crucial for SMEs.

Innovative small firms are the ones that find it hardest to access finance because of their riskier business models (Freel, 2007; Schneider and Veugelers, 2010; Mina et al., 2013; Lee et al., 2015). Their business models are important to create new markets but are also difficult for banks to value because they are more reliant on intangible assets, rather than physical property, which are hard to value as they are context specific, and thus difficult to be used as collateral for lending.

However, innovative firms with high growth potential have the possibility to access to the support of Business Angels which might complement traditional financial channels. Those are increasingly important in providing equity financing as well as contributing to economic growth and technological advance (European Commission, 2015), and indeed are assessed through an ad hoc indicator in the dimension.

Available empirical evidence analyse three major issues associated with inadequate finance for SMEs: inadequate capital structure of SMEs and lack of awareness of entrepreneurs and managers of potential sources of finance; reluctance of financial institutions in providing funds to SMEs; credit crunch caused by negative economic cycle which might significantly affect SMEs.

When trying to translate the strengths and weaknesses of Member States that have emerged throughout this report in the dimension "Access to Finance" in actual policy implications an additional step of analysis is thus required.

On the one side, the option leaving 'Access to finance' to *market rules* alone might result in a market failure when innovative and potentially fast-growing firms can be penalized.

The recent concentration in the banking system and the increasing bank market power might affect the market rules making the access to finance even more difficult and/or expensive for SMEs than for large and consolidated companies (Schmieder et al., 2010). Therefore, checking the selection rules adopted by banks and favouring the development of alternative liquid financing sources in Europe would help generate a more stable financing environment.

On the other side, however, wrong supporting policies can result in a policy failure, when, for instance, the "wrong" SMEs are the one receiving the support at the expenses of the others. SMEs usually have very limited internal funds and when they look for external funds, there is a high risk that they become financially frustrated and credit-constrained. Nevertheless, quantitative easing for SMEs has to be targeted on the basis of specific strategy/business-plan with a greater emphasis on SMEs with higher innovation propensity and internationalization interest to increase the impact of the intervention. Programmes that do not recognise the differences among firms will favour lower-quality firms at the expenses of higher-quality ones, but supporting lower-quality firms would decrease the investment rate of return and consequently would increase the price of capital for all type of firms (Nightingale and Coad, 2014).

Overall, this calls for a proper financial preparation of (potential and actual) entrepreneurs and managers in order to be aware of the financial and capital issues which might be relevant for the success of the company. Financial education and proper courses/info sessions to make financial alternatives known could help SMEs to find the right financial structure (OECD, 2015).

Overall, the evidence discussed on Clusters in this dimension shows that:

- 1) Cluster 1 is substantially above the EU average;
- 2) Cluster 3 is above the EU average;
- 3) Cluster 2 and Cluster 4 are very close each other and slightly below the EU average;
- 4) Cluster 5 is dramatically below the EU average.

This categorization is rather consistent with the development of the financial banking systems and institutions: the small and financial institutionally recent countries (Estonia, Latvia and Lithuania) explain the dominance of this Cluster among the others, Ireland and UK with their dynamic financial systems sustain the above-the-average performance of Cluster 3, while less innovative countries populate Cluster 2 and 4 (below the average) and the less innovative Cluster 5 (Southern Europe).

However, this ranking does not imply that policy makers in Italy, Spain should engage in widespread financial policies in favour of SMEs: as discussed 'erga-omnes' SMEs subsidies should be avoided to favour policies towards selective and tailored instruments able to take into account SMEs specificities. Looking specifically at the indicators building this dimension allows identifying which indicators should be considered as un-equivocal policy targets (++), as relevant policy targets (+) or as controversial (-).

Indicator 6.1 (Venture capital investments as % of GDP) is based on a financial business-oriented dimension of the country and it does not surprise that Luxembourg has the highest value. However, this instrument is still limited and not easily accessible to all the SMEs, thus limiting the need to a direct intervention. Indicator 6.2 (Strength of legal rights index) shows that mainly Eastern European countries (Bulgaria, Hungary and Romania) have the highest scores suggesting that, at least theoretically, laws are better designed to expand access to credit. This is not necessarily directly relevant for SMEs' access to finance.

Moreover, this indicator should be in principle negatively related with indicator 6.4 (Bad debt loss), as the higher are the legal rights, the lower should be the bad debt loss, under the assumption of financial markets working efficiently to avoid excessive accumulation of bad debt loss that might compromise firm stability in the medium-long term. This evidence is not strongly confirmed, showing high heterogeneity among EU countries and revealing the possible presence of inefficiencies during financial transactions.

Indicator 6.3 (Total duration in days to get paid) reflects the cluster ranking, nevertheless, a higher duration of days to get paid might also influence the trade credit dimension which is not automatically negative for SMEs, if properly managed. This makes it a not directly relevant policy target, although it positively contributes in describing the dimension, as signalled in the table below.

Indicator 6.5 (Cost of borrowing for small loans relative to large loans) is certainly important as it suggests that small loans might be relevant for SMEs, but – taken alone – it is insufficient to assess the effect in terms of access to finance for SMEs. Therefore, even if relevant, it has to be evaluated jointly with more specific SMEs' oriented indicators. Moreover, Indicator 6.6 (Rejected loan applications and loan offers whose conditions were deemed unacceptable) is the key dimension in assessing a country bank system's capacity to provide loans to SMEs. It is evident that the macroeconomic and banking systems default risks have reduced the willingness to provide loans for weak countries such as Greece where macroeconomic instability threatens the credibility of borrowers. Nevertheless, it might be the case that companies' business proposals were too risky to be acceptable for financial institutions at a regular price. Therefore it is difficult to disentangle too risky applications from too strict bank offer.

In general, indicator 6.7 (Access to public financial support including guarantees) is the main indicator to measure the direct role of public financial support in different countries.

This indicator is very worrisome in Greece. However this indicator does not allow to fully reflect the direct support to SMEs (and which SMEs). Indicator 6.8 (Willingness of banks to provide a loan) presents a picture of the relationship between banking systems and firms. This indicator shows that countries in cluster 5 are the ones showing the highest values. This actually means that there are specific country effects making banks more resistant to loan provision.

Policies able to increase indicator 6.7 and 6.8 should be encouraged when those are targeted to innovative and international SMEs.

Indicator 6.10 (Business Angels funding for new and growing firms) is particularly relevant in financial dynamic markets (Ireland, UK, but also the Netherlands) and new financial dynamic markets such as Latvia and Lithuania. The Business Angels presence is consistent with the indicator 6.9 (Equity funding for new and growing firms) which is above the European average almost in the same countries. This supports the idea that in more financially active markets, there are different alternative and roughly accessible sources which might help young and promising firms. Overall, the differences between these indicators among all countries are relatively small, signalling that almost everywhere this is a slowing procedure still in its development phase.

Consistently with what discussed above, in the following table the 10 indicators adopted to frame the access to finance dimension used for the cluster analysis are assessed with regard to the role they can play in describing the dimension, in singling out strengths and weaknesses of a given country, and in being considered as a possible policy target.

Table 49. Indicators and policy targets, principle 'Access to Finance'

INDICATOR	DESCRIPTIVE and SWOT ANALYSIS	POLICY TARGET
6.1 Venture capital investments	+	+
6.2 Strength of legal rights index	+	+
6.3 Total duration in days to get paid	+	-
6.4 Bad debt loss	+	+
6.5 Cost of borrowing for small loans relative to large loans	++	+
6.6 Rejected loan applications and loan offers whose conditions were deemed unacceptable	++	+
6.7 Access to public financial support including guarantees	+	+
6.8 Willingness of banks to provide a loan	++	++
6.9 Equity funding available for new and growing firms	+	+
6.10 Professional Business Angels funding available for new and growing firms	++	++

To sum up, whereas all indicators are valuable in describing the dimension, 6.5, 6.8 and 6.10 emerge as particularly important in shaping an effective policy, able to sustain the contribution of high-potential SMEs to the overall economic performance of a given EU country, while 6.3 does not necessarily required a direct policy action.

4.4 Insights on 'Skills and Innovation'

SMEs face different technological and economic environment (than large companies) with respect to R&D investment, innovative activities and skill acquisition (Winter, 1984; Acs et al., 1994; Brouwer and Kleinknecht, 1996). In particular, small firms tend to rely less on R&D (Kleinknecht, 1987) but are in a better position to incorporate both embodied and disembodied external knowledge (Audretsch and Vivarelli, 1996). Indeed, innovation output (product and process innovation, often granted through a patent) can be seen as the outcome of several innovation inputs and not only as the consequence of R&D investments. More complex and radical innovation generally relies on formal R&D (Parisi et al., 2006), while incremental innovation is much more related to technological acquisitions, "embodied technical change"¹, the purchasing of external technology incorporated in licences, consultancies and know-how, and the recruitment of skilled labour (see Freeman, 1982; Santarelli and Sterlacchini, 1990; Conte and Vivarelli, 2014).

All in all, innovative SMEs most likely focus on incremental innovation and process innovation through technological acquisition, rather than on radical innovation and new products based on large-scale R&D investment, and they tend to benefit more from innovative spillovers and skill transfers (Acs et al., 1994; Audretsch and Vivarelli, 1996). Overall, official R&D statistics may underestimate innovation in SMEs when the only focus is on R&D investment (Kleinknecht, 1987; Kleinknecht and Reijnen, 1991).

Furthermore SMEs are heterogeneous agents, from highly-innovative new technology based firms (Colombo and Grilli, 2007; Vivarelli, 2007) to traditional and financially-constrained SMEs for which R&D and innovation are irrelevant. Consequently, the presence of innovation and skills is not only relevant for in-house innovation, but also to increase the possibility to assimilate knowledge created elsewhere, i.e. the so called "absorptive capacity" (Cohen and Levinthal, 1989 and 1990) of external knowledge, which allows firms to gain from local spillovers and R&D cooperation with clients, competitors as well as knowledge institutions such as universities or public labs (see Audretsch and Vivarelli, 1996; Piga and Vivarelli, 2004; Simonen and McCann, 2008).

Not only firms are different agents, but also sectors, and consequently technological opportunities and appropriability conditions, shape innovation and the market structure in a way that large firms dominate innovation activities in highly concentrated sectors, characterized by low entry rates, higher appropriability conditions and lower technological opportunities, while SMEs dominate innovation in "entrepreneurial sectors" (Winter, 1984; Levin et al., 1985; Malerba and Orsenigo, 1995 and 1996; Breschi et al., 2000; Lin and Huang, 2008).

As knowledge (and innovation) is a public good that can easily flow to competitors, market failures may prevent companies (and particularly SMEs) from reaching the socially desirable level of innovative effort (see Arrow, 1962): since innovation is costly, uncertain and risky, public intervention is necessary to foster technological progress and overcome inertia. However, any public intervention should be careful and avoid "deadweight" and "substitution" effects that have been discussed in 'Entrepreneurship' on the risks of subsidizing firms. However, the risk of a deadweight effect should be lower in the case of SMEs, in that - given the relevant liquidity constraints affecting SMEs - in most cases the subsidized R&D investment would not have been made without the policy. By the same token, the substitution effect should also be lower in the case of SMEs; in fact, in contrast with policies involving larger firms, the crowding out of in-house R&D and innovation activities carried out by non-subsidized SMEs should be negligible.

This calls for a European innovation policy need, to be specifically tailored to SMEs' needs: SMEs generally tend to underinvest in innovation because of lack of knowledge about how and where to acquire the necessary competence and technological suppliers often demonstrate poor understanding of their actual competence needs thus limiting the knowledge transfer (Czarnitzki, 2006; García-Quevedo and Mas-Verdú, 2008). As SMEs

¹ As discussed in Salter (1960), this knowledge is acquired by investment in new machinery and equipment.

benefit from innovative spillovers and skill transfer from universities and public labs, including the role of university spin-offs, an innovation policy should be combined with regional education policies aiming to create a local environment able to create and transmit knowledge absorbable by SMEs.

However, policy actions should also recognize that certain SMEs are potentially innovative and ready to grow while others are not; certain SMEs play a crucial innovative role in "entrepreneurial sectors", while others only marginal roles in traditional ones. As a consequence, innovation policies addressed to the SMEs should be differently articulated across industrial sectors and different technological regimes.

Overall, in acknowledging those differences, policies should address a variety of goals so as to facilitate access to other innovative inputs in addition to R&D; to promote skill-upgrading and human resources practices; to foster innovative networking and fruitful supplier-user relationships; to create the necessary framework conditions for facilitating the spillovers from universities or research labs to SMEs.

When looking at Cluster performance in this dimension this report outlined the following evidence:

- 1) Cluster 3 substantially above the EU average;
- 2) Cluster 2 above the EU average;
- 3) Cluster 1 and Cluster 5 very close each other and below the EU average;
- 4) Cluster 4 dramatically below the EU average.

This ranking related to the innovative potentialities of SMEs is very consistent with the general innovation divide across European Member States: the leading innovative countries (Northern countries) support the dominant role of Cluster 3, French and German industrial and technological structure sustain the above-the-average performance of Cluster 2, while less innovative countries populate Cluster 1 and 5 (below the average) and the less innovative Cluster 4 (Eastern Europe). This is not surprising, given that SMEs have a weaker innovative and R&D capability and they strongly rely on the external environment.

However, this does not automatically imply that policy makers in Italy, Spain, Greece, the Baltic countries and the Eastern European countries should engage in widespread industrial and innovation policies in favour of SMEs, as regional, sectoral and technology specificities are to be considered together with firm specific characteristics. Looking specifically at the indicators building this dimension allows identifying which indicators should be considered as un-equivocal policy targets (++), as relevant policy targets (+) or as controversial (-).

Indicator 8.1 (SMEs innovating in-house) is important, but also insufficient to assess both SMEs innovativeness and the effectiveness of SMEs policies: SMEs are mainly devoted to incremental innovation and diffusion and they rely more on the external sources of knowledge (particularly embodied technological change, spillovers and skills available in the local context) rather than on in-house activities (basically R&D expenditures). Although, a certain degree of "in-house" capabilities are necessary to increase SMEs' absorptive capacity, contextual variables and policy targets emerge as more crucial to foster innovation among SMEs.

As a complement to this, indicators 8.2 (innovative SMEs collaborating with others), and 8.12 (R&D transfer) are key dimensions in assessing a country's capacity to foster innovation in SMEs and should be seen as targets of the government intervention. Any policy able to increase indicator 8.2 and 8.12 should be encouraged. Moreover, since knowledge spillover from universities and public labs, education and skill formation are key aspect in supporting SMEs' innovative activities, the indicator 8.12 could be extended to also account for R&D Transfer from universities to SMEs.

Consistently, since skills are a crucial constituent of the SMEs “absorptive capacity” and a necessary complementary asset to R&D investment and embodied technological change, indicators 8.8 (percentage of SMEs providing training to their employees), 8.10 (percentage of employees who have ICT specialist skills) and 8.11 (percentage of SMEs providing training to their employees to either develop or upgrade their ICT skills) should be considered key targets of local, national and EU SMEs policies. In other word, any education or industrial policy able to increase these indicators (in a stable way) should be welcome.

As far as innovation performance is concerned, indicators of innovative output such as the percentage of SMEs introducing product or process innovation (indicator 8.3), the percentage of SMEs introducing marketing and organizational innovations (indicator 8.4), the percentage of turnover obtained by selling innovative products (indicator 8.5) are very relevant since they are measuring the final contribution of SMEs in terms of the innovative performance of a given EU countries. They should be considered therefor as the ultimate target of the different economic policies addressed to reinforce the innovative performance of SMEs. Lastly, the three indicators related to e-commerce (8.6, 8.7, 8.9) play a role in describing the dimension but they are not so crucial (as the previous) in terms of innovation inputs and outputs. While they can be considered facilitating factors in accessing and using new technologies, they have a larger impact on the SMEs’ marketing and sales functions rather than on their innovative capabilities.

Table 50. Indicators and policy targets, principle ‘Skills & Innovation’

INDICATOR	DESCRIPTIVE and SWOT ANALYSIS	POLICY TARGET
8.1 SMEs innovating in-house (%)	+	+
8.2 Innovative SMEs collaborating with others (%)	++	++
8.3 SMEs introducing product or process innovations (%)	++	++
8.4 SMEs introducing marketing or organizational innovations (%)	++	++
8.5 Sales of new-to-market and new-to-firm innovations (% turnover)	++	++
8.6 SMEs selling online (% of SMEs)	+	+
8.7 SMEs purchasing online (% of SMEs)	+	+
8.8 Enterprises providing training to their employees (%)	+	++
8.9 Turnover from e-commerce	+	+
8.10 Digital skills and e-leadership: Percentage of total persons employed that have ICT specialist skills	+	++
8.11 Digital skills and e-leadership Enterprise provided training to their personnel to develop/upgrade their ICT skills	+	++
8.12 R&D Transfer	++	++

All in all, whereas all the indicators are better equipped to describe the dimension to which they belong, among the twelve indicators mostly 8.2, 8.8, 8.10, 8.11 and 8.12 emerge as particularly important in shaping an effective policy, able to sustain the innovative contribution of SMEs to the overall innovation performance of a given EU country. Finally - together with these intermediate goals - EU policy makers should target the eventual innovative performance of SMEs, well measured by the key output indicators 8.3, 8.4 and 8.5.

4.5 Insights on 'Internationalization'

As internationalization is an expensive and risky choice, not all European small entrepreneurs see growth as an important business objective: growth might be risky as they are concerned about losing control and being exposed to too much risk (Fischer and Reuber, 2003), therefore, some SMEs turn out not to be interested in going international (Antoldi, 2012). Nevertheless, the international dimension is becoming more and more important in the face of the rapid growth of markets in developing countries (such as BRICS) and the new dynamics of the post-2008 world economy.

Overall empirical evidence (e.g. Leonidou, 2004) suggests that exporting barriers severely affecting international vocation of SMEs are, in order of priority: limited information to locate/analyze markets; inability to contact overseas customers; difficult identification of foreign business opportunities; difficulty in matching competitors' prices; excessive transportation/insurance costs; different foreign customer habits/attitudes; poor/deteriorating economic conditions abroad; political instability in foreign markets. The first five barriers are internal, meanwhile the last three are external.

The effect of these barriers varies among the group of firms: *non-exporters* (companies not exporting currently but with future potential, which express a subjective view on barriers); *current exporters* (firms currently engaged in export activities, which experience problems during their day-to-day involvement in overseas markets) and *ex-exporters* (companies that used to export in the past but no longer do so, which see export barriers from both a perceptual and experiential viewpoint). This calls for different treatment by export promotion programs (Kedia and Chhokar 1986; Keng and Jiuan 1989).

Additionally, distance matters. Going beyond the single market remains a much tougher task compared to exporting within the EU. Many small firms find customs documentation, shipping arrangements, and other export procedures too difficult to manage. This difficulty is prevalent in the early research internationalization step (Yaprak, 1985; Osland and Yaprak, 1995).

Indeed, it is increasingly acknowledged that firms can boost their export potential by leveraging on networks or collaborative strategies, especially in the early stage of internationalization. Following this line, an export consortium² is a relevant example of SMEs strategic networks (Chetty and Blankenburg Holm, 2000; Villa and Antonelli, 2009).

Overall, internationalization has to be supported as globalization can selectively and adversely affect the market rules making internationalization even more difficult and uncertain and/or expensive for SMEs than for large and consolidated companies, thus supporting a European policy specifically tailored to specific SMEs' internationalization needs. How this policy should look like is not an easy question to be answered given SMEs heterogeneities. In many cases internationalization requires the firm to grow (in competencies, relations, size) and this growing process must also be adequately supported. Moreover, SMEs networks can play a fundamental role in the new international challenge of European business. While growth is certainly the destiny for SMEs going alone into large international markets, the alternative for micro and small firms is to join forces. This is a way to cooperate for internationalization through strategic networks among SMEs, particularly in the form of export consortia (Antoldi et al, 2011).

² An export consortium is a voluntary alliance of firms with the objective of promoting the goods and services of its members abroad and facilitating the export of these products through joint action. Export consortia are aimed at supporting the internationalization process of their partners mainly by supplying specific services that help them increase sales abroad, become familiar with target markets, make their brands known and gather information about foreign customers and distribution channels. In Europe, for instance, export consortia are becoming diffused in Italy and Spain, while UNIDO is promoting them in many countries as a tool for boost the local economic development (Antoldi et al., 2011).

Such support should however acknowledge the differences in SMEs: already international SMEs need policies enforcing their presence in foreign markets and helping internal exporters go beyond the single market. The new potential exporters have to be classified in terms of differing potentials and needs for internationalization (size, resource available, industry) and, afterwards, need policy to support them in smoothing the barriers they can face. Targeted and selective policies are thus highly advisable.

As discussed in the ad hoc section, overall countries Clusters are quite close to each other in this dimension.

The Clustering is consistent to the historical evidence: countries traditionally more apt to international markets, such as Denmark, Netherlands and UK (for geographical locations and historical reasons) explain the dominance of Cluster 3 among the others; Luxembourg and Malta, for, respectively, financial reasons and strategic location in the Mediterranean sea sustain the above-the-average performance of Cluster 1; Italy and Spain, manufacturing-dominated countries, have practice in internationalization, while less internationally prone countries populate Cluster 2 and the least international Cluster 4 (Eastern Europe).

However, this ranking does not imply that policy makers in Eastern Europe should engage in widespread policies in favour of SMEs giving the same weight to all the indicators composing the dimension.

Indicator 10.1 (Time to export for documentary compliance) and 10.3 (Time to import for documentary compliance) are quite close for all the countries. Indicator 10.2 (Cost to export for documentary compliance) shows that mainly Eastern European countries (Bulgaria, Hungary and Romania) have the highest values. On the contrary, indicator 10.4 (Cost to import for documentary compliance) shows that cost to import indicator is generally lower than cost to export, suggesting import activities are less expensive. Overall, it is advisable that the four previous indicators assessing time (for documentary compliance) and specific costs (for documentary compliance) are monitored to guarantee they do not get worse, but, as long as the differences among EU countries are limited and some countries are already at their minimum values, they should represent a moderate priority.

Indicator 10.5 (SMEs with extra-EU exports of goods) provides a clear picture of the role of SMEs in extra-EU export activity. On average, 10% of SMEs export outside the European boundaries. In Cluster 3, Denmark, Sweden and UK are well above the EU average, meanwhile Eastern European countries in Cluster 4 are well below the EU average. Italy and Spain well perform - above the EU average - also for the role played by export consortia (see Section 2). By the same token, Indicator 10.6 (SMEs with extra-EU imports of goods (% of SMEs)) focuses on the import dimension from outside EU. On average, the percentage of SMEs with extra-EU imports is larger than the percentage of SMEs with extra-EU exports, suggesting that the import dimension is more active than the export channel. SMEs in countries in Cluster 3, as well as in Luxembourg and Malta, play a relevant role in the outside EU imports.

Policies able to increase indicator 10.5 should be encouraged only if targeted to SMEs that have the required characteristics to go towards internationalisation. In open economies, also indicator 10.6 should be monitored and supported, but with a lower priority than the goal picturing the export dimension, since national and EU competitiveness is obviously more specifically correlated with SMEs export capacity.

Consistently with what discussed above, in the following table the 6 indicators adopted to frame the internationalization dimension used for the cluster analysis are assessed with respect to the role they can play in describing the dimension, in singling out strengths and weaknesses of a given country, and in being considered as a possible policy target.

Table 51. Indicators and policy targets, principle 'Internationalization'

INDICATOR	DESCRIPTIVE and SWOT ANALYSIS	POLICY TARGET
10.1 Time to export for documentary compliance (in hours)	+	+
10.2 Cost to export for documentary compliance (in USD)	+	+
10.3 Time to import for documentary compliance (in hours)	+	+
10.4 Cost to import for documentary compliance (in USD)	+	+
10.5 SMEs with extra-EU exports of goods (% of SMEs)	++	++
10.6 SMEs with extra-EU imports of goods (% of SMEs)	+	+

In general, policies pro-internationalization of SMEs have to be targeted on the basis of size, specific strategy/business-plan, industry and step of the internationalization process. This calls for specific policies addressed to selected SMEs to help the single company to become international, but also to support network (such as export consortia) which might substitute the small dimension of SMEs.

In this respect, among the six indicators to build the 'Internalization' dimension, indicator 10.5 emerges as central in shaping an effective policy, being able to sustain the contribution of potential international SMEs to the overall economic performance of a given EU country.

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Annexes

Annex 1. Variability of indicators over time

Raw data for the indicator in the SBA framework have been used for the available years in the time span 2010-2016 to calculate how fluctuating the indicators are over time. This assessments allows enriching the analysis on country-cluster strengths and weaknesses by providing insights on how each indicator is *stable* versus *fluctuating* over time, so that it is possible to assess whether a relative good (or bad) performance in the last available year is likely to highly differ from the past years (in case the indicator is fluctuating) or it is likely to signal a persistent pattern (in case the indicator is stable).

To perform such assessment the coefficient of variation (CV) also known as the relative standard deviation has been computed for each indicator to assess its fluctuation trends over time.

CV reports the ration between the standard deviation of an indicator and its average. CV has been computed for every country for every indicator in the year 2010-2016, as well as for the whole EU28.

Table 52 and Table 53 are coloured green when the CV of the selected indicator was lower than 0.5. Should it be green, such indicator is considered stable for the country over the time span 2010-2016. On the contrary, red cells signal indicators which are fluctuating over time, i.e. those cases in which a CV is greater than 0.5 (in particular indicators 6.1 and 6.6) or those for which the number of missing values in time did not allow the computation of CV (i.e. 5.1, 7.4, 8.8, 10.2 and 10.4).

For each country it is possible to assess how stable/fluctuating an indicator has been with respect to the past 6 years by looking at Table 52 and Table 53. One of the striking evidence is that Bulgaria, Cyprus and Malta face no stable indicator in the dimension 'Entrepreneurship'. This is a crucial issue and it has been taken into account when commenting on those countries' achievements in the dimension 'Entrepreneurship'.

Table 54 reports instead a synthetic assessment on the fluctuation of the indicator for the whole framework. A Green symbol v is assigned to indicators that have been found to be stable for the majority of the EU28 countries. More precisely, green light is assigned to any indicator which was stable for 21 or more countries. A yellow exclamation mark (! Symbol) is assigned to indicators that are stable for approximately only half of the countries, more precisely when those are stable for 14 to 20 countries. A red cross is assigned when the indicator is systematically fluctuating over time in the 28 EU countries, i.e. when less than 14 countries have a stable indicator over time. This is the case for indicators 6.1 (Venture capital investments (% of GDP)) and 6.6 (Rejected loan applications and loan offers whose conditions were deemed unacceptable (% of loan applications by SMEs)). Furthermore, there are 6 cases (indicators 2.3; 5.1; 7.4; 8.8; 10.2 and 10.4) in which raw data are available only for one year for most of the countries. This makes it not feasible to compute a CV. In both cases a red cross is assigned to signal that recommendations based on these indicators are not signalling a persistent phenomenon.

Overall, the analysis reported in the annex allows signalling those indicators which are subject to fast changes in time. The 8 red crossed indicators aforementioned are not persistent in time. This implies that strengths or weaknesses identified for such indicators in the latest available year might not be so in the next year. Consequently, facing a weakness in one of this fluctuating indicator might be less harmful than a weakness reported in a stable indicator. The first might simply signal a bas performance in the specific year, the latter is instead signalling a persistent weakness in the indicator. Similarly, a good but once in time performance is not necessarily a best practice for the other countries in the cluster to be followed (should it be so just in one specific year).

Such assessment is used to enrich the country-cluster based priority areas identified in this document.

Table 54. Overall stability of the SBA indicators – EU28

Indicator id	Variation	Note	Indicator id	Variation	Note
1.1	✓		7.1	!	
1.2	✓		7.2	✓	
1.3	✓		7.3	✓	
1.4	✓		7.4	✗	Not possible to compute CV
1.5	✓		7.5	✓	
1.6	✓		7.6	✓	
1.7	✓		7.7	✓	
1.8	✓		7.8	✓	
1.9a	✓		7.9	✓	
1.9b	✓		8.1	!	
2.1	✓		8.2	✓	
2.2	✓		8.3	✓	
2.3	✗	Not possible to compute CV	8.4	✓	
2.4	✓		8.5	✓	
2.5	✓		8.6	✓	
3.1	✓		8.7	✓	
3.2	✓		8.8	✗	Not possible to compute CV
3.3	!		8.9	!	
3.4	!		8.10	✓	
3.5	✓		8.11	✓	
3.6	✓		8.12	✓	
3.7	✓		9.1	✓	
3.8	✓		9.2	✓	
3.9	✓		9.3	✓	
3.10	✓		9.4	✓	
3.11	✓		9.5	!	
3.12	✓		10.1	✓	
3.13	✓		10.2	✗	Not possible to compute CV
5.1	✗	Not possible to compute CV	10.3	✓	
5.2	✓		10.4	✗	Not possible to compute CV
5.3	✓		10.5	✓	
5.4	✓		10.6	✓	
6.1	✗				
6.2	✓				
6.3	✓				
6.4	✓				
6.5	✓				
6.6	✗				
6.7	!				
6.8	✓				
6.9	✓				
6.10	✓				

Annex 2. Indicators in the SBA Framework

Table 55. The SBA framework

I. Entrepreneurship (9 indicators)	VII. Single market (9 indicators)
<p>1.1 Total early-stage Entrepreneurial Activity (% adults who have started a business or are taking the steps to start one)</p> <p>1.2 Total early-stage Entrepreneurial Activity for Female Working Age Population (% women who have started a business or are taking the steps to start one)</p> <p>1.3 Established Business Ownership (%)</p> <p>1.4 Improvement-driven opportunity entrepreneurial activity (% of entrepreneurs)</p> <p>1.5 Entrepreneurial intention (% adults who intend to start a business within 3 years)</p> <p>1.6 Entrepreneurship as Desirable Career Choice (%)</p> <p>1.7 High-status to successful entrepreneurship (%)</p> <p>1.8 Media attention for entrepreneurship (%)</p> <p>1.9a Entrepreneurship Education (the extent to which training in creating or managing SMEs is incorporated within the education and training system at basic school)</p> <p>1.9b Entrepreneurship Education (the extent to which training in creating or managing SMEs is incorporated within the education and training system at post-secondary levels)</p>	<p>7.1 Number outstanding single market directives (directives not notified or not transposed into national legislation) (-)</p> <p>7.2 Average transposition delay- overdue directives (months) (-)</p> <p>7.3 Number of pending infringement proceedings (-)</p> <p>7.4 Public contracts secured abroad (by total value of contracts)</p> <p>7.5 SMEs with intra-EU imports (%)</p> <p>7.6 SMEs with intra-EU exports (%)</p> <p>7.7 Selling Online Cross-border to other EU countries (% of SMEs)</p> <p>7.8 New and growing firms can easily enter new markets (1=worst, 5=best)</p> <p>7.9 New and growing firms can enter markets without being unfairly blocked by established firms (1=worst, 5=best)</p>
II. 'Second chance' (5 indicators)	VIII. Skills and innovation (12 indicators)
<p>2.1 Time to resolve insolvency (in years) (-)</p> <p>2.2 Cost to resolve insolvency (cost to recover debt as % of debtor's estate) (-)</p> <p>2.3 Degree of support for a second chance (%)</p> <p>2.4 Fear of Failure (% of pop. who indicate that fear of failure would prevent them from setting up a business) (-)</p> <p>2.5 Strength of insolvency framework index (0-16)</p>	<p>8.1 SMEs innovating in-house (%)</p> <p>8.2 Innovative SMEs collaborating with others (%)</p> <p>8.3 SMEs introducing product or process innovations (%)</p> <p>8.4 SMEs introducing marketing or organizational innovations (%)</p> <p>8.5 Sales of new-to-market and new-to-firm innovations (% turnover)</p> <p>8.6 SMEs selling online (% of SMEs)</p> <p>8.7 SMEs purchasing online (% of SMEs)</p> <p>8.8 Enterprises providing training to their employees (%)</p> <p>8.9 Turnover from e-commerce</p> <p>8.10 Digital skills and e-leadership: Percentage of total persons employed that have ICT specialist skills</p> <p>8.11 Digital skills and e-leadership Enterprise provided training to their personnel to develop/upgrade their ICT skills</p> <p>8.12 R&D Transfer</p>
III-IV. 'Think small first' & 'Responsive administration' (13 indicators)	IX. Environment (5 indicators)
<p>3.1 Time to start a business (in calendar days) (-)</p> <p>3.2 Cost to start a business (in Euro) (-)</p> <p>3.3 Paid-in minimum capital (% of income per capita) (-)</p> <p>3.4 Time required to register property (in calendar days) (-)</p>	<p>9.1 SMEs that have introduced resource-efficiency measures (%)</p> <p>9.2 SMEs that have benefitted from public support measures for resource-efficiency actions (%)</p> <p>9.3 SMEs that offer green products or services (%)</p> <p>9.4 SMEs with more than 50% turnover generated by green products or services (%)</p>

3.5 Cost required to register property (% of prop. value) (-)	9.5 SMEs that have benefitted from public support measures for production of green products (%)
3.6 Number of tax payments per year (-)	
3.7 Time required to comply with major taxes (hours/y) (-)	
3.8 Cost to enforce contracts (% of claim) (-)	
3.9 Fast-changing legislation and policies are a problem when doing business (% of businesses who agree with the statement) (-)	
3.10 The complexity of administrative procedures are a problem when doing business (% of businesses who agree with the statement) (-)	
3.11 starting a business (number of procedures) (-)	
3.12 Burden of government regulations (1=worst, 7=best)	
3.13 The people working for government agencies are competent and effective in supporting new and growing firm (1=best, 5=worst)	

V. Public procurement (4 indicators)

X. Internationalisation (6 indicators)

5.1 SME's share in total value of public contracts awarded (%)	10.1 Time to export Documentary compliance (hours) (-)
5.2 Share of businesses having taken part in a public tender of public procurement procedure (%)	10.2 Cost to export Documentary compliance (US \$) (-)
5.3 Average delay in payments from public authorities (days) (-)	10.3 Time to import Documentary compliance (hours) (-)
5.4 Enterprises submitting a proposal in a public electronic tender system (eProcurement)	10.4 Cost to import Documentary compliance (US\$) (-)
	10.5 SMEs exporting outside the EU (% of SMEs)
	10.6 SMEs importing from outside the EU (% of SMEs)

VI. Access to finance (10 indicators)

6.1 Venture capital investments (% of GDP)
6.2 Strength of legal rights (0=worst, 12=best)
6.3 Total duration to get paid (number of days) (-)
6.4 Bad debt loss (% of total turnover) (-)
6.5 Cost of borrowing for small loans (relative to large loans) (-)
6.6 Rejected loan applications and loan offers (% of loan applications by SMEs) (-)
6.7 Access to public financial support including guarantees (% of respondents who indicated a deterioration) (-)
6.8 Willingness of banks to provide a loan (% of respondents who indicated a deterioration) (-)
6.9 Equity funding available for new and growing firms (1=worst, 5=best)
6.10 Professional Business Angels funding available for new and growing firms (1=worst, 5=best)

Source: Table 3 in Stano and Ghisetti (2016)

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