

# **Business performance management for SMEs: country-specific differences in performance drivers lead to different requirements**

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## **Abstract**

Business performance management systems support companies in achieving their objectives and improving their performance. The content of the paper is based on surveys conducted as part of an international research project. The survey focuses on assessing the impact of external and internal factors on business performance. The results show that there are country-specific differences in terms of influencing factors. While there are many regional similarities in the internal influencing factors, the external influencing factors in particular diverge. The practical implications of the studies show which internal and external factors SMEs should focus on to improve their business performance. The results of the study can be used to develop business performance management systems tailored to SMEs.

## **Keywords**

business performance management; performance drivers; internal and external factors; small- and medium-sized enterprises; optimization measures

## **1. Introduction**

One of the fundamental objectives in business is to generate profit. This is achieved, among other things, by increasing performance. It thus refers to the increase in corporate performance while optimizing the various dimensions such as time, quality, flexibility and, in general, effectiveness and efficiency (e.g. Hudson et al., 2001). One possibility to improve overall business performance on a holistic level is to implement a business performance management system. Business performance measurement must be distinguished from this. There are different definitions for the terms performance management and performance measurement depending on the discipline as well as the multidisciplinary approach (Franco-Santos et al., 2007). The main task of performance measurement is to determine performance indicators for business units in order to enable performance measurement and assessment. Building on performance measurement approaches, performance management as a holistic management approach deals with the achievement of performance targets (Brunner, 1999). Performance measurement is thus a subarea of performance management, which is required to operationalize performance by means of performance indicators and to control the achievement of objectives.

Business performance management (BPM) is largely practiced by large companies, while small and medium-sized enterprises (SME) usually lack the resources to implement a business performance management or performance measurement system. Despite the fact that business performance management can contribute significantly to the increase of corporate performance (de Waal et al., 2011), SMEs mostly use individual key figures or only parts of a formal performance measurement system (Cocca and Alberti, 2010; Taticchi et al., 2010; Garengo et al., 2005). In front of the techno-economical background (Zunk, 2018), business performance management also affects company-specific processes, such as manufacturing processes, and helps to optimize these from an economic point of view as well. Heinicke (2018) shows in a more recent study that the topic of performance measurement in SMEs is still scarce. In her review of 98 top-tier journals in the areas of management accounting, SMEs and general management it turns out that only 34 studies were found that deal with performance management systems in SMEs (Heinicke, 2018). Also a conducted survey of companies in regions of Austria and Žilina shows that many small and medium enterprises have not yet implemented business performance management, but steer their business with a handful of key figures as well as intuitively (Grünbichler and Klučka, 2020; Knefz-Reichmann et al., 2019).

The lack of research with regard to BPM in SMEs as well as the existing lack of practical knowledge about performance management in SMEs in Austria and Slovakia led to a multi-year research project on performance management in SMEs. The overall objective in this research project was to develop a BPM implementation framework for SMEs. This was preceded by qualitative interviews and quantitative surveys on specific BPM topics in selected regions. SMEs from the regions of Styria (Austria) and Žilina (Slovakia) were selected by the authors because they have a similar corporate structure. Both regions are home to industrial companies (e.g. the automotive industry), which have corresponding smaller supplier companies, and are therefore suitable for a comparison of the performance drivers indicated by the companies. This paper presents a part of the results of the quantitative survey in response to the research question of which internal and external performance factors in SMEs drive firm performance.

The objective of this paper is to identify those internal and external factors that have an influence on corporate performance in SMEs. In addition, the study examines whether there are region-specific differences with regard to the performance drivers. These findings can then be used to develop performance measurement and management systems tailored to SMEs, for example by developing performance indicators that focus on areas critical to success. Companies can use the findings to focus resources on the measures and areas outlined in this study that promise success.

The structure of the paper is as follows: In this section, an introduction to this topic is given. In the second section, the authors review the literature on the internal and external factors that influence corporate performance. In the third section, the methodology for this paper is presented, while in the fourth section, the data collection is written. The results follow in the fifth section. It is shown that there are country-specific differences with regard to the influence of the factors. Furthermore, results on intra-firm factors in Austrian companies are presented. In the last section the conclusion follows.

## 2. Literature Review

Neely and Bourne (2000) show that it is not what to measure that is critical to success, but what levers managers must pull to have an impact on success. This indicates that companies should take a special look at the areas that have a particular impact on business performance and not get caught up in what everything in the company could be measured. Therefore, to answer the research question, a literature review is conducted, which follows Wright et al. (2007) and Webster and Watson (2002) approach to identify the success factors in SMEs.

For this purpose, the Scopus database ([www.scopus.com](http://www.scopus.com)) was used to search for scientific papers on the topic of value drivers and company performance with focus on SMEs. The Scopus database was chosen because it is the largest citation database for peer-reviewed literature and it offers comprehensive evaluation possibilities. To narrow the search and limit the number of non-specific hits, a narrow search string was used. The search string concerning the topic was ( TITLE-ABS-KEY ( performance AND driver) AND TITLE-ABS-KEY ( company OR business\* OR corporate\* ) AND TITLE-ABS-KEY ( SME ) ). In addition, further inclusion and exclusion restrictions have been imposed:

- Limit to subject area: Business, Management and Accounting
- Limit to: English language only

- Inclusion: Article, Conference Paper
- Exclusion: Book Chapter, Book, Editorial etc.

The search period covered papers up to the year 2018. The search with the limitations yields a number of 139 scientific papers on various topics related to performance drivers in SMEs. The papers were subsequently read by the authors and relevant papers with empirical studies measuring effects on business performance were read in detail. In the following, the relevant papers with value drivers with a positive effect on the company's performance are presented.

A driver of business performance is the customer and entrepreneurial orientation. In a study from Tajeddini et. al. (2013), interviews with 261 SMEs revealed that customer orientation is positively related to both efficiency and effectiveness. The results also show that entrepreneurial orientation only has a positive influence on effectiveness. At the same time, entrepreneurial orientation is found to be a driver of customer orientation and thus also has an indirect influence on the efficiency of small retailers. A study by O'Regan & Lehmann (2008) shows that corporate strategy has a positive influence on the culture and organisation of a company. In particular, communication and functional coordination are identified as key drivers for corporate success. Another factor that should not be underestimated is the manager, who can make a significant contribution to success. Argyropoulou et. al. (2008) constitute a competitive advantage through the use of ERP systems. The ERP system thus becomes a performance driver in companies, whereby here again the resource issue is important, since the introduction of such a complex project requires financial resources.

Agan et. al. (2013) reveal many significant findings in their study. the most influential driver is expected utility, with the most important forces being soft performance expectations such as image, reputation and brand. Furthermore, a connection between the existence of an ISO certification and performance is also suspected. This study also shows that quality management and BPM systems are closely linked. Holienka et. al. (2015) show in their study, which built regression models based on 3.311 SME financial statements from various sectors, that intellectual capital performance is a significant driver of value creation in each of the industries studied. Intellectual capital therefore represents a value driver for SMEs as well. Reverte et. al. (2016) examined the relationship between corporate social responsibility and performance in their study. Using a structural equation modelling approach on a sample of 133 environmentally responsible Spanish companies (primarily SMEs), they showed that the results provide evidence of positive and significant direct effects of corporate social responsibility on innovation and organisational performance across all groups of companies.

Sanchez-Hernandez & Gallardo-Vazquez (2016) were also able to confirm a significant positive relationship between corporate social orientation and competitive success in their study using structural equation modelling as the chosen method and a sample of 758 companies in the Extremadura region in Spain. Niaki & Nonino (2017) show in their qualitatively conducted study that SMEs in the industrial sector can increase their productivity if they have implemented additive manufacturing in rapid manufacturing of metal products. The study shows the extent to which revolutionary technologies can contribute to increased performance. Ipinnaiye et. al. (2017) results show that the macroeconomic environment affects firm growth both directly and indirectly. Based on the study of manufacturing SME growth in Ireland, their results provide evidence of the integrated effects of macroeconomic conditions, firm characteristics and firm strategy on SME growth.

Soto-Acosta et. al. (2018) demonstrate in their study with covariance-based structural equation modelling on a dataset of 429 Spanish SMEs that information technology capability, knowledge management capability and environmental dynamism are positively associated with innovation ambidexterity. Moreover, environmental dynamics are found to enhance the positive effect of innovation ambidexterity on firm performance. Isaga (2018) examined in a study 300 SMEs in the furniture industry from four different regions of Tanzania. Structural equation modelling was used to simultaneously test the direct and indirect effects of entrepreneurs' characteristics on SME performance. The results show that personality traits have a significant impact on SME performance through cognitive traits. Anwar (2018) shows in the study of 303 manufacturing SMEs in Pakistan, which were interviewed using a structured questionnaire and the results were then analysed using a structural equation model, that business model innovation has a significant positive impact on SMEs' competitive advantage and performance.

### 3. Methods

This paper presents results on one of several research questions from a research project on business performance management and measurement that was conducted from 2017 to 2019. For the research project a two-stage research design was chosen: In the first stage, qualitative and quantitative surveys were conducted to identify some specific items of BPM in SMEs, with some results on other issues already published (Grünbichler and Klucka, 2020; Knefz-Reichmann et al., 2019; Klucka and Kelisek, 2018). The second stage builds on the literature review and the results of the first stage. This stage focused on issues with the implementation of BPM in SMEs and the development of an implementation framework for SME. The size definition of SME is based on the recommendation of the Commission of the European Union (2003/361/EC from 6 May 2003).

In this paper, results from the first stage of the research question of value drivers on company performance are presented. The research question is: Which internal and external factors drive SME performance? The working hypothesis  $H_1$  in this context is that there are regional differences in the assessment of internal and external factors that influence company performance.

The method used to answer the question was an electronic standardized questionnaire (Computer Assisted Web Interview - CAWI). The standardized electronic questionnaire was applied to obtain the highest possible response rate at low cost. The questionnaire was developed in Slovakia on the basis of the literature review and the results of the qualitative interviews from previous research. The questionnaire contains closed, half-open and open questions. For the closed questions, a five-point monopolar Likert scale was used, ranging from "Very important / relevant" to "Not important / relevant" and, if applicable, with the answer option "Is not relevant for our company". Furthermore, questions with multiple answer options were asked on a nominal scale. The answers to the half-open and open questions were evaluated by content analysis and taken into account in the data processing by forming categories. Since the previous results showed that many companies have not yet implemented formal BPM, there was a filter question at the beginning so that companies with and without BPM can fill out the questionnaire. For the companies without BPM, there was a second filter question. Here, companies were asked slightly different questions depending on whether they wanted to introduce BPM or not. In addition, further questions were asked if certain relevant preliminary questions were ticked. For example, if a check mark was placed indicating that corporate culture is an important performance driver, a follow-up question asked about measures taken to improve corporate culture.

After completion, the questionnaire was first sent to a few pilot companies in Slovakia to check its comprehensibility. Minor adjustments were made. After the pilot phase, the questionnaire was sent to randomly selected SMEs in Slovakia. In parallel, the questionnaire was translated into German. During the translation, care was taken to ensure that the questionnaire was identical, for example that the companies were given the same answer options to choose from.

### 4. Data Collection

Primary data were used with an online questionnaire. The survey software Rogator was applied in Austria and Google Surveys in Slovakia. The results were exported to and analyzed in Microsoft Excel software. The software was also used for descriptive statistical analysis to indicate the frequencies of occurrence of the features and to test the hypothesis.

In Austria, the data collection period was in September and October 2018. At the time of examination, 3,785 companies fulfill the criteria of SME in Styria. The statistics of the Chamber of Commerce (Wirtschaftskammer Österreich, 2018) as well as Herold's chargeable database (Herold, 2018) for contact data were used as a data basis for filtering the companies relevant for the survey. The questionnaire was sent out to 2,519 companies in several replies. Due to the low response rate, telephone calls to randomly-selected SMEs were subsequently made. The response was 127 completed questionnaires, of which 20 did not meet the criteria. The number of questionnaires that can be used for analysis is therefore 107.

In Austria, the data collection period was September and October 2018. At the time of the survey, 3,785 companies in Styria met the criteria of an SME. The databases of the Austrian Chamber of Commerce (2018) and the Herold database (Herold, 2018) were used to identify SMEs and obtain contact information. In anticipation of a low response rate, the

questionnaire was sent out in several rounds to a total of 2,519 companies. After the first mailings actually had a low response rate, a further round of randomly selected SMEs were contacted by telephone and asked to complete the questionnaire. Finally, the response rate was 127 completed questionnaires, of which 20 did not meet the criteria. The number of questionnaires that can be used for the analysis is therefore 107.

In Slovakia, the questionnaire was sent out to entrepreneurs at the end of 2017 to the beginning of 2018. As the key figures used and business areas to be controlled are constant, as expected, and the introduction of a BPM is usually longer-term, no significant influence between the regions is assumed due to the time difference of the sending out. In 2017, there were 567,131 SMEs in Slovakia. The situation in Slovakia was similar to that in Austria with regard to research data. Due to the very low response rate in the first round, a second round was conducted. In this phase, more entrepreneurs were surveyed. The completion of the questionnaires was mainly based on personal contacts. The total number of responses was 179. The usable number of completed questionnaires was 168.

## 5. Results and Discussion

This section presents the results of the survey. In Austria, there were many responses to the in-depth questions on the improvement measures of internal factors, which are presented first. For the return of 107 questionnaires in Austria, the following picture emerges: 62 companies have a BPM and 45 do not. Of these 45 companies, 18 intend to introduce a BPM in the near future and 27 do not see the need to do so. The in-depth questions were answered by the 62 companies that have a BPM and are continuously taking measures to improve it. This is followed by the comparative results between the regions and the testing of statistical significance. This section ends with recommendations.

### 5.1. Numerical and Graphical Results

The internal factors can be influenced by the company in a more targeted manner than the external factors. For this reason, companies in Styria were first asked a question about the influence of certain internal factors on company performance (Table 1), and follow-up questions asked about measures for optimization. These questions were only asked to those companies that have implemented a performance management system (n = 62).

Table 1. Evaluation of internal factors that have an influence on company performance

Internal factor	Very important	Important	Conditionally important	Less important	Not important
Communication within the company	85,5%	11,3%	1,6%	1,6%	0,0%
Corporate Culture	59,7%	32,3%	6,5%	0,0%	1,6%
Employee satisfaction	74,2%	19,4%	1,6%	4,8%	0,0%
Involvement of employees in strategic planning process	37,1%	41,9%	16,1%	3,2%	1,7%
Leadership style	62,9%	33,9%	1,6%	1,6%	0,0%

It is evident that communication within the company, corporate culture, employee satisfaction and management style are seen as very important for increasing company performance. As this was already suspected, this question was followed by further in-depth selection questions at nominal scale level on which measures for improvement had been implemented.

When asked which communication channels are used in the company, the companies were able to choose from several answers (nominal scale level). Multiple answers were possible. Of the 62 companies, a total of 223 responses were selected for communication channels, distributed as shown in Figure 1.

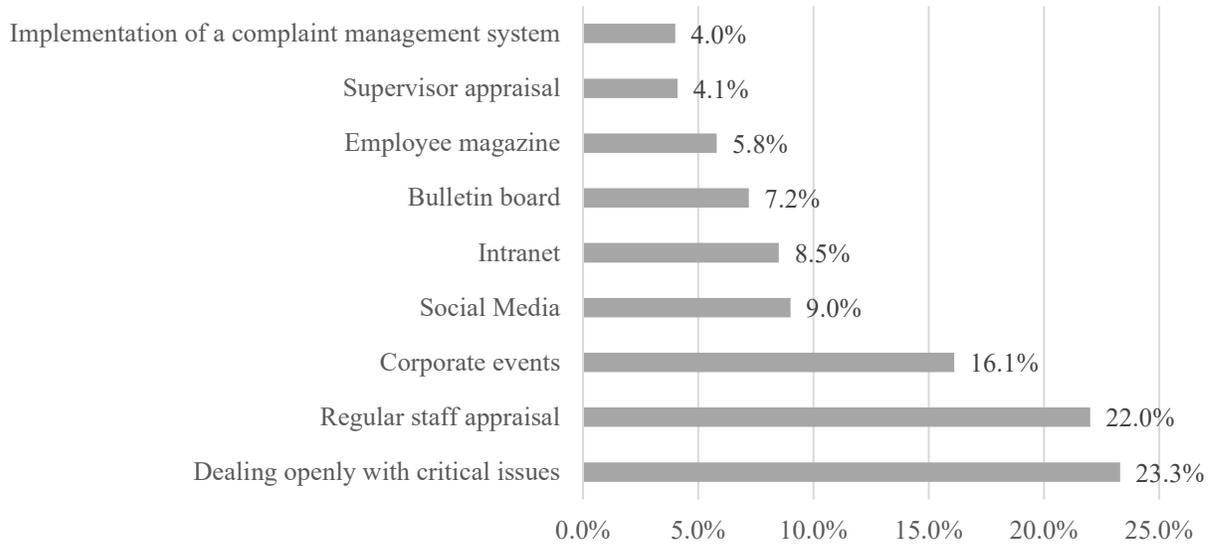


Figure 1. Used communication channels in the company

The answer to this question shows that it is particularly important to deal openly with critical issues. It can also be assumed that the learning effect is greatest when critical topics are discussed. The next most important are regular staff appraisal and corporate events. These answers are hardly surprising, as these two channels are typical in Austrian companies. 20 companies use social media as a communication channel. The advantage is certainly the wide reach and fast dissemination of information. Disadvantages can lie in data protection and the distribution of company secrets. It also shows that the implementation of a complaint system is last in line and would coincide with the most common response that critical issues are addressed openly and for this reason a complaint system is not necessary.

Another important driver of corporate performance is employee satisfaction. A question was asked to identify ways of increasing employee satisfaction. For this purpose, the given answer options were to be evaluated on a five-point scale from very important to unimportant (Table 2). In addition, "Not relevant for my company" could be ticked if required.

Table 2. Evaluation of opportunities that lead to an increase in employee satisfaction

Opportunity	Very important	Important	Conditionally important	Less important	Not important	Not relevant
Profit-sharing/premiums	45,0%	31,7%	18,3%	1,7%	1,7%	1,7%
Issue of company shares	11,7%	16,7%	13,3%	11,7%	15,0%	31,7%
Incentive programs	20,0%	33,3%	33,3%	3,3%	0,0%	10,0%
Work autonomy	33,3%	33,3%	13,3%	1,7%	5,0%	13,3%
Voluntary social benefits	21,7%	31,7%	25,0%	8,3%	5,0%	8,3%
Issuance of vouchers	11,7%	30,0%	26,7%	10,0%	6,7%	15,0%

The companies' answers show that the most important measures to increase employee satisfaction are profit sharing, granting autonomous work and voluntary social benefits. Giving company shares to employees and issuing vouchers

are less important to increase employee satisfaction. One reason for this could be that such measures receive little support in Austria and there are no tax advantages for the companies.

Another essential internal factor for enhancing business performance is corporate culture. For this question, the companies were able to choose from several answers (nominal scale level). Multiple answers were possible. In total, the 62 companies ticked 403 answers, distributed as shown in Figure 2.

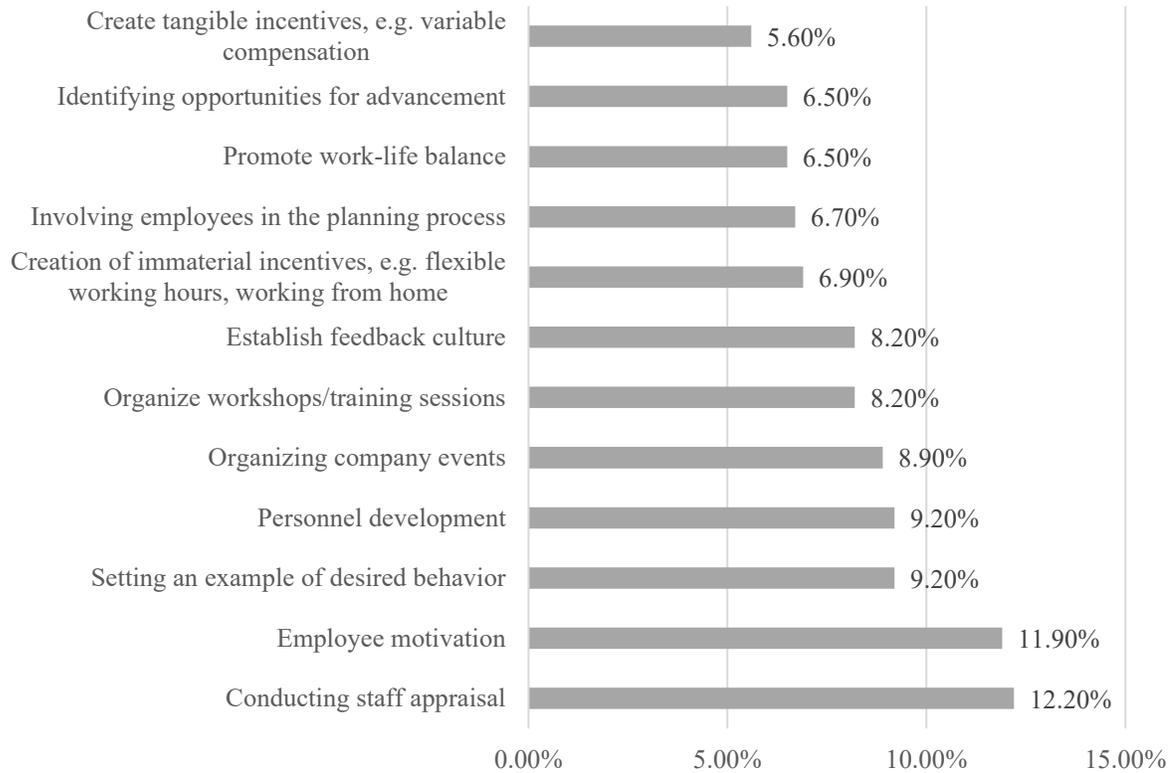


Figure 2. Measures implemented to improve corporate culture

The large number of responses selected indicates that companies are taking many measures to positively influence corporate culture. The focus is clearly on employees. Most companies see holding performance reviews, motivating employees, modeling desired behavior, and developing staff as ways to improve performance. Those that go beyond the typical competence profile, such as being involved in the planning process or pointing out opportunities, creating a work-life balance or additional costs in the form of variable components and thus participation in success, are mentioned less frequently. It is particularly evident among the younger generation that the work-life balance, for example, plays a central role. It is clear that companies have so far been striving for classic forms of motivation enhancement and that a rethinking process still needs to be initiated for newer forms.

A holistic view must consider internal and external factors. Table 3 shows the factors in an aggregated form in comparison for the two regions of Styria and Žilina. Some similarities in the assessment of the factors on the company performance can be seen, but also certain differences.

Table 3. Assessment of the influence of external and internal factors on the company's performance

Factor	Region	Very important/ Important	Conditionally important	Less important/ Not important
Ecological factors	Žilina	41,7%	34,5%	23,8%
	Styria	43,0%	40,2%	16,8%
Globalization factors	Žilina	21,4%	43,5%	35,1%
	Styria	41,1%	25,2%	33,6%
Political factors	Žilina	20,8%	35,1%	44,0%
	Styria	38,3%	29,0%	32,7%
Economic factors	Žilina	32,7%	46,4%	20,8%
	Styria	61,7%	26,2%	12,1%
Legal factors	Žilina	41,1%	41,1%	17,9%
	Styria	50,5%	35,5%	14,0%
Social factors	Žilina	54,8%	32,7%	12,5%
	Styria	51,4%	30,8%	17,8%
Production factors	Žilina	51,2%	28,6%	20,2%
	Styria	59,8%	22,4%	17,8%
Marketing and Sales factors	Žilina	54,8%	33,9%	11,3%
	Styria	66,4%	22,4%	11,2%
Technical Factors	Žilina	55,4%	26,8%	17,9%
	Styria	67,3%	17,8%	15,0%
Personnel Factors	Žilina	65,5%	24,4%	10,1%
	Styria	83,2%	11,2%	5,6%

While largely similar answers are given for the internal factors in the regions of Styria (n = 107) and Žilina (n = 168) regarding the factors influencing company performance, namely personnel, technical, marketing & sales, production and social factors, it can be seen that the answers regarding the external factors diverge. In this context, it is interesting to note that the economic, political and globalization factors are rated differently in some cases, with these factors having a more important impact on business performance for Styrian entrepreneurs. This could possibly be related to the fact that Styrian companies tend to locate their suppliers abroad and have stronger political ties, for example through the Chamber of Commerce. The environmental factors are again rated as having a similarly strong impact on company performance.

## 5.2. Validation

In context with the research question, the question arises whether there are region-specific differences in the factors influencing business performance. The following hypothesis was formulated for this purpose:

Hypothesis 1 (H<sub>1</sub>): There are region-specific differences in the assessment of the internal and external factors influencing corporate performance.

The results show that there are broad similarities in the internal factors, while there are apparent differences in the influence of the external factors on the company's success (Table 3). For a statistical evaluation therefore a Two-Factor ANOVA with replication was applied in Microsoft Excel. The application yielded the following results (Table 4, Table 5).

Table 4. Comparison of the Austrian and Slovak results

Region	Total	Very important/ important	Conditionally important	Less important/ Not important
Žilina	Count	10	10	10
	Sum	4,394	3,470	2,136
	Average	0,439	0,347	0,214
	Variance	0,0230	0,0052	0,0115
Styria	Count	10	10	10
	Sum	5,627	2,607	1,766
	Average	0,563	0,261	0,177
	Variance	0,0198	0,0071	0,0080

Table 5. Two Factor ANOVA with Replication

Source of Variation	SS	df	MS	F	P-Value	F-crit
Sample	0,00000	1	0,00000	0,00000	1	4,01954
Columns	0,96213	2	0,4811	38,73	0,00000	3,16825
Interaction	0,1201	2	0,06	4,835	0,011708	3,16825

The analysis shows that the F-value is greater than the critical F-value ( $F_{crit}$ ) and the p-value is less than 0.05 (see interaction). Therefore, the hypothesis of the same average for each sample is rejected ( $H_0$ ) and the working hypothesis is adopted. Thus, it can be seen that the variability of selected measures in the two regions from Austria and Slovakia has different variance. Therefore, the measures used to optimize business performance need to be considered on a country-specific basis. For further research, it is obvious that regional differences must be taken into account in terms of their influence on business performance. Therefore, regional specifics need to be taken into account when developing a performance management and measurement framework.

The study by Rigby and Bilodeau (2015) also indicates a similar result, in that they already disclose that there are differences in the use and satisfaction of different management tools in North America (the US and Canada), Europe, Middle East and Africa (France, Germany, Spain and the UK), Asia-Pacific (China and India), and Latin America (Mexico and Brazil). It can be deduced from this that comprehensive BPM valid for all is not usually implemented by companies and that country-specific differences must therefore be taken into account.

### 5.3. Recommendations

The objective of this study was to identify internal and external influencing factors that have a significant impact on company performance. In addition, it was investigated whether there are regional differences in this respect. Based on the results, the following general recommendations can be made:

- With regard to the internal influencing factors, special attention should be paid to communication within the company, employee satisfaction, the corporate culture and the management style in order to increase the company's performance.
- When optimizing corporate communications, attention should be paid to dealing openly with critical issues and a culture of open discussion. This is seen as a major driver of corporate performance in communications.
- When it comes to measures to increase employee satisfaction, profit sharing or the payment of bonuses has a major impact on company performance. In contrast, giving company shares to employees is less relevant. The legal framework could be created to make these measures more attractive.

- Measures to optimize corporate culture show that companies still prefer traditional forms of employee motivation and regard them as an essential driver of corporate performance. Here, work could be done on a rethink that also takes into account the coming demands of the younger generation in particular, such as work-life balance.

An analysis of the aggregated internal and external influencing factors shows that the internal influencing factors are assessed similarly across the regions, while there are greater deviations in the external influencing factors. It is therefore necessary to take a detailed look at the needs of SMEs and develop adapted BPM systems.

## 6. Conclusion

The studies conducted in this research project as well as studies from the literature review show that there is still a need for research on SMEs and the topic of business performance management, both in science and in practice. The findings of these regional studies show differences here in that the companies in the two regions assess the influence of the various factors on company performance differently. It follows that performance measurement and management systems must also take these region-specific characteristics into account. The development of a management system must therefore be very specific to the needs of the SME.

The practical implications of the studies indicate which internal and external factors SMEs should focus on in order to increase business performance. In particular, the external factors could have an influence on the company's performance. Here, it is important to consider which KPIs should be used to map the external factors. In the course of the interviews, it was also found that small companies in particular do not see the need for a formal BPM. Decisions tend to be made intuitively. One assumption for this attitude is that the introduction of a BPM is not required by law and therefore anything that does not serve the immediate core business is not implemented.

A theoretical limitation is the generalisability of the results due to the small sample in both regions. Furthermore, individual regions of both countries were selected. It turned out that the impact of the factors on company performance is assessed differently by the companies in the two regions. Generalisability can therefore only be limited from this point of view. A further limitation is that there is a wide spread of different constellations within SMEs and therefore different approaches to BPM can also exist in these. Possible differentiations result, for example, from the range of products and services, the number of employees, the level of sales or the competitive situation. In this respect, too, it is necessary to take a closer look at the SMEs and thus to narrow down the subject area.

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