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Country Index for Family Businesses

Competitiveness ranking, 7th edition summary

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Introduction

This update of the Country Index for Family Businesses evaluates Germany's attractiveness as a location for family businesses for the seventh time since 2006. Conceived as a location comparison that specifically encompasses the perspective of large family businesses, the index analyses and compares criteria that are important to such businesses in Germany with those in competitor countries. The full German version of the Country Index for Family Businesses has been published by the Foundation for Family Businesses. The English text presented here summarizes the main findings of the original version.

Location comparisons consider location factors relevant to the medium- and long-term investment and location decisions of enterprises. As a rule, these location factors do not change suddenly. Typically, gradual developments over several years improve or impair a location. The approach taken by the Country Index for Family Businesses allows both short-term changes and longer-term trends to be identified. To that end, the thorough two-year comparison between 2016 and 2018 is complemented by an analysis of the time series 2006 to 2018.

The long-term perspective, in particular, reveals unpleasant insights for Germany: Compared with many other locations, Germany has gradually become less attractive. For example, the quality of the country's transport infrastructure has continuously received worse scores. Due to a highly passive tax policy in Germany in a fast-changing global environment, German tax competitiveness has clearly deteriorated, especially in the most recent years. The index's finding of a gradual (relative) deterioration in the location quality for Germany seems to be at odds with the country's booming economy. In a familiar pattern, the willingness to reform weakens in economically good times because the need for adjustments appears to be less urgent. But in some areas Germany has improved over the past decade: Financial stability has become a major asset for the country. Sound fiscal policy as well as a healthy banking system and a well-financed private sector have become favourable location factors. With respect to regulation intensity, Germany has also earned much better marks today than it did ten years ago.

A number of important recent decisions, such as the United Kingdom's choice to withdraw from the European Union and the comprehensive tax reform implemented by the United States in 2018, are not yet significantly reflected in this update. Other political developments on the other hand are already leaving their mark. The distinctly deteriorated assessment of the rule of law in Poland and Hungary is particularly noteworthy in this regard: The conflict between the governments of these countries and the European Union over the accusation that these governments are restricting judicial independence, amongst other things, is reflected in the significantly inferior marks received by these countries in the index.

The Country Index for Family Businesses focuses on the location requirements of enterprises with the majority control exercised by a family, irrespective of the company's legal form, though it may be managed by persons outside the family. In particular, the index addresses companies with a turnover (in the industrial sector) of at least €100 million, for which a location in a foreign country is a realistic option. The location criteria considered are “taxes”, “labour costs, productivity, human capital”, “regulation”, “financing”, “infrastructure and institutions” and “energy”.

In the present edition of the index, Portugal, Hungary, Japan and Canada have been added to the countries investigated. Two other important OECD countries outside the European Union have thus been included and coverage in southern and eastern Europe has been extended. At the same time, Luxembourg was dropped from the selection of countries, because as a city-state Luxembourg has many specific characteristics that make comparisons with large territorial states difficult. Thus, the countries investigated here are now Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Japan, the Netherlands, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, the United Kingdom and the United States. This country selection includes the most important locations for family businesses within the OECD. The selection also covers all regions of the EU, allowing European locations to be compared with the major OECD countries in North America and Asia.

The Country Index is calculated using a multi-stage procedure. In a first step, relevant and meaningful key figures are determined for each of the subject areas mentioned. From these key figures, a sub-index of the location quality is calculated for each subject area. These six sub-indices are then used to calculate the aggregated Country Index, which compares the location conditions for family businesses in the countries under consideration.

Sources for the sub-indices include national and international statistics. Further information on the sources can be found in the German version of the Country Index which also features a comprehensive data and fact annex on each of the six subject areas covered.

A. The Country Index for Family Businesses

The Country Index for Family Businesses is set up to reflect scores between zero and one hundred, whereby higher scores indicate a more favourable evaluation of the respective location conditions for family businesses. Table 1 shows the results of the 2018 and 2016 Country Indices in comparison.

Table 1: Country Index for Family Businesses

Country	Score 2018	Rank 2018	Score 2016	Rank 2016
Switzerland	65.40	1	65.60	1
United Kingdom	64.51	2	64.73	3
United States	63.51	3	62.65	4
Canada	63.22	4	64.79	2
Netherlands	62.31	5	60.45	5
Finland	60.26	6	59.94	6
Sweden	59.44	7	57.86	8
Denmark	58.48	8	59.91	7
Czech Republic	56.60	9	54.48	11
Ireland	54.26	10	56.71	9
Austria	53.92	11	55.27	10
Poland	53.45	12	52.88	13
Belgium	51.50	13	47.39	15
Hungary	50.00	14	47.08	17
Portugal	49.89	15	46.15	18
Germany	**49.61**	**16**	**53.50**	**12**
Slovakia	47.95	17	48.30	14
Japan	46.39	18	47.09	16
France	45.75	19	45.82	19
Spain	44.99	20	43.12	20
Italy	39.17	21	38.35	21

Source: Calculations by ZEW and Calculus Consult

The current rankings are led by Switzerland, followed by the United Kingdom and the United States. Switzerland's top ranking is mainly due to outstanding results in the area of "infrastructure and institutions" and a very good ranking in the realm of "regulation". For the dimensions "taxes", "labour costs, productivity, human capital" and "financing", Switzerland's results are average to slightly above average; in the area of "energy", Switzerland ranks only at the bottom. In second place, the United Kingdom achieves its best results for the dimensions "labour costs, productivity, human capital", "regulation" and "financing". The United States tops the rankings for three different dimensions at once, specifically “regulation”, “financing” and “energy”. The fact that its overall ranking is still only third is due to below-average results in the area of “infrastructure and institutions”, but above all to a very poor ranking in the area of “taxes”. This finding reflects the United States’ low tax competitiveness before the comprehensive corporate tax reduction was implemented in 2018 and points to considerable upward potential in the next update.

Germany ranks sixteenth in the current Country Index, four places lower than in the comparative calculation for 2016. In the 2018 Country Index, Germany only achieves a top position for the “financing” dimension. In the area of “infrastructure and institutions”, Germany’s results are average; the country achieves below-average results in the areas of “labour costs, productivity, human capital”, “regulation” and “energy”. In the “taxes” dimension, Germany has dropped back to the penultimate place in the current rankings. Compared with the comparative calculation for 2016, an improvement could only be achieved in the “regulation” dimension. In all other areas, the scores are worse than they were two years ago. A deterioration of more than 20 points in “taxes” is particularly noteworthy.

France, Spain and Italy are at the bottom of the rankings – all of them unchanged from the comparative calculation for the Country Index 2016. France only achieves good results for the “energy” dimension. The results in the areas “labour costs, productivity, human capital”, “financing” and “infrastructure and institutions” are below average. France’s biggest location weaknesses are for the dimensions “taxes” and “regulation”. Spain achieves its best result in the “energy” dimension. In the areas of “taxes”, “labour costs, productivity, human capital”, “financing” and “infrastructure and institutions”, Spain’s rankings are consistently well below average. Spain achieves its worst result for the “regulation” dimension. Lastly, Italy, which ranks last, achieves average results in the area of “taxes”. Italy’s results in the realms of “regulation” and “energy” are below average; for the dimensions “infrastructure and institutions”, “financing” and “labour costs, productivity, human capital”, Italy ranks last or second to last.

B. Taxes

Taxation plays an important role in a family-business evaluation of a location. Tax policy also continues to play a key role in political debates, especially with regard to its effect on growth and employment. In view of the continuous expansion of globalization and international tax competition, Germany's attractiveness as a business location is of particular interest. Against this background, this study provides an international comparison of indicators for the tax burden placed on family businesses. The analysis focuses mainly on the taxation of business activity on a national level and on the tax consequences for companies experiencing a business succession. In addition, aspects of cross-border taxation and the complexity of the tax system are included in order to fully reflect a location's fiscal environment.

The study's evaluation of the national tax burden is based on the measurement of effective average tax burdens. These tax burdens indicate to what extent an economic profitability indicator – in this study, the net asset value – of a profitable investment is reduced by taxes. This measure is considered to be a decisive factor in location decisions. The corresponding calculations are carried out using the European Tax Analyzer, a computer simulation program developed by the Center for European Economic Research (ZEW) and the University of Mannheim. This tool allows for the consideration of specific economic characteristics of family businesses and the inclusion of key factors that are relevant to decision-making at the corporate and shareholder levels.

The sample case used to measure the effective inheritance tax burden for international comparison is an "unprepared succession", i.e. the taxation of the transfer of assets in the event of death. To determine the indicator for the tax burden for inheritance, another calculation model developed by ZEW can be used to take into account the specific characteristics of family businesses as well as all regulations relevant to inheritance taxation.

Tax conditions for companies conducting cross-border activities are assessed on the basis of a predominantly qualitative comparison that includes selected rules of importance to either foreign investment at home or domestic investment abroad. The individual tax factors are evaluated, weighted according to their importance and combined to form the indicator for cross-border business activity.

The final section of the sub-index "taxes" captures the complexity of the tax system. This aspect of taxation is a recurring topic in tax policy discussions and represents a significant cost factor for family businesses both in terms of the expenses resulting from the complexity of the corporate tax system – in this study, estimated in terms of the time required to fulfil tax obligations – and in terms of entrepreneurial planning decisions.

Table 2: Sub-index "taxes"

Country	Score 2018	Rank 2018	Score 2016	Rank 2016
Slovakia	83.97	1	84.16	1
Czech Republic	82.78	2	78.94	2
Hungary	81.94	3	70.95	5
Poland	79.87	4	75.36	3
Sweden	75.07	5	72.75	4
Austria	68.23	6	68.63	7
Switzerland	68.20	7	67.31	8
Netherlands	67.04	8	64.01	9
Portugal	64.68	9	60.82	12
Finland	63.82	10	61.56	11
Italy	61.43	11	57.14	13
United Kingdom	61.18	12	69.82	6
Canada	59.07	13	63.78	10
Belgium	58.94	14	35.22	19
Ireland	56.28	15	56.67	14
Denmark	52.25	16	51.82	15
Spain	48.02	17	46.51	17
France	38.46	18	38.27	18
United States	34.88	19	34.02	20
Germany	**28.62**	**20**	**49.46**	**16**
Japan	16.11	21	17.76	21

Source: ZEW calculations

Table 2 summarises the results of the "taxes" sub-index for the countries considered in this study. Like the Country Index and all other reported sub-indices, the "taxes" sub-index is based on normalised values of the underlying data series and can take scores between zero and one hundred. The higher the index score, the better the conditions of the tax framework.

The rankings are headed by Slovakia, followed by the Czech Republic, Hungary and Poland. The eastern European countries have low tax burdens on national business activity and on inheritances, but they are at the bottom of the rankings in terms of the complexity of their tax systems. The lowest score is reported for Japan; this can be traced back to high tax burdens on national business activity as well as on inheritances.

In comparison with the 2016 Country Index, the rankings generally remain constant (with a few exceptions). Development of the "tax rate cut cum base broadening", i.e. the reduction of statutory tax rates combined with a widening of the tax base, can still be observed. Compared with the 2016 Country Index, a clear deterioration is recorded in Germany, caused by the 2016 inheritance tax reform. The country now occupies the penultimate position. The United Kingdom's decline in the rankings is due to negative changes with respect to the taxation of national and cross-border business activity. Canada is also deteriorating in the area of national business activity. In contrast, Belgium's position has improved significantly in comparison with the 2016 Country Index as a result of reductions in the inheritance tax burden on family businesses.

C. Labour costs, productivity and human capital

The topic "labour costs, productivity, human capital" examines the important aspects for family businesses that pertain to labour: labour costs, labour productivity and the availability and quality of human capital. Of these three factors, labour costs are the most important location factor. They directly record the costs that a company incurs for the deployment of labour. The Country Index for Family Businesses uses the costs per hour worked in manufacturing. However, a comparison of labour costs alone is not sufficient for assessing the competitiveness and attractiveness of a location. Instead, unit labour costs are often used as a more appropriate measure in international competition. This indicator is not only based on costs per hour worked but also on productivity per hour worked and provides a more comprehensive picture. Therefore, the Country Index for Family Businesses also considers the level of overall economic productivity measured as gross domestic product per hours worked.

Table 3: Sub-index "labour costs, productivity and human capital"

Country	Score 2018	Rank 2018	Score 2016	Rank 2016
Ireland	68.23	1	60.39	2
Canada	65.60	2	62.15	1
United Kingdom	61.47	3	56.28	6
United States	60.54	4	58.57	4
Denmark	58.91	5	59.44	3
Finland	57.50	6	55.04	7
Japan	56.82	7	57.08	5
Netherlands	53.71	8	52.52	8
Belgium	51.15	9	48.81	10
Switzerland	50.53	10	50.25	9
Portugal	50.49	11	45.04	14
Sweden	50.32	12	45.31	13
France	48.10	13	46.74	12
Poland	46.79	14	46.89	11
Spain	45.44	15	43.30	17
Austria	44.82	16	43.72	15
Germany	**43.18**	**17**	**43.42**	**16**
Czech Republic	41.18	18	41.94	18
Hungary	37.43	19	39.22	19
Italy	36.95	20	35.79	21
Slovakia	36.41	21	36.34	20

Source: Calculations by Calculus Consults

The quality dimension is important both for the quality of the expected work performance and for the ability of a company to recruit qualified and qualifiable workers. Investment in education as the sum of public and private expenditure on education relative to gross domestic product is an indicator of the importance placed on having a qualified workforce. The results of the PISA school performance study provide information on the level of school education at the respective locations. This is important for showing not only the general level of training of the labour force, but also the qualification of trainees and future junior staff as well. Lastly, the educational attainment of the working-age population, measured as the share of the population with tertiary education in the total working-age population, is primarily intended to provide information on the availability of highly skilled labour.

At the top of the current rankings is Ireland, which is characterised by outstanding productivity growth, still moderate labour costs, very good results in the latest PISA study and a large proportion of highly qualified talent in the labour force. In second place, Canada has excellent results, especially in the field of education.

Germany is seventeenth in the current rankings, one position down from the comparative calculation for 2016. Germany’s weaknesses in the area of “labour costs, productivity, human capital” continue to be labour costs, education expenditure and the educational level of the labour force. With regard to the latter indicator, Germany has even fallen further back compared with other countries. By contrast, the results of the current PISA study are better than those in the previous study. The relationship between labour costs and productivity remains a disadvantageous location factor despite slightly improved results in hourly productivity.

Hungary, Italy and Slovakia are at the bottom of the rankings, with a slight distance to the countries that place above them. All three countries show very poor results for the educational dimension. The two eastern European countries are characterised by very low productivity, while Italy shows an unfavourable relationship between labour costs and productivity.

D. Regulation

The topic "regulation" examines the barriers faced by family businesses in various areas of their business activities. These can be regulations for personnel decisions, wage determination, foreign trade, day-to-day business activities and worker representation. Labour market legislation and collective bargaining regulations are examined, including legal regulations on the recruitment and dismissal of employees as well as restrictions on the remuneration structure through statutory minimum wages or collective bargaining agreements. Bureaucratic hurdles in foreign trade are also considered, including information on restrictions on foreign investment and foreign ownership as well as on tariff, non-tariff and administrative trade barriers. Tariff-related barriers to trade are primarily customs duties. Non-tariff and administrative barriers to trade, on the other hand, are not only quantitative restrictions, they are also indirect protectionist measures as well as measures that are not explicitly aimed at foreign trade, but impair foreign trade as a side effect. In a broader sense, they also include clearance procedures in the foreign trade of goods and services.

Regulation intensity for business start-ups is quantified on the basis of key figures related to the expenditure of time as well as costs to be expected when founding a corporation. For regulations affecting day-to-day activities, information is collected about the effort required to obtain licences and permits as well as about government agencies' communication and efforts to reduce bureaucratic hurdles. The area of worker participation in enterprises is considered as well, specifically rules on: the required size of work councils, mandatory paid leaves for worker representatives to carry out their duties, the right to resources such as rooms and paid training, and the extent of participation rights in business decisions. In addition, information on board-level representation is taken into account.

As Table 4 shows, the current rankings are led by the United States, showing a very low regulatory intensity, especially in the areas of labour market and collective bargaining, business start-ups and worker participation. Second and third are the United Kingdom and Canada, respectively, which have similar profiles.

Germany places thirteenth in the current rankings and has improved by three places compared with the 2016 Country Index. Germany achieves its best results in terms of regulations for business start-ups. In contrast, the results are comparatively poor in the area of day-to-day business regulations and, above all, concerning worker representation. The assessments of regulatory intensity in the realms of labour market legislation and collective bargaining are better than they were two years ago. The results in the area of foreign trade regulation are also somewhat more favourable. Spain, Sweden and Austria, with disparate weakness profiles, form the final group in the rankings.

Table 4: Sub-index "regulation"

Country	Score 2018	Rank 2018	Score 2016	Rank 2016
United States	80.02	1	77.51	1
United Kingdom	70.28	2	69.76	2
Canada	69.99	3	68.57	3
Switzerland	65.94	4	66.06	4
Japan	56.92	5	57.27	5
Ireland	54.15	6	56.81	6
Denmark	53.56	7	53.97	7
Netherlands	53.24	8	48.96	9
Portugal	51.02	9	51.09	8
Finland	49.33	10	47.63	10
Hungary	47.35	11	46.90	11
Slovakia	46.12	12	43.71	13
Germany	**45.93**	**13**	**37.91**	**16**
Poland	43.97	14	44.15	12
Italy	43.34	15	40.39	14
Belgium	41.33	16	38.49	15
Czech Republic	36.77	17	36.31	18
France	36.48	18	37.86	17
Spain	32.22	19	30.87	19
Sweden	31.42	20	29.72	21
Austria	30,17	21	30,55	20

Source: Calculations by Calculus Consults

E. Financing

The topic "financing" deals with the requirements of family businesses to obtain the necessary funds they need both for their day-to-day operations and for investments, as well as with the stability and reliability of the financial system. The degree of financial market development and the extent of the general credit supply to enterprises are quantified by the volume of credit granted to non-banks in relation to gross domestic product. The banking system's risk susceptibility is reflected in the ratio of banks' capital to risk-weighted assets and the proportion of non-performing loans amongst total loans. Important criteria for the granting of credit also include the legal requirements for granting credit to companies, especially in the area of insolvency and liens. Poorly developed insolvency legislation and inefficient jurisdiction that impairs the enforcement of creditor claims can have a significant impact on lending. Finally, access to credit information for potential lenders and this information's scope and quality are also taken into account. The more accurately a potential lender can assess the borrower's creditworthiness, the more confident its decisions are on whether or not to lend and, as a result, the more favourable the conditions are for family businesses to obtain bank loans.

The debt-equity ratio of private and public households is also an important factor for determining the robustness of the financial system. Recent financial crises have shown that debt crises in the private or public sector can spread, endangering the entire financial system and causing a macroeconomic recession. At the same time, the options a government has to support an economic and financial system in a state of flux are limited by the government's financing options. Finally, the sovereign ratings issued by leading rating agencies are also taken into account in the "financing" sub-index. Rating agencies not only consider the public debt situation in their ratings, they also examine the condition of the financial systems and macroeconomic developments. As a result, ratings are an indicator of the state of the banking system and the economy as a whole. Furthermore, ratings have a feedback effect on the public sector: Upgrades or downgrades by rating agencies have an impact on the financing options in the financial markets, which in turn limit the state's ability to finance economic policy measures.

The results recorded in Table 5 show a group consisting of the United States, Germany and Canada top the current rankings. The United States has outstanding results especially in the areas of creditor protection, credit information and credit market development. Germany is characterised by very good results in the areas of credit information and debt as well as very good ratings by the rating agencies. Canada's strengths also lie in credit information, sovereign ratings and creditor protection.

Portugal and Italy are clearly at the bottom of the rankings. In particular, the results in the areas of creditor protection, credit market development and sovereign ratings are very unfavourable for Portugal. In the area of credit information, however, the country achieves above-average results. Italy has a similar profile, with the country's extremely poor results in the credit market realm being the main reason why it ranks last behind Portugal.

Table 5: Sub-index "financing"

Country	Score 2018	Rank 2018	Score 2016	Rank 2016
United States	79.20	1	83.59	1
Germany	**76.49**	**2**	**78.59**	**2**
Canada	73.06	3	77.25	3
United Kingdom	67.17	4	69.03	4
Czech Republic	65.48	5	66.69	5
Finland	62.08	6	65.29	7
Poland	61.98	7	64.86	8
Sweden	60.09	8	61.50	9
Switzerland	59.92	9	65.88	6
Austria	59.07	10	60.54	10
Denmark	57.65	11	58.18	11
Slovakia	53.02	12	54.62	12
Ireland	51.11	13	50.03	13
Netherlands	49.20	14	41.22	17
France	44.92	15	46.45	15
Spain	42.89	16	42.43	16
Japan	42.65	17	47.33	14
Hungary	38.34	18	37.91	19
Belgium	37.31	19	39.29	18
Portugal	24.48	20	20.79	21
Italy	24.26	21	28.25	20

Source: Calculations by Calculus Consults

F. Infrastructure and institutions

The topic "infrastructure and institutions" deals with both services provided by the business-related infrastructure and aspects of the legal and institutional environment. Transport infrastructure and information and communication infrastructure belong to business-related infrastructure. The field of transport infrastructure is assessed in terms of the development and quality of road, rail and air infrastructure. Information and communication infrastructure is considered in terms of the internet infrastructure's performance. This includes reviewing key figures on the availability of secure internet servers using encryption technology and the development of broadband networks.

Table 6: Sub-index "infrastructure and institutions"

Country	Score 2018	Rank 2018	Score 2016	Rank 2016
Switzerland	96.65	1	94.55	1
Netherlands	85.45	2	89.43	2
Finland	76.05	3	79.49	3
Sweden	75.05	4	74.81	4
Denmark	66.32	5	71.23	5
United Kingdom	65.66	6	67.26	6
Canada	58.63	7	58.50	12
Japan	58.58	8	59.38	9
Germany	**58.13**	**9**	**61.53**	**8**
Austria	56.78	10	63.07	7
United States	52.26	11	49.89	13
Belgium	51.85	12	59.23	11
Ireland	50.09	13	59.25	10
Portugal	41.56	14	37.61	15
France	39.95	15	41.85	14
Czech Republic	38.17	16	33.05	16
Spain	31.85	17	27.22	17
Hungary	14.23	18	14.34	19
Poland	13.93	19	17.11	18
Italy	8.08	20	9.50	20
Slovakia	6.16	21	8.05	21

Source: Calculations by Calculus Consults

In addressing the legal-institutional environment, issues of legal certainty, corruption control and crime, and political stability are examined in more detail. The importance of a functioning state apparatus, an efficient legal system and a stable social and political climate for location considerations, even in highly developed industrialised countries, becomes obvious in light of the obstacles that have become evident or have emerged during the recent economic crisis, particularly in the affected southern European countries. But in France as well, significant restrictions have been imposed over the last few years on public life and, in turn, company business activities as a result of antiterrorism measures. With regard to legal certainty, assessments of the efficiency and independence of the legal system and the protection of property rights, including intellectual property rights, are taken into account. Assessments of corruption control consider both the general corruption situation and corruption incidents involving regional and local authorities that directly affect companies' business activities. Finally, assessments of general political stability; of business costs to be expected due to terrorism, crime and acts of violence; and of police service reliability are also included.

As Table 6 shows, Switzerland and the Netherlands clearly top of the rankings. Switzerland achieves very good results in all criteria examined in the sub-index "infrastructure and institutions", whereas the results for the Netherlands drop slightly in the area of crime and political stability. Finland and Sweden also stand out clearly from the countries that follow. Finland even achieves one of the first two positions in each of the three institutional dimensions, but this is not enough for an overall top position due to below-average results in the field of transport infrastructure.

Germany is ranked ninth in the current rankings, one position lower than in 2016. Germany's scores are highest in the field of transport infrastructure and lowest in crime and political stability. Compared with the 2016 Country Index, however, the transport infrastructure scores have deteriorated significantly; the same holds true for the results in legal certainty.

Hungary, Poland, Italy and Slovakia are clearly at the bottom of the rankings. The results of these four countries are consistently weak across all criteria; only Hungary reaches at least the lower midfield of the rankings in terms of crime and political stability. In particular, the scores of Poland and Slovakia have markedly deteriorated further compared with the 2016 Country Index. For Poland, this reflects increasing concerns about judicial independence. The European Commission considers the developments in Poland a threat to basic European Union values and has started an Article 7 procedure, with the withdrawal of voting rights a possible sanction that could be applied.

G. Energy

The topic "energy" deals with the important location factor of a cost-effective and reliable energy supply for enterprises. Costs and reliability of electricity supply are particularly important here, as electricity is needed continuously and can only be replaced or stored to a very limited extent. Accordingly, the costs of electricity for industrial consumers are recorded separately from energy costs for other energy resources; family businesses mainly incur these costs in terms of heating and transport expenses.

Table 7: Sub-index "energy"

Country	Score 2018	Rank 2018	Score 2016	Rank 2016
United States	81.48	1	80.10	1
Hungary	72.57	2	66.58	9
Czech Republic	72.40	3	66.90	7
Spain	70.56	4	69.30	2
France	70.17	5	67.47	6
Poland	68.06	6	63.89	11
Belgium	67.68	7	68.60	3
Netherlands	66.58	8	68.59	4
Sweden	65.67	9	64.87	10
Austria	65.18	10	66.67	8
Denmark	65.02	11	68.58	5
United Kingdom	61.94	12	55.07	16
Portugal	61.89	13	56.03	14
Germany	**53.97**	**14**	**55.72**	**15**
Japan	53.87	15	50.10	21
Finland	53.85	16	52.98	18
Italy	53.19	17	52.84	19
Canada	52.85	18	58.64	12
Switzerland	52.58	19	51.43	20
Slovakia	52.23	20	53.69	17
Ireland	42.70	21	56.53	13

Source: Calculations by Calculus Consults

The reliability of electricity supply is also considered separately from that of primary energy resources, since the supply of electricity is subject to different risk factors than the supply of gas, oil or coal. As far as electricity is concerned, an uninterrupted supply is crucially important to businesses. Even brief outages of a few minutes can cause high costs and damage. The reliability of electricity supply is assessed by internationally comparable measures collected and published by network agencies and regulatory institutions. Compared with electricity, primary energy resources such as gas, oil or coal are more suitable for storage. Hence, very short supply interruptions do not constitute a major problem. Instead, import dependencies constitute a substantial risk factor, as industrialised countries depend on imports from politically and/or economically less stable countries to a considerable extent for these energy resources.

Finally, the "energy" sub-index also takes into account the problem of climate change. Although it is difficult to quantify the expected restructuring due to measures to combat climate change, the issue is too important to be completely disregarded in the Country Index. The quantified deviation of current greenhouse gas emissions from the legally anchored climate policy targets or those promised by the respective government is used as an indicator. The difference between the current status and the target values should serve as an indicator for estimating the expected future structural adjustments in the energy sector: If the targets are to be met, energy policy measures that may affect costs and the security of the energy supply are more likely and will be more extensive the greater the current shortfall compared with the target.

Table 7 shows that the United States leads the current sub-index "energy" rankings by a clear margin. The United States has very favourable energy prices and a low import risk for gas, oil and coal. Hungary and the Czech Republic follow in second and third place. Both countries achieve very good results regarding the achievement of their climate targets, and electricity, gas and fuel prices are comparatively low. On the other hand, reliability of electricity supply is poor for these countries, and the import risks for gas, oil and coal are comparatively high. However, both countries have significantly improved with regard to the 2016 Country Index, mainly due to lower electricity prices and a reduction in power outages.

Germany is ranked fourteenth in the current rankings, one position up on the comparative calculation for 2016. The improvement is primarily due to a decrease in electrical power outage time and a higher position in the ranking for climate targets (although it should be noted that, in terms of the deviation from the target, Germany's shortfall has increased compared with the 2016 Country Index; the reason why Germany is still positioned higher in the rankings is that other countries have performed even worse). With respect to electricity prices, however, Germany has fallen further behind its competitors.

Ireland is by far the worst performer in the 2018 Country Index. Ireland's position in last place and the significant deterioration in the country's ranking compared with the 2016 results are due to dramatically higher power outages in the reference year and a decline in the ranking for climate targets.

Conclusion

The current update of the Country Index shows that from the perspective of large family businesses, Germany has fallen behind in recent years. The main reasons for Germany's slide from twelfth to sixteenth place are a significant loss of tax competitiveness and continuously poorer scores in the areas of "infrastructure and institutions" and "energy".

Inheritance tax reform, with its much higher financial burden on family companies, is not the only issue responsible for the unfavourable assessment of the German tax system. Germany also has to cope with the consequences of a whole decade of inactivity regarding the taxation of business activities – a decade during which the country's competitors were highly active. Consequently, Germany must now be considered a high-tax location in comparison with other countries. It should be emphasised that this finding does not even reflect recent important decisions, such as the tax reform in the United States that comprehensively reduced the effective corporate tax burden and the further tax cuts planned by France. In addition, deterioration in the perceived quality of the transport infrastructure is part of the reason why Germany's results in the area of "infrastructure and institutions" have been on the decline. This finding is a warning sign and confirms that the debate about the need for higher transport infrastructure investments across all modes of transport is important from the perspective of large family businesses. In the area of "energy", Germany offers a highly reliable electricity supply, but family businesses are burdened with very high electricity costs compared with other countries.

Germany does excel or is at least improving in certain fields: The country achieves a top score in the areas of "financing", and "regulation". Germany has now clearly moved upwards from the ranks of countries with high regulation intensity. The burden of labour market regulation is, in particular, perceived to be lower than it was two years ago. It should be noted, however, that the country is still a long way from achieving ratings comparable to highly flexible countries such as the United States, Canada and the United Kingdom as well as Switzerland.

Switzerland; the United States, Canada, and the United Kingdom; the Scandinavian countries; and the Netherlands are in a league of their own in the Country Index, with values of around sixty index points and above. The United Kingdom is still in second place behind Switzerland. How the imminent Brexit will affect the positioning is hard to predict. A hard Brexit would increase the regulatory burden and impair the country's financial stability. As the country might try to compensate investors through lower tax and regulatory burdens, the overall effect is not clear at all. The United States has been heading upwards since the beginning of Donald Trump's presidency; in particular, the already low degree of regulation is rated even better than it was two years ago. This is likely due to the very business-friendly orientation of the Trump administration. However, this result could be jeopardised in the future by the administration's strong protectionist stance, which would be coupled with new impediments to foreign trade. The data do not yet take account of the comprehensive tax reform that went into effect in 2018. With the new tax laws, the United States might even oust Switzerland from first place in the overall assessment.

A look at the four economies included in the Country Index for the first time – Canada, Hungary, Portugal and Japan – is revealing: The scores for the two non-European OECD countries vary considerably. While Canada ranks fourth due to liberal regulation, an excellently trained workforce and high financial stability, Japan lags far behind in eighteenth place. Hungary achieves scores similar to those of Poland and Slovakia, but significantly lower than those of the Czech Republic. Although positioned in the lower third, Portugal is ranked markedly better than the other two southern European countries Spain and Italy.

The detailed insights of the Country Index analysis also underline two serious problem areas in the European Union from the point of view of family businesses: Italy's departure from the reform process and the impairments of the rule of law and separation of powers in Poland and Hungary. Italy is still in the last position in the country rankings, with the gap in its score growing. This means that the country, whose past economic successes were largely achieved by family businesses, now offers only a very poor environment for these businesses and is seeing no significant progress. The new Italian government, in office since spring 2018, has now even terminated the moderate reform course of its predecessors and is relying on extending social benefits and creating new debt, which endangers Italy's financial stability. This, as an ultimate consequence, is placing Italian membership in the European Monetary Union at risk.

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