

Research Article

The moderating effect of financial performance exerts on the interaction of absorptive capacity and organizational performance

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Abstract

Objective: In this paper, we will analyze the moderating effect of financial performance exerts on the interaction of absorptive capacity and organizational performance. **Methodology/approach:** A conceptual model was developed to assess the relationship between absorptive capacity, financial performance, and organizational performance in small and medium-sized Brazilian companies. To capture the multidimensional nature of absorptive capacity, this study uses structural equation modelling and measures the mediating effects of financial performance. **Main results:** The main finding is the moderating effect. The effect of absorptive capacity on organizational performance has a moderating effect of financial performance. **Theoretical/methodological contributions:** Small businesses ought to recognize and take advantage of the practical benefits of absorptive capacity. However, entrepreneurs should find motivation to develop more formalized absorptive capacities to raise the organizational performance. The results can help companies identify ways to better appropriate external information and knowledge to improve absorptive capacity. **Relevance/originality:** The research contributes to the proposition and empirical test of a predictive model of organizational performance in small and medium-sized enterprises, which can predict organizational performance in Brazilian's SMEs. This study represents one of the first attempts to investigate the relationships between absorptive capacity, organizational performance, and financial performance. **Social/management contributions:** The results can help companies identify ways to better appropriate external information and knowledge to improve absorptive capacity.

Keywords: absorptive capacity; financial management; organizational performance; small business.

O efeito moderador que o desempenho financeiro exerce sobre a interação da capacidade de absorção e o desempenho organizacional

Resumo

Objetivo: Neste artigo, analisaremos o efeito moderador que o desempenho financeiro exerce sobre a interação da capacidade de absorção e o desempenho organizacional. **Metodologia/abordagem:** Um modelo conceitual foi desenvolvido para avaliar a relação entre capacidade de absorção, desempenho financeiro e desempenho organizacional PME brasileiras. Para capturar a natureza multidimensional da capacidade de absorção, este estudo usa modelagem de equação estrutural e mede os efeitos mediativos do desempenho financeiro. **Principais resultados:** A principal descoberta é o efeito moderador. O efeito da capacidade de absorção no desempenho organizacional tem um efeito moderador exercido pelo desempenho financeiro. **Contribuições teóricas/metodológicas:** As PME devem reconhecer e aproveitar os benefícios práticos da capacidade de absorção. No entanto, os empreendedores devem encontrar motivação para desenvolver capacidades de absorção mais formalizadas para aumentar o desempenho organizacional. Os resultados podem ajudar as empresas a identificar maneiras de se apropriar melhor de informações e conhecimentos externos para melhorar a capacidade de absorção. **Relevância/originalidade:** A pesquisa contribui para a proposição e teste empírico de um modelo preditivo de desempenho organizacional em pequenas e médias empresas, capaz de prever o desempenho organizacional em PMEs brasileiras. Este estudo representa uma das primeiras tentativas de investigar as relações entre capacidade de absorção, desempenho organizacional e desempenho financeiro. **Contribuições sociais/para a gestão:** Os resultados podem ajudar as empresas a identificar maneiras de melhor se apropriar de informações e conhecimentos externos para melhorar a capacidade de absorção.

Palavras-chave: capacidade de absorção; gestão financeira; desempenho organizacional; Pequenos negócios.

INTRODUCTION

The absorptive capacity (ACAP) consists of the ability of an organization to identify potential in the external environment and absorb this knowledge for the organization. Traditionally, larger companies have more absorptive capacity than smaller companies, because they have a more suitable administrative structure for such action. However, it is known that small companies also have absorptive capacity. The big debate is how small businesses can professionally take advantage of such capacity (Lafuente, et al, 2020; Miroshnychenko, et al, 2020). The present study seeks to highlight the moderating effect that financial performance (Fin) has on the interaction of absorptive capacity (ACAP) and organizational performance (OP). Small businesses ought to recognize and take advantage of the practical benefits of absorptive capacity. However, entrepreneurs should find motivation to develop more formalized absorptive capacities to raise the organizational performance. Managers must recognize the effect of absorptive capacity on financial and non-financial performance to be able to take managerial actions capable of improving the organization's results. The results can help companies identify ways to better appropriate external information and knowledge to improve absorptive capacity.

Considering the relevance of SMEs to a country's economy and the maintenance of financial and organizational performance, amidst so many environmental changes, absorptive capacity is observed as a study option. The term absorption capacity receiving attention after the work of Cohen and Levinthal (1990), who developed the concept of absorption capacity, which made the absorption process concept known and considered a central factor in the companies' innovation and adaptation to changes (Ali et al., 2016; Strom-Andersen, 2020). According to Cohen and Levinthal (1990), absorption capacity can be defined as the company's ability to recognize the value of external knowledge, seeking to assimilate and apply this knowledge for commercial purposes.

Based on this context, the following research question emerges: what is the relationship between absorptive capacity, financial management and organizational performance in small and medium-sized enterprises (SMEs)?

As an answer, the general objective was set out: to analyze the relationship between absorptive capacity, financial management and organizational performance in SMEs. In order to achieve the general objective, some specific objectives were constructed: a) to identify the influence of absorptive capacity on financial management; b) to identify the influence of absorptive capacity on the organizational performance; c) to identify the influence of financial management on organizational performance.

This article's subject covers small business management, which is the main theme of studies with small companies (Kumar et al, 2021). According Kallmuenzer and Scholl-Grissemann (2017) a fruitful proposal for future research would be to study and track the development and implementation process as well as the final impact SMEs over a longer period and at several stages within this process. With this paper, it was possible to address this research gap. Silva and Primo (2021) suggest research on how companies can create opportunities based on their resources and capabilities for future studies. In our research we will study absorptive capacity. This article has originality because it adapts and reconciles the themes Absorptive Capacity, Financial Management and Organizational Performance in the Brazilian SMEs organizational framework, setting hypotheses from the framework proposed, for the purpose of analysis in this investigation.

There is literature confirming that absorptive capacity exerts a positive influence on innovation processes and outcomes, such as financial performance of the organizational (Bercovitz & Feldman,

2007, Kostopoulos et al., 2011, Najafi Tavani et al., 2013, Garcia-Perez-de-Lema et al., 2017, Santos et al., 2021) absorptive capacity affects innovation and organizational performance outcomes (Ebers & Maurer, 2014, Ali et al., 2016, Oliveira et al, 2020, Agostineto et al, 2022) and Financial performance has the ability to positively influence different non-financial performances of organizations (Lai et al., 2017, Ikram et al., 2019, Montenegro de Lima et al, 2020, Chen & Ma, 2021, Bazhair, 2021). Briefly, absorptive capacity positively influences organizational performance, so in this paper, we will analyze the moderating effect of financial performance. This study represents one of the first attempts to investigate the relationships between absorptive capacity, organizational performance and financial performance.

The article is structured as follows. The first section discusses the relationship between absorptive capacity, financial performance and organizational performance in small firms and outlines a series of hypotheses. We then describe the dataset and the key variables used in the analysis (research methodology). The next sections present the partial least square structural equation modeling results, followed by a discussion of the empirical findings. The final section considers the implications of our findings and identifies potential avenues for future research.

THEORETICAL REVIEW

According to Cohen and Levinthal (1990), absorption capacity can be defined as the organizational ability to recognize the value of external knowledge, seeking to assimilate and apply this knowledge for commercial purposes.

The changes in the business environment and the increase in competition have led organizations to focus greatly on improving their organizational performance to achieve a sustainable competitive advantage by relying on keeping pace with these changes and developing their absorptive capacity (AlTaweel & Al-Hawary, 2021). There is literature confirming that absorptive capacity affects innovation and organizational performance outcomes (Ebers & Maurer, 2014, Ali et al., 2016, Oliveira et al, 2020).

Potential absorptive capacity influences realized absorptive capacity, which impacts and organizational performance (Garcia-Sanchez et al., 2018). The results provide support for the absorptive capacity's role for organizational performance. Furthermore, different configurations of absorptive capacity conditions lead to better organizational performance (Ali et al., 2016; Dabić et al, 2019). To investigate the relationships between firm capabilities, BM design (mediating variable), and firm performance (Pucci et al., 2017). There is a direct relationship between absorptive capacity and organizational performance. Not only that, but organizational performance also directly depends on the absorptive capacity (Oliveira et al, 2020).

A small and medium enterprise (SME) absorbs knowledge to innovation, but also improve organizational performance (Benhayoun et al., 2021; de Noronha, et al, 2021). Thus, according to the absorptive capacity has a positive effect on organizational performance, we generate the hypothesis:

H1: *the absorptive capacity influences the organizational performance of SMEs.*

Financial performance can be a subjective measure, based on how well a SME can use assets from its primary mode of business and generate revenues. It refers to the degree to which financial objectives are being accomplished (Santos et al., 2021). Would their capability of applying new knowledge lead to higher financial returns? Yes, Absorptive Capacity leads to better Financial

Performance (Santos et al., 2021), absorptive capacity contributes, directly and indirectly, to innovation and financial performance (Kostopoulos et al., 2011).

There is literature confirming that absorptive capacity exerts a positive influence on innovation processes and outcomes, such as financial performance of the organizational (Bercovitz & Feldman, 2007, Kostopoulos et al., 2011, Najafi Tavani et al., 2013, Garcia-Perez-de-Lema et al., 2017, Santos et al., 2021).

Absorptive capacity refers to a SME's ability to utilize external knowledge for commercial purposes. Ability to capture externally generated information is crucial. Rungi and Stulova (2013) demonstrate that absorptive capacity entails a direct effect on financial performance. So, the effect of influential knowledge on financial performance is positively moderated by absorptive capacity (Papazoglou & Spanos, 2021).

Multiple tangible and intangible determinants affect the survival and success of a small and medium enterprise (SME). Absorptive capacity significant contributors on the financial and non-financial performance of SMEs. The SME ought to focus on self-developing those capabilities that render sustainable its competitive posture (Khan et al., 2019). The absorptive capacity exerts an effect on financial performance in both the Brazilian and Portuguese contexts (Laviniki, et al., 2021)

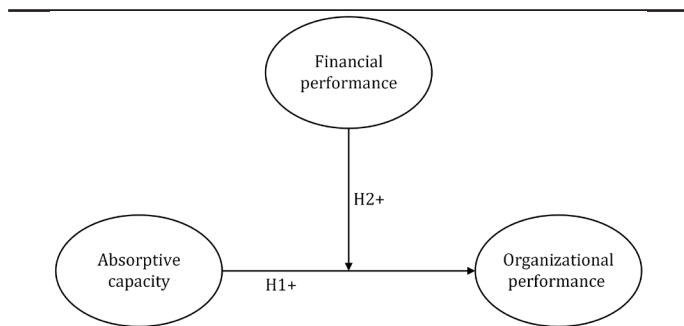
Financial performance could positively influence different non-financial performances of organizations. Financial performance influences operational performance (Lai et al., 2017), customer satisfaction (Rodrigues Viana et al., 2022), sustainability actions (Montenegro de Lima et al., 2020), green investment (Chen & Ma, 2021, Mazon et al., 2022), corporate governance mechanism (Bazhair, 2021), the organization's level of legitimacy will have a positive impact on its performance (Prado-Roman, et al., 2020), corporate social responsibility (Ikram et al., 2019), innovation capability and innovation in nascent ventures (Pagotto et al., 2022). Thus, according to the financial performance has a positive effect on organizational performance, we generate the hypothesis:

H2: *The effect of absorptive capacity on organizational performance has a moderating effect of financial performance of SMEs.*

The international literature, basis for the construction of the theoretical framework, shows the existence of relationships between Absorptive Capacity, Financial Performance, and Organizational Performance. In this connection, when listing these three literature dimensions, aiming at the adaptation and compatibility with the theme in the Brazilian SMEs organizational context, we proceeded with the construction of the logic and the hypotheses of the framework proposed for analysis in this investigation, as shown in Figure 1.

Figure 1

Logic and hypotheses of the proposed framework for analysis.



Note: Elaborated the authors.

RESEARCH METHODOLOGY

In this section, the research methodology is presented. First the measures and then the sample profile.

Measures

A questionnaire with 34 questions related to absorptive capacity, financial performance and organizational performance was elaborated. It should be noted that the data collection instrument underwent a pre-test when evaluated by a group of experts (composed of researchers and business professionals) who reviewed the questionnaire and provided feedback on the ease of understanding of the instrument, consistency, and adequacy of the sequence of items, which led to some specific changes. The final questionnaire has thirty-four statements measured on a five-point Likert type scale and the applied version is shown in Appendix A.

It should be noted that the data collection instrument underwent a pre-test when evaluated by a group of experts (composed of researchers and business professionals) who reviewed the questionnaire and provided feedback on the ease of understanding of the instrument, consistency, and adequacy of the sequence of items, which led to some specific changes. The final questionnaire has statements measured on a five-point Likert type scale. Study with scales in SMEs is pointed out by Manthey et al. (2021) as suitable for this type of study

Sample Profile

Data collection took place between August and November 2020 through research applied in the Google Forms tool. With the same tool, the verification of the filling out and validation of the questionnaires received was initially carried out.

In this research, the sample size was calculated using the G*Power 3.1.9 software (<http://www.gpower.hhu.de/en.html>) was used with the following parameters: Effect Size 0.15; alpha error 0.05; Power 0.80; Number of predictors 2. The total sample size was 68.

A total of 295 questionnaires were collected, all the companies studied were micro or small commercial companies in the city of Florianópolis. Florianópolis is a coastal city, and the commerce of micro and small companies is important for a tourist city. Then, the data collected were inserted into Excel spreadsheets and analyzed using descriptive statistics and the Partial Least Square Structural Equation Modeling (PLS-SEM) technique. The PLS-SEM is a method of structural equation modeling which allows estimating complex cause-effect relationship models with latent variables. PLS-SEM is a technique widely used for research in Small Business and Enterprise Development (Ng et al., 2020; Pulka et al., 2021).

With the same tool, the verification of the filling out and validation of the questionnaires received was initially carried out. A total of two hundred and ninety-five questionnaires were collected and validated. Despite the non-probabilistic sampling, this can be considered a homogeneous group, with at least one common characteristic: companies of the greater Florianópolis region, as recommended by Flynn et al., (1990), Hourneaux Jr. et al., (2018) and Dabić et al (2019).

The creation of models / frameworks is common in entrepreneurship and small business research (Victorino et al, 2020; Santos & Teixeira, 2021; Lopes et al, 2021). Then, the data collected were inserted into Excel spreadsheets and analyzed

using descriptive statistics and the partial least square structural equation modeling technique, with the support of the SmartPLS software, version 3.

Finally, it is clarified that the procedures applied here are quantitative, because in this kind of research, data collection uses standardized methods and generates numerical data, which can be analyzed using graphs and statistical techniques. For the authors, the quantitative approach allows formulating hypotheses that can be tested (contributing to the development of the theory) or examined in future research. The research is conclusive as it seeks to test specific hypotheses and examine relationships. It is also descriptive, as it seeks to describe characteristics of a given phenomenon, seeking to establish relationships between existing variables, such as trust and perceived influence.

ANALYSIS OF RESULTS: PLS (PARTIAL LEAST SQUARES) ANALYSIS

In this section, the structural equations are analyzed by means of the partial least squares, through two steps: evaluation of the measurement model and analysis of the structural model, both of which are further detailed.

Model Assessment - Validity And Reliability

After exporting the collected primary data to the SmartPLS software, version 3, and carrying out its configurations, a report of the preliminary data obtained was generated. The evaluation of the model started through its convergent validity, discriminant validity and reliability, as recommended by Hair Jr et al. (2017).

It should be noted, however, that the sequence of the analyses occurred in accordance with the recommendation of Bido & Silva (2019), namely: 1) convergent validity; 2) discriminant validity; 3) reliability. Since one of the assumptions for assessing reliability is that its convergent validity and discriminant validity be adequate. Thus, if any problem in the convergent or discriminant validity is diagnosed, it is suggested not to proceed further to the reliability assessment.

Thus, it was found that the AVE of Latent Variables (LV), according to Ringle et al. (2014), values greater than 0.50 are acceptable, and values greater than 0.40 may be acceptable in applied social sciences.

Once the convergent validity is assured, the next step was to assess the Discriminant Validity, which indicates whether the constructs or variables are independent of each other (Hair Jr et al., 2017). According to Ringle et al. (2014) for the discriminant validity of the observed variables, cross loads must be observed, that is, indicators with higher factor loads in their respective latent variables than in the others, as recommended by Chin (1998). For the discriminant validity of latent variables, we can use, HTMT criterion - Heterotrait-Monotrait Ratio (Henseler et al., 2015).

First, the crossed factor loadings were evaluated according to Chin's (1998) criterion, which proved to be adequate, as shown in the Table 1.

By analyzing Table 1, the factor loads of the Variables Observed in the original Latent Variables are higher when compared to the other constructs. Variables ACAP 09, ACAP 11, had cross loads below acceptable standards and therefore were excluded from the model.

The results from the Heterotrait-Monotrait Ratio (HTMT) criteria are shown in Table 2.

Table 1

Cross loads values of the variables observed in the latent variables.

Code	Absorptive Capacity	Finance	Organizational performance
ACAP01	.691	.510	.464
ACAP02	.750	.482	.542
ACAP03	.682	.462	.398
ACAP04	.753	.556	.549
ACAP05	.780	.586	.521
ACAP06	.688	.503	.474
ACAP07	.707	.429	.402
ACAP08	.668	.404	.424
ACAP10	.714	.496	.505
OP01	.564	.617	.784
OP02	.466	.556	.802
OP03	.471	.570	.793
OP04	.541	.606	.840
OP05	.561	.540	.808
OP06	.558	.522	.766
OP07	.553	.511	.758
Fin01	.590	.799	.570
Fin02	.559	.810	.563
Fin03	.610	.826	.573
Fin04	.582	.811	.583
Fin05	.579	.868	.582
Fin06	.570	.837	.572
Fin07	.514	.789	.656
Fin08	.468	.756	.504
Fin09	.528	.829	.567
Fin10	.511	.780	.534
Fin11	.604	.862	.573
Fin12	.490	.720	.424
Fin13	.499	.588	.555

Note: Elaborated by the authors, based on research data (SmartPLS3®, 2021).

Table 2

HTMT Criterion.

Construct	Absorptive Capacity	Financial Performance	Organizational performance
Absorptive Capacity			
Financial Performance	.751		
Organizational performance	.745	.761	

Note: Elaborated by the authors, based on research data (SmartPLS3®, 2022).

It is noteworthy that, based on the results of the studies by Henseler et al. (2015) and on previous research, the referred authors suggest a threshold value of 0.90, therefore the discriminant validity of latent variables is also attested by the HTMT criterion.

Finally, the values of internal consistency were evaluated using Cronbach's alpha and composite reliability. The Cronbach's alpha of the constructs is greater than 0.80. Also, the reliability criterion met was considered, through the composite reliability indices,

which were higher than the minimum limit of 0.7 (Hair Jr et al., 2017). Table 3 shows the referred values, together with the values related to the AVE:

Table 3

Values related to the internal consistency of the model.

	Cronbach's alpha	Composite reliability	AVE
Absorptive Capacity	.881	.904	.512
Financial	.950	.956	.630
Organizational performance	.902	.922	.630

Note: Elaborated by the authors, based on research data (SmartPLS3®, 2022).

In Table 3 we can see that the Cronbach's alpha of the constructs. Also, the reliability criterion met was considered, through the composite reliability indices, which were higher than the minimum limit of 0.7 (Hair Jr et al., 2017).

Structural Modeling Evaluation

The first evaluation carried out consisted of the analysis of collinearity, using the Variance Inflation Factor (VIF). Table 4 shows these values.

Table 4

Values related to the Variation Inflation Factor (VIF).

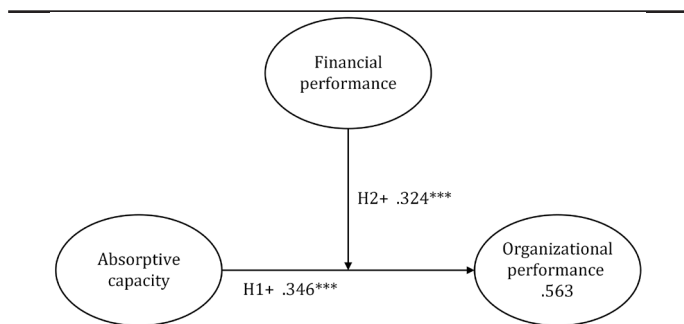
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ACAP06	.688	.503	.474
ACAP07	.707	.429	.402
ACAP08	.668	.404	.424
ACAP10	.714	.496	.505
OP01	.564	.617	.784

Note: Elaborated by the authors, based on research data (SmartPLS3®, 2022).

As all values are less than five, all variables were maintained. Subsequently, Pearson's determination coefficients (R²) were evaluated. According to Ringle et al. (2014, p. 67), R² "assesses the variance portion of the endogenous variables, which is explained by the structural modeling". Figure 2 presents the structure of the measurement model, with the values of R² and path coefficients.

Figure 2

Proposed model, R² and path coefficients.



Note: Elaborated the authors.

It appears that the endogenous latent variables present R² above the percentage suggested as large/high, according to Hair Jr et al. (2011) classifications, that is, all latent variables have a large effect on the model. The model explained a substantial part of the variation of the endogenous variable: 56.3% of organizational performance.

Financial performance has a moderating effect on organizational performance. The direct relationship between absorptive capacity and organizational performance has a path of 0.346 (Figure 2), while the moderating effect of financial performance generates a PLS path result of 0.324.

with f squared, it was evaluated how much each construct is "useful" for the adjustment of the model. Table 5 shows the referred values:

Table 5

f squared.

Constructs	Absorptive Capacity	Financial	Firm performance
Absorptive Capacity		.921	.142
Financial			.261
Firm performance			

Note: Elaborated by the authors, based on research data (SmartPLS3®, 2022).

Values of 0.02, 0.15 and 0.35 are considered small, medium, and large, respectively. the values of Q2 and f2 indicate that the model is accurate and that the constructs are important for the overall fit of the model.

To test the significance of the relationships pointed out, the bootstrapping technique was used is a resampling technique used to assess the significance (p-value) of the correlations (measurement models) and the regressions (structural model).

The effect of absorptive capacity on organizational performance has a moderating effect of financial performance of SMEs are significant at the p = .000 level (Table 6). The Absorptive Capacity to Financial Performance and Financial Performance to Organizational Performance path coefficients of 0.692 and 0.468, respectively, are relatively stronger than the paths from Absorptive Capacity to Organizational Performance of 0.346.

Table 6

Hypothesis.

Hypotheses	T statistics (O/STDEV)	p-value	Significance
H1 Absorptive Capacity -> Organizational Performance	7.305	0.000	supported
H2 Moderating effect: Absorptive Capacity -> Financial Performance -> Organizational Performance	5.947	0.000	supported

Note: Elaborated by the authors.

Another important issue relates to the fit statistics for the models (see Table 7), and while in the past the priority was the predictive relevance of the model in determining a given dependent variable, today PLSSEM offers fit measures such as SRMR, d_ULS, d_G or NFI (Henseler et al., 2015).

Table 7*Fit measures.*

Statistics	Model
Standardized Root Mean Squared Residual (SRMR)	.063
Squared Euclidean distance (d_ULS)	1.736
Geodesic Distance (d_G)	.896
Chi ²	1,428.731
Normed Fit Index (NFI)	0.782

Note: Elaborated by the authors.

In this vein, the Standardized Root Mean Squared Residual (SRMR) value of the measurement model should be lower than 0.08 (Hair Jr et al., 2017). In addition, all discrepancies (Squared Euclidean distance -d_ULS- and Geodesic Distance -d_G-) should be below the 99 per cent quantile of the bootstrap discrepancies. This model has a very good measurement model fit.

Discussion Of Results

The results indicate that the absorptive capacity as an independent variable impact on the organizational performance, as it allows to expand and assimilate new knowledge, according to Zahra & George (2002). In addition, the studies by Glabiszewski & Zastempowski (2017) show that absorption can provide economic growth resulting from the innovation absorbed by the organizations.

On the other hand, the results show that the absorptive capacity influences financial performance when observing the relationship of the variables to have a positive impact on the development of the organization. This can lead to an absorption perspective, as reported in the Strom-Andersen studies (2020).

When analyzing the independent variable “absorptive capacity”, the dependent variables are “Financial” and “Firm Performance”. It was observed that Financial is influenced by the Absorptive Capacity in 48% with an R² of 0.69. However, the dependent variable Firm Performance is influenced by Financial and Absorptive Capacity by 56%. But the R² for ACAP is 0.34 and for Financial 0.46. The research by Silajdzic & Mehic (2015) reached the same conclusion that absorptive capacity has a positive influence on economic growth and Rathakrishnan et al. (2021) absorptive capacity influences company performance.

It can thus be inferred that the companies studied in this investigation have managers who encourage support between the organization's departments to solve problems and spread ideas, and that such attitudes impact both the finance and organizational performance; however, they impact finance in a more relevant way. But, considering that the absorptive capacity influences 48% of finance and that finance influences 46% of the organizational performance, then, the absorptive capacity has an indirect impact on the organizational performance.

The PLS-SEM analysis resulted in retention of 29 indicators and more importantly, the absorptive capacity construct had 9 indicators after elimination of 5 item. The comparative retention of indicators in the PLS-SEM approach enhances the validity and reliability of that model and provides insights for future research and managerial implications that otherwise would be lost.

These results corroborate the research by Strom-Andersen (2020), who in his study concluded that companies that invest in absorptive capacity present evidence that the financial investment made is reflected in the companies' results. A small and medium enterprise (SME) absorbs knowledge to innovation, but also improve organizational performance (Benhayoun et al., 2021).

The variables were attested by the HTMT criterion, where the threshold value is 0.90 and in this study the correlations were between 0.745 and 0.761. The criteria of composite reliability were also met, as values higher than the minimum limit of 0.7 were found.

The results found in this work are in line with the results obtained by several authors, who emphasize that the business absorption capacity is directly linked to results and competitive advantage. In addition, financial performance impacts performance when considering the organizational absorptive capacity. It is evident that there is a relationship between SMEs absorptive capacity, financial performance, and organizational performance.

Moderating effects in the context of PLS path modeling describe a moderated relationship within the structural model. So, absorptive capacity positively influences organizational performance (Ebers & Maurer, 2014, Ali et al., 2016, Oliveira et al., 2020; AlTaweel & Al-Hawary, 2021) and the main finding of this research: financial performance has a moderating effect on organizational performance.

Small businesses ought to recognize and take advantage of the practical benefits of absorptive capacity. However, entrepreneurs should find motivation to develop more formalized absorptive capacities to raise the organizational performance. The results can help companies identify ways to better appropriate external information and knowledge to improve absorptive capacity.

Previous studies on SME have already been produced to find mediating effects on organizational performance: Absorptive Capacity and Firm Performance in SMEs: The Mediating Influence of Strategic Alliances (Flatten et al., 2011), Absorptive capacity, firm performance, and the moderating role of entrepreneurial orientation (Wales et al., 2012), Technological constraints to firm performance, the moderating effects of firm linkages and cooperation (Kolade et al., 2019), Mediating role of innovativeness in the link between core competencies and SME performance (Ng et al., 2020), Growing SMEs and internal financing: the role of business practices (Fadil & St-Pierre, 2021), Entrepreneurial competencies, entrepreneurial orientation, entrepreneurial network, government business support and SMEs performance. The moderating role of the external environment (Pulka et al., 2021). Adapting and repositioning makes a difference in organizational performance and competitiveness (Lafuente et al., 2020). Thus, acquisition, assimilation, transformation, and exploration must be continuous actions on organizations (Miroshnychenko, et al., 2020). Previous studies were not found relating financial performance as a mediating variable of the absorptive capacity and organizational performance relationship in SME.

The existence of the relationship absorptive capacity and financial performance is not enough to assume an improvement in absorptive capacity. In addition to obtaining information, it is important to analyze other elements such as content, trust and vision. Some resources were responsible for generating organizational performance. According to Pagotto, et al. (2022) these relationships strengthen a set of practices that catalyze the development of innovation, as there is a significant and positive relationship between innovation capacity and innovation, so companies do not compete for innovation, but for the ability to achieve it.

Several managerial implications ensue from our study suggesting that SME managers need to understand how different components of absorptive capacity relate to organizational performance. Thus, firms with better absorptive capacity have advantages in sustaining competitive advantage. Thus, gaining access to knowledge, adapting, and incorporating knowledge in the current business are key to organizational performance. According

Miroshnychenko, et al. (2020) providing opportunities to access external knowledge sources (e.g., enabling employees to take part in industry specific meetings) and spreading such knowledge throughout the organization (e.g., through cross-departmental meetings) should foster potential absorptive capacity in SMEs.

The absorptive capacity of SME generally increases their capacity to access, internalize, and exploit new knowledge, as well as their flexibility. Furthermore, our findings support real-world observations. Another interesting aspect of our work is that we shed light on absorptive capacity as a previously overlooked determinant of organizational performance in SME. Specifically, our study demonstrates that absorptive capacity affects organizational performance via financial performance. These findings are in line with those presented by Miroshnychenko, et al. (2020).

Our findings also suggest that business consultants advising SME should consider the importance of possible relationships between financial performance and the different components of absorptive capacity when providing advice and support on the topic of organizational performance.

CONCLUSIONS

The two study hypotheses were accepted. Thus, it is concluded that the absorptive capacity influences SMEs organizational performance and that the effect of absorptive capacity on organizational performance has a moderating effect of financial performance. In conclusion, to achieve the absorptive capacity impact on business results, its articulation is recommended with financial performance.

There is literature confirming that absorptive capacity exerts a positive influence on financial performance; absorptive capacity affects organizational performance; and financial performance can positively influence different non-financial performances of organizations. This article adapts and reconciles the themes Absorptive Capacity, Financial performance, and Organizational Performance in the Brazilian SMEs organizational framework, showing a relationship between them. The absorptive capacity affect organizational performance directly moreover financial performance plays the moderating role in their relationship.

The SEM approaches enable more flexible in developing complex and realistic structural and measurement models. Now is possible to develop new theory and to evaluate the accuracy with which a theoretical model reflects reality. The theoretical contribution of this research consists in the proof that financial performance has a moderating effect on the relationship between absorptive capacity and financial performance. The article provides clearer understanding for scholars and practitioners about the new and effective pathway to promote firm's operational and financial performance. As a limitation of the article, it is indicated that this is just a tested model, there are others. It is noteworthy that there are other scales to measure the same constructs. Finally, the results are not generalized.

Managers must recognize the effect of absorptive capacity on financial and non-financial performance to be able to take managerial actions capable of improving the organization's results. This study offers new insights concerning the performance. For future studies, it is suggested to review qualitatively the interaction of absorptive capacity, financial performance, and organizational performance for managers of small and medium-sized companies, evidencing which aspects they consider bearing the greatest impact on business results.

Conflict of interest statement

The authors declare that there is no conflict of interest.

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Authors' statement of individual contributions

Roles	Contributions			
	Soares TC	Santa SLB	Vaz KKR	Soares SV
Conceptualization	■			■
Methodology	■			
Software	■	■	■	
Validation	■			■
Formal analysis	■	■	■	
Investigation	■	■	■	
Resources	■			■
Data Curation	■			
Writing - Original Draft	■	■	■	
Writing - Review & Editing	■			■
Visualization	■			
Supervision	■			■
Project administration	■			
Funding acquisition	■			■

REFERENCES

- Agostineto, R., Soares, T., Mazon, G., Soares, S. (2022). Influence of intellectual capital and individual absorptive capacity on innovation performance. *Revista de administração da UFSM*, 15, pp. 270-289. <https://doi.org/10.5902/1983465968613>
- Ali, M; Kan, KAS and Sarstedt, M (2016) Direct and configurational paths of absorptive capacity and organizational innovation to successful organizational performance. *Journal of Business Research* 69 (11), pp.5317-5323. <https://doi.org/10.1016/j.jbusres.2016.04.131>
- AlTaweel, IR & Al-Hawary, SI (2021) The Mediating Role of Innovation Capability on the Relationship between Strategic Agility and Organizational Performance. *Sustainability* 13 (14). <https://doi.org/10.3390/su13147564>
- Bazhair, AH (2021) Corporate Governance Mechanism and Firm Performance in Saudi Arabia. *Estudios de Economía Aplicada* 39 (4). <https://doi.org/10.25115/eea.v39i4.4317>
- Benhayoun, L; Le-Dain, MA & Dominguez-Pery, C (2021) Characterising absorptive capacity supporting smes' learnings within collaborative innovation networks: insights from multi-level case studies. *International Journal of Innovation Management* 25 (04). <https://doi.org/10.1142/s136391962150047x>
- Bercovitz, J.E.L.. & Feldman, M.P. (2007) Fishing upstream: firm innovation strategy and university research alliances. *Res. Policy*, 36 (7) pp. 930-948. <https://doi.org/10.1016/j.respol.2007.03.002>
- Bido, D. d. S., & Silva, D. d. (2019). SmartPLS 3: Especificação, estimação, avaliação e relato. *Administração: Ensino e Pesquisa*, 20(2), 488-536. <https://doi.org/10.13058/raep.2019.v20n2.1545>
- Chen, YF & Ma, YB (2021) Does green investment improve energy firm performance?. *Energy Policy* 153. <https://doi.org/10.1016/j.enpol.2021.112252>
- Chin, W. W. (1998). The partial least squares approach for structural equation modeling. In G. A. Marcoulides (Ed.), *Modern methods for business research*. Lawrence Erlbaum Associates ed., 295-336.

- Cohen, W. & Levinthal, D. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly* (35), 128-152. <https://doi.org/10.2307/2393553>
- Dabić, M., Lažnjak, J., Smallbone, D. & Švarc, J. (2019). Intellectual capital, organisational climate, innovation culture, and SME performance: Evidence from Croatia. *Journal of Small Business and Enterprise Development*. 26 (4), 522-544. <https://doi.org/10.1108/JSBED-04-2018-0117>
- de Noronha, M. E. S., Majorana, C. D. B., Longo, L. R., & Avrichir, I. (2021). An analysis of international scientific production on business accelerators from 1990 to 2019. *Iberoamerican Journal of Entrepreneurship and Small Business*, 11(1), e2072. <https://doi.org/10.14211/ibjesb.e2072>
- Ebers, M & Maurer, I (2014) Connections count: How relational embeddedness and relational empowerment foster absorptive capacity. *Research Policy*, 43 (2), pp.318-332. <https://doi.org/10.1016/j.respol.2013.10.017>
- Fadil, N. & St-Pierre, J. (2021), Growing SMEs and internal financing: the role of business practice, *Journal of Small Business and Enterprise Development*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/jsbed-11-2019-0375>
- Flatten, T., Greve, G. I. & Brettel, M. (2011) Absorptive Capacity and Firm Performance in SMEs: The Mediating Influence of Strategic Alliances. *European Management Review* 8(3). <https://doi.org/10.1111/j.1740-4762.2011.01015.x>
- Flynn, B. B., Kakibara, S. S., Schroeder, R. G., Bates, K. A., & Flynn, E. J. (1990). Empirical research methods in operations management. *Journal of Operations Management*, 9(2), 250-284. [https://doi.org/10.1016/0272-6963\(90\)90098-X](https://doi.org/10.1016/0272-6963(90)90098-X)
- Garcia-Perez-de-Lema, D.; Madrid-Guijarro, A.; & Martin, D. P. (2017) Influence of university-firm governance on SMEs innovation and performance levels, *Technological Forecasting and Social Change*, 123, pp 250-261. <https://doi.org/10.1016/j.techfore.2016.04.003>
- Garcia-Sanchez, E; Garcia-Morales, VJ & Martin-Rojas, R (2018) Influence of Technological Assets on Organizational Performance through Absorptive Capacity, Organizational Innovation and Internal Labour Flexibility. *Sustainability* 10 (3). <https://doi.org/10.3390/su10030770>
- Glabiszewski, Waldemar & Zastempowski, Maciej. (2017). The Absorptive Capacity of a Finance Organization as an Efficiency Factor of Its Pro-technology Innovation Activities. *Efficiency In Business And Economics*, [S.L.], 57-69. Springer International Publishing. https://doi.org/10.1007/978-3-319-68285-3_5
- Hair Jr., J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (SAGE Ed. 2 ed.). Los Angeles.
- Hair Jr, J. F, Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *The Journal of Marketing Theory and Practice*, 19(2), 139-152. <https://doi.org/10.2753/MTP1069-6679190202>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modelling. *Journal of the Academy of Marketing Science*, 43(1), 115-135. <https://doi.org/10.1007/s11747-014-0403-8>
- Hourneaux Jr, F, Gabriel, M. L. d. S., & Gallardo-Vázquez, D. A. (2018). Triple bottom line and sustainable performance measurement in industrial companies. *Revista de Gestão*, 25(4), 413-429. <https://doi.org/10.1108/REGGE-04-2018-0065>
- Ikram, M; Sroufe, R; (...) & Shahzad, F (2019) Does CSR influence firm performance? A longitudinal study of SME sectors of Pakistan. *Journal of Global Responsibility*, 11 (1), pp.27-53. <https://doi.org/10.1108/jgr-12-2018-0088>
- Kallmuenzer & Scholl-Grissemann (2017) Disentangling antecedents and performance effects of family SME innovation: A knowledge-based perspective. *International Entrepreneurship and Management Journal*, 13 (4), pp 1117 - 1138. <https://doi.org/10.1007/s11365-017-0443-x>
- Khan, NU, Li, SJ, Khan, SZ, & Anwar, M (2019) Entrepreneurial orientation, intellectual capital, IT capability, and performance. *Human Systems Management*, 38, pp. 297-312. <https://doi.org/10.3233/HSM-180393>
- Kolade, O., Obembe, D. & Salia, S. (2019), Technological constraints to firm performance: The moderating effects of firm linkages and cooperation, *Journal of Small Business and Enterprise Development*, Vol. 26 No. 1, pp. 85-104. <https://doi.org/10.1108/JSBED-01-2018-0029>
- Kostopoulos, K.; Papalexandris, A.; Papachroni, M.; & Ioannou, G. (2011) Absorptive capacity, innovation, and financial performance. *J. Bus. Res.*, 64 (12), pp. 1335-1343. <https://doi.org/10.1016/j.jbusres.2010.12.005>
- Kumar, S., Vanevenhoven, J., Liguori, E., Dana, L.P. & Pandey, N. (2021) Twenty-five years of the *Journal of Small Business and Enterprise Development*: a bibliometric review. *Journal of Small Business and Enterprise Development*. <https://doi.org/10.1108/JSBED-12-2020-0443>
- Lai, YQ; Saridakis, G & Johnstone, S (2017) Human resource practices, employee attitudes and small firm performance. *International Small Business Journal-Researching Entrepreneurship*, 35 (4), pp.470-494. <https://doi.org/10.1177/0266242616637415>
- Laviniki, Laimer, Rodrigues & Marques (2021) The effect of absorptive capacity on the financial performance of Brazilian and Portuguese companies in a low technological intensity sector. *BBR*. 18(5), 537-560. <https://doi.org/10.15728/bbr.2021.18.5.4>
- Lafuente, E., Szerb, L. & Rideg, A. (2020). A system dynamics approach for assessing SMEs' competitiveness, *Journal of Small Business and Enterprise Development*, 29 (4), 555-578. <https://doi.org/10.1108/JSBED-06-2019-0204>
- Lopes, D. P. T., Silva, S. A. da, Almeida, C. M. de, & Martins, L. G. R. (2021). Analisando um ecossistema de educação empreendedora a partir da experiência de uma instituição pública brasileira. *Revista De Empreendedorismo E Gestão De Pequenas Empresas*, Copypedited, waiting translation. <https://doi.org/10.14211/regepe.e2018>
- Manthey, N. B., De Lorenzi Cancellier, Éverton L. P., & Tezza, R. (2021). Desempenho da inovação de produto: análise de medidas e escalas de mensuração para aplicação em PMEs. *Revista De Empreendedorismo E Gestão De Pequenas Empresas*, 10(3), e1892. <https://doi.org/10.14211/regepe.e1892>
- Mazon, G.; Soares, T. C., Birch, R., Schneider, J., Andrede Guerra, J. B. (2022) Green Absorptive Capacity, Green Dynamic Capabilities and Green Service Innovation: a study in Brazilian Universities. *International Journal of Sustainability in Higher Education*, Ahead of print. <https://doi.org/10.1108/IJSHE-10-2021-0454>
- Miroshnychenko, I.; Strobl, A.; Matzler, K. & De Massis, A. (2020). Absorptive capacity, strategic flexibility, and business model innovation: Empirical evidence from Italian SMEs. *Journal of Business Research*, 130, p. 670-682. <https://doi.org/10.1016/j.jbusres.2020.02.015>
- Montenegro de Lima, C.R.; Coelho Soares, T.; Andrade de Lima, M; Oliveira Veras, M.; & Andrade Guerra, J.B.S.O.A (2020) Sustainability funding in higher education: a literature-based review. *International journal of sustainability in higher education*. 21, p.441 - 464. <https://doi.org/10.1108/ijsh-07-2019-0229>
- Najafi Tavani, S.; Sharifi, H.; Soleimanof, S.; & Najmi, M. (2013) An empirical study of firm's absorptive capacity dimensions, supplier involvement and new product development performance *Int. J. Prod. Res.*, 51 (11), pp. 3385-3403. <https://doi.org/10.1080/00207543.2013.774480>
- Ng, H.S., Kee, D.M.H. & Ramayah, T. (2020), Examining the mediating role of innovativeness in the link between core competencies and SME performance, *Journal of Small Business and Enterprise Development*, Vol. 27 No. 1, pp. 103-129. <https://doi.org/10.1108/jsbed-12-2018-0379>
- Oliveira, M; Curado, C; Balle, A.R., & Kianto, A (2020) Knowledge sharing, intellectual capital and organizational results in SMES: are they related? *Journal of Intellectual Capital*, 21 (6), pp.893-911. <https://doi.org/10.1108/JIC-04-2019-0077>
- Pagotto, D. do P, Borges Junior, C. V., Severo, M. I., & Hoffmann, V. E. (2022). Forms of capital, innovation capability and innovation in new ventures. *Iberoamerican Journal of Entrepreneurship and Small Business*, 11(2), e1952. <https://doi.org/10.14211/ibjesb.e1952>
- Papazoglou, ME & Spanos, YE (2021) Influential knowledge and financial performance: The role of time and rivals? absorptive capacity. *Technovation*, 102. <https://doi.org/10.1016/j.technovation.2021.102223>
- Prado-Roman, C, Diez-Martin, F & Blanco-Gonzalez, A (2020) The effect of communication on the legitimacy and performance of organizations. *Revista Brasileira de Gestão de Negócios*, 22(3), 565-581. <https://doi.org/10.7819/rbgn.v22i3.4071>
- Pucci, T., Nosi, C. & Zanni, L. (2017), Firm capabilities, business model design and performance of SMEs, *Journal of Small Business and Enterprise Development*, 24 (2), 222-241. <https://doi.org/10.1108/JSBED-09-2016-0138>

- Pulka, B.M., Ramli, A. & Mohamad, A. (2021), Entrepreneurial competencies, entrepreneurial orientation, entrepreneurial network, government business support and SMEs performance. The moderating role of the external environment, *Journal of Small Business and Enterprise Development*, Vol. 28 No. 4, pp. 586-618. <https://doi.org/10.1108/JSBED-12-2018-0390>
- Rathakrishnan, T., Ng, S. I., Ho, J. A., & Zawawi, D. (2021). O enigma corporativo: como combinar pessoas e processos para melhorar o desempenho da empresa. *Revista Brasileira de Gestão de Negócios*, 23(2), 226-251. <https://doi.org/10.7819/rbgn.v23i2.4099>
- Ringle, C. M.; Silva, D. Da. & Bido, D. (2014). Modelagem de equações estruturais com utilização do SmartPLS. *Revista Brasileira de Marketing*, 13 (2), 56-73. <https://doi.org/10.5585/remark.v13i2.2717>
- Rodrigues Viana, T., Azevedo, A. C., & Morais Pereira, R. (2022). Association between satisfaction and performance in franchise networks: a study from the perspective of correspondence analysis. *Iberoamerican Journal of Entrepreneurship and Small Business*, 11(2), e2187. <https://doi.org/10.14211/ibjesb.e2187>
- Rungi, M & Stulova, V (2013). The Impact of Absorptive Capacity on Post-Acquisition Financial Performance: The European ICT Data. *IEEE International Conference on Industrial Engineering and Engineering Management (IEEM)*, pp.522-526.
- Santos, Roldan & Loo (2021) Clarifying relationships between networking, absorptive capacity and financial performance among South Brazilian farmers. *Journal of Rural Studies*, 84, pp. 90-99. <https://doi.org/10.1016/j.jrurstud.2021.02.011>
- Santos, J. A. R. dos, & Teixeira, R. M. (2021). Processo de criação de empresas ambientalmente sustentáveis. *Revista De Empreendedorismo E Gestão De Pequenas Empresas*, Copyedited, proofread, in layout editing. <https://doi.org/10.14211/regepe.e1913>
- Silajdzic, S & Mehic, E. (2015). Knowledge Spillovers, Absorptive Capacities and the Impact of FDI on Economic Growth: empirical evidence from transition economies. *Procedia - Social And Behavioral Sciences*, 195(3), 614-623. <https://doi.org/10.1016/j.sbspro.2015.06.142>
- Silva, R. A. da, & Primo, M. A. M. (2021). De onde vêm as oportunidades internacionais e para onde vai a literatura?. *Revista De Empreendedorismo e Gestão De Pequenas Empresas*, 10(1), e1826. <https://doi.org/10.14211/regepe.v10i1.1826>
- Strøm-Andersen, Nhat. (2020). Innovation and by-product valorization: a comparative analysis of the absorptive capacity of food processing firms. *Journal Of Cleaner Production*, [S.L.], 253, 1-15. Elsevier BV. <https://doi.org/10.1016/j.jclepro.2019.119943>
- Victorino, K., Sordi, J. D., Gonçalves, M. A., Rauber, L. H., & Jahn, N. M. (2020). Uso do Marketing Digital: Uma Análise de Empresas de um Parque Tecnológico. *Revista De Empreendedorismo E Gestão De Pequenas Empresas*, 9(4), 672-694. <https://doi.org/10.14211/regepe.v9i4.1748>
- Wales, W., Parida, V. & Patel, P. C. (2012) Too much of a good thing? Absorptive capacity, firm performance, and the moderating role of entrepreneurial orientation. *Strategic Management Journal* 34(5). <https://doi.org/10.1002/smj.2026>
- Zahra & George (2002). Absorptive capacity: A review, reconceptualization and extension. *Academy of Management Review*, 27 (2), 185-203. <https://doi.org/10.2307/4134351>

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APPENDIX A

AFFIRMATIVE AND INVESTIGATION CODES STATEMENTS

Affirmative Statements	Code
The search for relevant information from our sector is part of the organizational daily routine.	ACAP 01
Our managers encourage employees to seek information from our industry.	ACAP 02
Our managers expect employees to use information from other industries.	ACAP 03
In our organizational, ideas and concepts are communicated between different areas.	ACAP 04
Our managers encourage support among different organizational areas to solve problems.	ACAP 05
In our organizational there is a fast flow of information between the departments.	ACAP 06
Our managers hold regular department meetings to exchange new developments, problems and achievements.	ACAP 07
Our employees have the ability to structure and use the knowledge acquired externally.	ACAP 08
Our employees prepare new knowledge acquired externally for other purposes and to make it available	ACAP 09
Our employees are successful in articulating existing knowledge with new ideas.	ACAP 10
Our employees are able to apply new knowledge to their work.	ACAP 11
Our managers support the development of projects	ACAP 12
Our organizational regularly reconsiders the technologies used and adapts them according to new knowledge.	ACAP 13
Our organizational has the ability to work better when it adopts new technologies.	ACAP 14
Organizational uses data from the cash flow in a managerial way	Fin 01
Organizational uses data from the balance sheet in a managerial way	Fin 02
Organizational uses data from the income statement in a managerial way	Fin 03
Organizational uses data from its budget in a managerial way	Fin 04
Organizational uses data from its financial planning in a managerial way	Fin 05
Organizational knows how much resources it has raised from third parties	Fin 06
Organizational knows the cost of third parties	Fin 07
Organizational knows how much of its own resources have been invested in the business	Fin 08
Organizational knows the cost of equity	Fin 09
Organizational calculates product cost based on costs	Fin 10
Organizational calculates the need for working capital	Fin 11
Organizational calculates inventory cost	Fin 12
Organizational has a credit policy in place for credit sales	Fin 13
Compared to the average results of our competitors, we grew faster.	FP 01
In general, today our organizational performs better than it did 12 months ago.	FP 02
In general, today our organizational performs better than it did 5 years ago.	FP 03
In the past 12 months, our organizational has achieved its performance goals	FP 04
For the past 5 years, our organizational has achieved its performance goals.	FP 05
Compared to the average of our competitors, we are more profitable	FP 06
Compared to the average of our competitors, we have a larger market share.	FP 07

Note: Elaborated the authors.