_____

DETERMINANTS OF THE GROWTH OF SMALL AND MEDIUM ENTERPRISES[*]

Štefan Slávik [1], Nadežda Jankelová [2], Ivana Mišúnová Hudáková [3], Juraj Mišún [4]

[1,2,3,4] _Department of Management, University of Economics in Bratislava, Bratislava, Slovak Republic_

E-mails:[1] stefan.slavik@euba.sk; [2] nadezda.jankelova@euba.sk; [3] ivana.misunova@euba.sk; [4] juraj.misun@euba.sk

Abstract. SMEs (Small and Medium Enterprises) play a vital role in the economic and social life of the country. Existing studies mostly use proxy performance indicators and relatively general determinants of the performance of SMEs. The goal of the research is to contribute to the deepening and expansion of knowledge about the determinants of performance and growth of SMEs, while the growth and performance of SMEs are expressed by monetary indicators of actual performance, and the determinants of performance are ascertained in specific enterprises based on personal observation of the researcher. The research was conducted on a sample of 146 SMEs. Descriptive statistics, correlation and regression analysis were used to analyze the research sample. The results of the research are the positive determinants, which are the ambitions of the founder, the number of employees, the excellence of the product, the diversity of the level of education and work experience of the employees, the level of education of the employees and the managerial experience of the founder. Negative determinants are the company's age, proof of product excellence, and explicit formulation of financial goals. The originality of the research lies in the use of audited performance indicators of specific SMEs, which are influenced by the determinants identified in these SMEs' field research. Determinants are divided into positive and negative, including the intensity of their influence, further into long-term and short-term, and according to the range of influence on various performance indicators.

Keywords: SMEs, business growth; performance indicators; positive and negative determinants; short-term and long-term influence

Reference to this paper should be made as follows: Slávik, Š., Jankelová, N., Mišúnová Hudáková, I., Mišún, J. 2023. _Entrepreneurship and Sustainability Issues_, 11(2), 480-497. http://doi.org/10.9770/jesi.2023.11.2(32)

JEL Classifications: L25, L26, M10

1. Introduction

Small and medium enterprises have become a recognized economic and social phenomenon of economic and social life (Malki, 2023). Their role in the economy and society cannot be overlooked. In the era of economic globalization, SMEs are recognized as the engine of sustainable economic development in developed and developing countries (Prasanna et al., 2019), (Khorshid et al., 2023). Even in developed countries, there are lofty expectations for SMEs' growth as the country's economic growth depends on them (Heilmann et al., 2018). Small and medium-sized enterprises are still an exciting topic to study because they play a significant role in employment (Simbaña-Taipe et al., 2019), (Eklund, 2020), and in the generation of gross domestic product (Sarwoko and Frisdiantara, 2016). Small and medium-sized enterprises are key to local economic development, contributing to job creation, poverty reduction, and economic growth. They help stimulate competition (Kessler, 2007) and economic renewal, especially in transitioning from a command to a market economy. They show

more creativity, innovation, and flexibility than large firms (Ha et al. 2018). Cicea et al. (2019) believe that studying the performance of SMEs is necessary for three reasons: their significant impact on gross domestic product and unemployment, their ability to adapt to a rapidly changing environment, and the cultivation of free entrepreneurial initiative. In addition, SMEs contribute significantly to technological progress in society and innovation in the economy (Zygmunt, 2017).

The arguments in favour of the existence and role of SMEs in the economy, business and society are favourable, but they do not lead to smooth business success. For example, the survival rate of new SMEs in Slovakia after five years of existence is 46.8%, which is in line with the European Union average (SBA, 2022, p. 44). In a competitive environment, SMEs look for small gaps to avoid direct pressure from large companies. Compared to large companies, their resources are quantitatively smaller and structurally limited. The existence of SMEs can be solved in several ways, but the healthiest way is to achieve sustainable growth (Yoo et al., 2018). Therefore, the fundamental question is what causes, influences, or promotes SMEs' business performance and growth. The answer to this question is the purpose and goal of the research, the results of which are presented in this article.

2. Analysis of the Literature on the Growth of Small and Medium-sized Enterprises

A company's growth is a manifestation of its viability, customer acceptance, and ability to seize opportunities and avoid threats. Pursuing growth is crucial for companies regardless of industry, age, or size (Kindström et al. 2022). The ability to sustain growth is a prerequisite for survival and prosperity (Dobbs and Hamilton, 2007). Explosive growth is essential for superior financial performance (Pearce and Pearce, 2020). From a family business perspective, growth is seen as a sign of success, particularly as a source of continuity and generational wealth creation (Stenholm et al., 2016). Business growth is not the result of chance but is linked to specific factors and attributes (Vaz, 2021). Small business growth is a multidimensional concept that is not easy to grasp, and researchers have not found agreement on a single measure (Cesinger et al., 2018). Understanding the reasons influencing small business growth can help ensure growth is regulated, thoughtful, and sustainable.

Standard or proxy performance indicators are used to measure the growth and success of SMEs. In both cases, they measure business performance, which is expressed in different quantifiers and described from different perspectives because of its multiple meanings. Standard indicators measure financial performance, such as profit growth, sales growth, return on sales, return on assets, return on equity, financial performance (composite) (Ahinful et al., 2023), profitability (Grau and Reig, 2021), return on sales (Fiorentino et al., 2021). Business performance can be profit-oriented and focus on sales returns, cost efficiency, or operational activities, or market-oriented and then on market share, sales growth, or unit cost economy (Zhou, Park, & Ungson, 2013). Standard performance indicators do not only measure immediate performance, for example, for one year. Performance is also expressed over a more extended period, e.g., revenue growth (Kindström et al., 2022), sales growth (Eklund, 2020), (Dalgıç and Fazlıoğlu, 2021), increase in total assets (Ergün and Doruk, 2020).

Proxy performance indicators express performance indirectly, e.g., competitiveness (Dvouletý and Blažková, 2021), SME productivity (Owalla et al., 2022), export performance (Zuchella et al., 2019; Safari and Saleh, 2020), access to sufficient financing (Batrancea et al., 2022), value added (Cicea et al., 2019). Another form of proxy performance indicators is represented by complex indicators, such as entrepreneurial success (Kozielski, 2019) and the replacement of actual data with point scales (Ahinful et al., 2021), Maaji et al. (2023), which compare indicators such as profit growth, revenue/sales growth with indicators of similar companies in the industry. However, according to Fiorentino et al. (2021), employee growth is the most widely used non-financial alternative measure of start-up growth. The most commonly used measures of small business growth (Wiklund and Shepherd, 2003; Gilbert et al., 2006; Wiklund et al., 2009) are firm size growth and sales growth. With the advent of the digital era, the performance of SMEs is measured not only by financial but also by technical indicators (Kim, 2021).

Little is known about which capabilities are more or less critical for achieving a particular dimension of performance, such as growth (Barbero et al., 2011). Internal and external determinants and their combinations influence business performance and its growth. The performance of SMEs is greatly influenced by the

experience, skills, values, and knowledge of employees (Malki, 2023) and their competencies (Eklund, 2020). Another study found that four factors, namely the owner's education level, the owner's marketing skills, customer complaints, and the firm's age, are important in determining the success or failure of SMEs (Maaji et al., 2023). Nazaro and Maltano (2023) also emphasize the owner's key role and predisposition to run the business; Rafiki (2020) reports the experience of the senior manager. The motivations of new entrepreneurs, such as the desire for success, financial reward, social recognition, and the desire for independence, are positively and significantly related to the growth of SMEs (Ismail, 2022), including the self-actualization of the founder (Ekinci et al., 2020). Kozielski (2019) writes that the knowledge of the market, the learning organization, and the marketing orientation of the founder and the employees make it possible to achieve better performance in the market; similar results were also obtained by Putra et al. (2019). However, in the background of personal determinants of growth, the intention to grow stands out, which is promoted by the ambition of the founder of the SME (Cesinger, et al., 2018).

Innovation is a frequently cited internal growth factor for SMEs. Research shows that innovation is crucial to the growth of new firms (Arcuri et al., 2023). Innovation fundamentally increases the likelihood that a firm will grow rapidly (Dalgic and Fazlioglu, 2021). Differences in growth can be explained by different levels of innovativeness in new firms (Fiorentino et al., 2021). Family-owned SMEs benefit from an innovative orientation directly and indirectly related to firm growth through entrepreneurial activity (Stenholm et al., 2016). Zuchella et al. (2019) argue that entrepreneurial and innovative capabilities are the most influential antecedents of objective and subjective international performance measures. Innovation, in combination with an SME's leverage, size, and reputation, influences its profitability (Grau and Reig, 2021). Restrepo-Morales et al. (2019) write that the performance of SMEs depends on their internal innovation efforts, which focus on product development. Furthermore, their findings suggest that imitators perform almost as well as innovators.

In addition to owners, employees, and innovation, the internal factors of SME growth include strategic flexibility (Brozovič et al., 2023), firm age (Coad and Karlsson, 2022), (Ur Rehman, et al., 2019), management, technology, and technical competence in marketing and innovation (Kim, 2021), and type of business ownership (Ahinful et al., 2023). According to Kindström et al. (2022), the specific challenges for the growth of SMEs are three central themes, namely, business model, leadership, and people.

External factors do not receive as much publicity and scholarly interest as internal growth factors. This does not diminish their importance, but external determinants affect all sizes of firms, although not to the same extent. Most studies have focused on internal factors (Eggink, 2021). Ur Rehman et al. (2019) examined business environment factors mainly as barriers to SME growth: availability of finance, infrastructure, regulations, corruption, competition, and insufficiently educated labour force. Eggink (2021) conducted a comprehensive analysis of external influences, from which it is clear that their use in favour of the growth of SMEs is beyond the strengths and possibilities of this category of enterprises. A similar study was carried out by Cicea et al. (2019). From their conclusions, it can be deduced that they are intended more for the creators and regulators of the business environment than for the SMEs themselves. SMEs from the external environment can make the most of this information and resources, such as interest rates, business angels, bank support and public support (Batrancea et al., 2022), financial constraints in the region (Nizaeva and Coskun 2019), influence of industry concentration (Bartoloni et al., 2020).

However, the company's sustainable growth is not the result of a single particular factor. Rather, it is a mixture of business strategy, organization and procedures that are interrelated or mutually influential (Malki, 2023). A study by Runtuk et al. (2023) shows that internal factors that are interrelated and strongly influence SME growth are MS (managerial skills), EO (entrepreneurial orientation) and OwS (ownership structure). In addition, external factors such as CIL (Customer Involvement and Location) (customer involvement and location) and GS (government support) also play an important role in reinforcing the impact of other SME growth factors. The concept of combined determinants of SME growth has also been explored to varying degrees in studies by Salder et al. (2020), Dvouletý and Blažková (2021), Vaz (2021), Owalla et al. (2022). From these studies, the relationships between the size of the firm and its competitive ability (Dvouletý and Blažková, 2021) and the idiosyncratic characteristics of the entrepreneur (Vaz, 2021) come to the fore. The results of a quantitative and

qualitative analysis by Pearce and Pearce (2020) show that high-growth firms rely on different combinations of attributes related to advanced technology, market aggressiveness, and functional excellence.

The literature analysis shows that both standard and proxy indicators of SME performance and growth are predominantly expressed in scoring scales that capture respondents' subjective assessments. There are relatively few studies that work with specific data on the performance and growth of SMEs. In many countries, individual data on the performance and growth of a particular SME are not publicly available or are available only in some detail for a fee. Very few studies describe in more detail the nature of the internal factors that influence firm performance and growth. Most studies are based on publicly available data and, therefore do not go deep enough inside the company, and broadly constructed determinants are much more prevalent. Among the internal determinants, the person of the owner and founder, the internal characteristics of the company, whose bearers are the employees, and motives for growth and innovation come to the fore. It can be assumed that research using individual data on the growth and performance of specific SMEs from audited sources and identifying growth determinants through field research in these SMEs will contribute to deepening and broadening knowledge about the internal determinants of SME growth and performance.

3. Aim, Research Sample, and Research Methods

The research aims to identify the internal determinants of growth and performance of small and medium-sized enterprises. The growth and performance of SMEs are expressed by actual economic results, substitute or proxy indicators measured in rating scales are not used. Internal determinants of performance are identified in specific companies based on personal observation of the researcher.

The analysis of the literature shows that essential determinants of the performance and growth of SMEs are the founder/owner/leading person of the firm (by leading person we mean the most senior employee, who can be the founder, owner and at the same time e.g., the director of the company or a hired professional manager), employees, growth ambitions, and innovations that have an internal (intra-firm) origin. Most of the literature analyzed these determinants have a declarative and hypothetical character without empirical verification. The decision to focus on internal factors is also supported by a study on SME growth (Salder et al., 2020), which found that out of 208 citations on this topic, 33% were devoted to company characteristics, 30% to the external environment, 23% to strategy, and 14% of citations belonged to assets. The company's leading person and employees are an essential part of the company's characteristics, and growth ambitions significantly influence the company's strategy.

3.1 Research Sample and Field Research

The research was conducted in 146 small and medium-sized enterprises on the territory of the Slovak Republic between October and November 2022. The only condition for selecting a company for the sample was its size. The branch of business was not a requirement, although it was recorded. The selection of companies was deliberately random to avoid emphasizing or favoring any other characteristic, apart from the size of the company, which could influence its performance and growth. The research was conducted in the form of a structured interview based on a questionnaire in direct contact between the respondent and the researcher. Sectoral classification of the SMEs studied according to SK NACE (Nomenclature statistique des économiés économiques dans la Communauté européenne):
C - Industrial production: 27
E - Water supply; Sewerage, waste management, and remediation activities: 3
F - Other building completion and finishing work: 12
G - Wholesale and retail trade: 40
H - Transport a storage: 2
I - Accommodation and food services: 5
J - Information and communication: 17
K - Financial and insurance activities: 6
L - Real estate activities: 1
M - Professional, scientific, and technical activities: 12

N - Administrative and support service activities: 12
P - Education: 1
Q - Human health and social work activities: 5
R - Arts, entertainment, and recreation: 3

3.2 Application of Statistical Methods

Business performance is expressed by indicators of revenue, sales and economic results achieved in 2021, and performance growth is expressed by indicators of ln revenue avg, ln sales avg and economic results avg for the period 2016 to 2021. The data on company performance comes from the Finstat database (https://www.finstat.sk), which uses, processes, and displays data from the Register of Financial Statements database (https://www.registeruz.sk). This database contains primary and audited accounting data of the surveyed SMEs. Performance and growth indicators are dependent variables in regression models.

The dependent variables, revenue and sales, were transformed using a logarithm before building the regression models because the distribution of the values of these variables is highly skewed, which can cause bias in the estimates obtained through statistical analyses. In this case, logarithmic transformation is the most common data transformation type in econometric models. In this study, it helped to arrange the variable values symmetrically and alleviate the problem of extreme values. Logarithmic transformation was not used for the dependent variable, economic result, because this variable also acquires negative and zero values. The distribution of values is relatively symmetrical, so transformation is unnecessary.

The regression model was built using backward or stepwise methods, which search for independent variables that significantly influence the dependent variable based on the statistical significance of the variables in the regression model. In the backward method, variables are gradually eliminated from the complete model containing all the selected explanatory variables, based on tests of statistical significance, until the step at which all the remaining variables are statistically significant. The stepwise method is based on gradually including variables with the highest correlation with the dependent variable. At the same time, the statistical significance of variables previously included in the model is also tested at each step. If a variable is found insignificant during the step, it is removed from the model. A regression model is built for each dependent variable using both procedures, and the resulting model is selected based on actual significance and interpretability. The quality of the regression model is assessed using the coefficient of determination (R^2) and the adjusted coefficient of determination (adjusted R^2). The significance of the overall model is tested using the ANOVA test.

Potential determinants of performance and growth (Figure 1) are the product and its innovativeness, the leading person of the company, the employees, and the interest in the growth of the company (growth ambitions). The detailed content of the verified determinants and their measurement scales are given in the Appendix. The data on determinants come from field research on SMEs. Determinants of performance and growth represent independent variables in regression models.
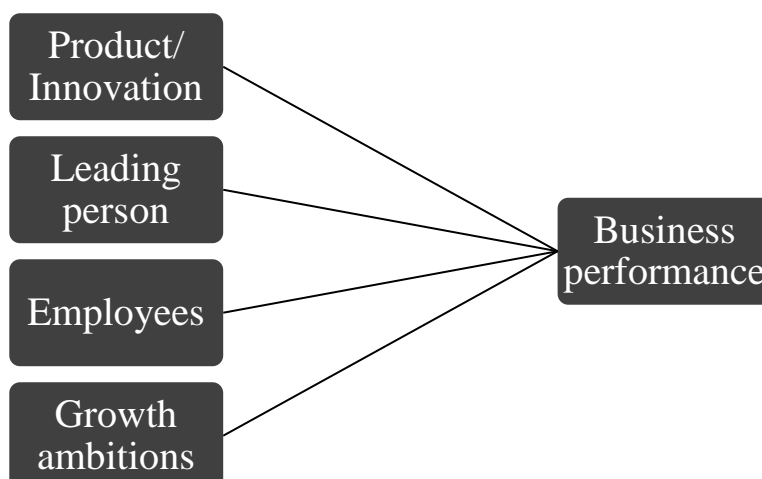
Figure 1. Model of determinants of business performance and growth.

4. Results of the Analysis of the Research Sample

The results of the analysis of the research sample are divided into five groups A, B, C, D and E. Group A (Table 1) shows the determinants divided by individual dependent variables, which are revenues, sales and economic results in 2021 and revenues, sales and economic results for the period 2016 - 2021, which serve to express the growth of business performance. Group B (Table 2) shows the determinants sorted by the magnitude of their impact on the performance indicators, the basic distinction being between positive and negative impact. Group C (Table 3) distinguishes between short-term results, which record the impact of the determinants on performance in 2021, and long-term results, which record the impact of the determinants on performance growth for the period 2016 - 2021. Group D shows the range, or the extent of the influence of the determinants on several performance indicators. Group E shows the sensitivity of performance indicators to influential determinants.

Table 1. Group A: Results of regression analysis – influence of determinants on revenues/sales/economic result

Dependent variable	Independent variable statistically significant	Influence	regress. coef. B
ln revenues 2021	**number of employees**	**positive ↑**	0,025
ln revenues avg	**age of company**	**negative ↓**	- 0,043
ln revenues avg	financial goals*	negative ↓	- 0,368
ln revenues avg	ambitions*	positive ↑	0,405
ln sales 2021	**number of employees**	**positive ↑**	0,023
ln sales 2021	reasons for starting a business *	negative ↓	-0,406
ln sales avg	**age of company**	**negative ↓**	- 0,042
ln sales avg	evidence of product excellence*	negative ↓	- 0,481
ln sales avg	homogeneity vs. heterogeneity of education level*	positive ↑	0,364
ln sales avg	homogeneity vs. heterogeneity of working experience*	positive ↑	0,352
econ. result 2021	**level of education of employees**	**positive ↑**	**
econ. result 2021	**NACE M (Professional, scientific, and technical activities)**	**negative ↓**	***
econ. result 2021	evidence of product excellence *	negative ↓	- 0,340
econ. result 2021	number of employees*	positive ↑	0,397
econ. result 2021	ambitions*	positive ↑	0,358
econ. result avg	**excellence of product**	**positive ↑**	10,568
econ. result avg	management experience of the founder*	positive ↑	0,329
econ. result avg	ambitions*	positive ↑	0,347

independent variables statistically significant at the 0.05 level
*independent variables statistically significant at the 0.1 level
Beta = 518 053,29; ***Beta = -1 024 713,6; **; *(it is not appropriate to use a log. transformation)

4.1 Model for ln Returns 2021, Stepwise Method

Dependent variable: ln returns 2021
* statistically significant independent variable is the number of employees, B = 0.025, sig. 0.015
Interpretation: if the number of employees increases by 1 in 2021, revenues will increase by 2.5%; if the number of employees increases, revenues also increase in the last monitored year;
the model explains 37.6% of the variability of the dependent variable
the model is statistically significant at the 0.05 level, sig. 0.015

4.2 Model for ln Returns avg for the Monitored Period, Stepwise Method

Dependent variable: ln returns avg for the monitored period
* a statistically significant independent variable is the age of the company, B = - 0.043, sig. 0.005;
Interpretation: If the age of the enterprise increases by 1, the average returns decrease by 4.3%; as the company's age increases, its average revenues for the monitored period decrease.
The model explains 46.2% of the variability of the dependent variable.
The model is statistically significant at the 0.05 level.
Independent variables statistically significant at the 0.1 level:
* financial goals, Beta ln = - 0.368, sig. 0.067;
Interpretation: If the financial goals are explicitly formulated, then the performance of the company decreases; however, companies that explicitly set financial goals have a share of 21% in the research sample, while 81% of companies, i.e., four times more, do not formulate financial goals.
* ambition, Beta ln = 0.405, sig. 0.072;
Interpretation: if ambitions increase by one degree/point, average returns will rise; as the company's ambitions grow, its average revenues for the monitored period increase.

4.3 Model for ln Sales 2021, Stepwise Method

Dependent variable: ln sales 2021
* Only the number of employees is a statistically significant variable, B = 0.023, sig. 0.026;
Interpretation: If the number of employees increases by 1, sales will increase by 2.3% in 2021; if the number of employees increases, sales increase in the last observed year.
The model explains 35.1% of the variability of the dependent variable.
The model is statistically significant at the 0.05 level, sig. 0.026.
Independent variables statistically significant at the 0.1 level:
* reasons for starting a business, Beta ln = -0.406, sig. 0.086;
Interpretation: If the share of psychological reasons for starting a business increase, sales will decrease in 2021; if the share of situational reasons for starting a business increase, then in the last observed year sales decrease.

4.4 Model for ln Sales avg for the Monitored Period, Stepwise Method

Dependent variable: ln sales avg for the monitored period
* a statistically significant variable is the age of the company, B = - 0.042, sig. 0.013;
Interpretation: If the age of the enterprise increases by 1 year, the average returns will decrease by 4.2%; if the age of the company increases, its average revenues for the monitored period decrease.
The model explains 38.7% of the variability of the dependent variable.
The model is statistically significant at the 0.05 level, sig. 0.013.
Independent variables statistically significant at the 0.1 level:
* proof of exceptionality, Beta ln = - 0.481, sig. 0.099;
Interpretation: If the evidence of product excellence is increasing, then the average returns for the observed period are decreasing.
* homogeneity of level/degree of education of employees, Beta ln = 0.364, sig. 0.098;
Interpretation: If the homogeneity of the level of education decreases, or heterogeneity increases, the average returns for the observed period increase.

* homogeneity of employees' work experience, Beta ln = 0.352, sig. 0.10;
Interpretation: If the homogeneity of work experience decreases, or heterogeneity increases, then the average returns for the observed period increase.

4.5 Model for Economic Result 2021, Stepwise Method

Dependent variable: economic result 2021
Statistically significant variables are:
* predominant education of employees, Beta = 518,053.3, sig. 0.000;
Interpretations: If the prevailing education of employees increases by 1 degree, the hosp. result in 2021 by 518053 units; as employees' education level increases, the economic result increases in the last observed year.
The model explains 45.7% of the variability of the dependent variable.
The model is statistically significant at the 0.05 level, sig. 0.006.
* NACE M (Professional, scientific, and technical activities), Beta = -1,024,713.6, sig. 0.000;
Interpretation: Enterprises in the NACE M category have (ceteris paribus) an economic result in 2021 of 1.026 mil. units lower than enterprises in other NACE categories, which were, however, statistically insignificant.
The model explains 86.9% of the variability of the dependent variable.
The model is statistically significant at the 0.05 level, sig. 0.001.
Independent variables statistically significant at the 0.1 level:
* proof of exceptionality, Beta ln = -0.340, sig. 0.097;
Interpretation: If the evidence of product excellence is increasing, then the economic result in the last monitored year is decreasing.
* number of employees, Beta ln = 0.397, sig. 0.081;
Interpretation: If the number of employees increases, so does the economic result in the last monitored year.
* ambition, Beta ln = 0.358, sig. 0.079;
Interpretation: If ambitions grow, the economic result also grows in the last observed year.

4.6 Model for Economic Result Average for the Monitored Period, Stepwise Method

Dependent variable: economic result average for the monitored period
* only product/service excellence is a statistically significant variable, B = 10.568, sig. 0.001;
Interpretation: If product/service excellence increases by 1 degree, the average economic result of the company will increase by 10,568 units; if the exceptionality of the product/service increases, the average economic result of the company increases in the monitored period.
The model explains 59.7% of the variability of the dependent variable.
The model is statistically significant at the 0.05 level, sig. 0.001
Independent variables statistically significant at the 0.1 level:
* managerial experience of the founder before starting the business, B = 0.329, sig. 0.063;
Interpretation: Longer managerial experience of the founder before starting the business has a favourable effect on the growth of the average economic result in the monitored period.
* ambition, B = 0.347, sig. 0.051;

Interpretation: If ambitions grow, the average economic result also grows in the monitored period.

Table 2. Group B: Results of regression analysis – the size of influence of significant factors.

Dependent variable	Independent variable statistically significant	Influence	regress. coef. B
econ. result avg	**excellence of product**	**positive ↑**	10,568
ln revenues avg	ambitions[*]	positive ↑	0,405
econ. result 2021	number of employees	positive ↑	0,397
ln sales avg	homogeneity vs. heterogeneity of education level[*]	positive ↑	0,364
econ. result 2021	ambitions[*]	positive ↑	0,358
ln sales avg	homogeneity vs. heterogeneity of working experience[*]	positive ↑	0,352
econ. result avg	ambitions[*]	positive ↑	0,347
econ. result avg	management experience of the founder[*]	positive ↑	0,329
ln revenues 2021	**number of employees**	**positive ↑**	0,025
ln sales 2021	**number of employees**	**positive ↑**	0,023
econ. result 2021	**level of education of employees**	**positive ↑**	[**]
ln sales avg	**age of company**	**negative ↓**	- 0,042
ln revenues avg	**age of company**	**negative ↓**	- 0,043
econ. result 2021	evidence of product excellence [*]	negative ↓	- 0,340
ln revenues avg	financial goals [*]	negative ↓	- 0,368
ln sales 2021	reasons for starting a business [*]	negative ↓	- 0,406
ln sales avg	evidence of product excellence [*]	negative ↓	- 0,481
econ. result 2021	**NACE M** (Professional, scientific, and technical activities)	**negative ↓**	[***]

independent variables statistically significant at the 0.05 level
*independent variables statistically significant at the 0.1 level
Beta = 518 053,29; ***Beta = -1 024 713,6; **; *(it is not appropriate to use a log. transformation)

Positive factors:
- the number of employees is recorded three times as a relevant independent variable or influential positive factor,
- ambition as a characteristic of the leading person of the business is recorded three times as a relevant independent variable, once the managerial experience of the founder before starting the business is recorded, these are influential positive factors,
- the level of education and the work experience of the employees in terms of their diversity are recorded as two relevant independent variables, which have a positive effect on the performance of the company with increasing diversity,
- the level of education of the employees is recorded once as a relevant independent variable or an influential positive factor,
- the excellence of the product is recorded once as a relevant independent variable or an influential positive factor.

Negative factors:
- the age of the firm is recorded twice as a relevant independent variable or influencing factor, but with a negative effect,
- reasons for starting a business are recorded once as a relevant independent variable or influencing factor, but with a negative impact (as the share of psychological reasons increases, the firm's performance decreases),
- evidence of product excellence is recorded twice as a relevant independent variable or influencing factor, but with a negative impact,
- the explicit formulation of financial goals appears once as an influential determinant, but with a negative effect,
- NACE M companies are the only type of companies that determine their own performance from this point of view, but with a negative impact.

Strength of the influence of factors:
Strong factors for performance and growth are product excellence, ambition, diversity of education and employees' work experience, education level of employees, management experience of the founder, and number of employees. However, the number of employees has both a strong and a weak effect on the firm's performance, depending on the type of indicator. The age of the firm has a negative effect on the performance and growth of the firm, but its influence is small. The influence of the reasons for starting a business is relatively strong, but the negative trend means that performance decreases as the psychological reasons for starting a business increase. The choice of industry also has a negative effect on firm performance, but the relevant consequences are only for one industry (NACE M). The determinants evidence of exceptionalism and explicit formulation of financial objectives have a negative effect, which is not in line with common experience.

Table 3. Group C: Results of regression analysis – short-term (2021) vs. long-term view (avg)

Dependent variable	Independent variable statistically significant	Influence	View
ln revenues 2021	**number of employees**	**positive ↑**	short-term
ln sales 2021	**number of employees**	**positive ↑**	
ln sales 2021	reasons for starting a business *	negative ↓	
econ. result 2021	**level of education of employees**	**positive ↑**	
econ. result. 2021	**NACE M** (Professional, scientific, and technical activities)	**negative ↓**	
econ. result 2021	evidence of product excellence *	negative ↓	
econ. result 2021	number of employees *	positive ↑	
econ. result 2021	ambitions*	positive ↑	
ln revenues avg	**age of company**	**negative ↓**	long-term
ln revenues avg	financial goals *	negative ↓	
ln revenues avg	ambitions*	positive ↑	
ln sales avg	**age of company**	**negative ↓**	
ln sales avg	evidence of product excellence *	negative ↓	
ln sales avg	homogeneity vs. heterogeneity of education level *	positive ↑	
ln sales avg	homogeneity vs. heterogeneity of working experience *	positive ↑	
econ. result avg	**excellence of product**	**positive ↑**	
econ. result avg	management experience of the founder*	positive ↑	
econ. result avg	ambitions*	positive ↑	

independent variables statistically significant at the 0.05 level
*independent variables statistically significant at the 0.1 level

Short-term factors (business performance in 2021):
- the number of employees is recorded three times as a relevant independent variable or an influential positive factor,
- the level of education of the employees is recorded as a relevant independent variable or an influential positive factor,
- ambition as a characteristic of an entrepreneur is recorded once as a relevant independent variable, it is an influential positive factor,
- reasons for starting a business are recorded once as a relevant independent variable or an influential factor, but with a negative impact (when the share of psychological reasons increases, the performance of the enterprise decreases),
- doing business in the industry of NACE category M has a negative impact on the company's performance in the short term, other NACE categories have no relevant impact on performance,
- evidence of product excellence is recorded once as a relevant independent variable or influencing factor, but with a negative impact.

Long-term factors (business growth over the monitored period):
- the age of the firm is recorded twice as a relevant independent variable or an influential factor, but with a negative impact,

- ambition as a characteristic of a business leading person is recorded twice as a relevant independent variable, and the founder's management experience before starting the business is recorded once, these are influential positive factors,
- the exceptionality of the product is recorded once as a relevant independent variable or an influential positive factor,
- the level of education and work experience of the employees in terms of their diversity are recorded as two relevant independent variables that have a positive effect on the company's performance as diversity increases,
- explicitly formulated financial goals are recorded once as a relevant independent variable or influencing factor, but with a negative impact,
- proof of product exceptionality is recorded once as a relevant independent variable or influencing factor, but with a negative impact.

Group D: Results of the analysis – range/scope of influence of determinants on performance indicators.
Determinants (independent variables) that affect more than one performance indicator (dependent variables) have a greater impact on business performance because they are more effective and universal than determinants that affect only one indicator. Determinants that affect two or more performance indicators are:
* Number of employees: ln revenues 2021, ln sales 2021, economic result 2021 (3 performance indicators),
* Company age: ln revenues avg, ln sales avg (2 performance indicators),
* Ambitions: ln revenues avg, economic result avg (2 performance indicators),
* Proof of excellence: economic result 2021, ln sales avg (2 performance indicators).

Group E: Analysis results – sensitivity or sensitivity of performance indicators to influential determinants.
Research shows that a varying number of determinants influence performance and growth indicators. Thus, there are indicators that are influenced more complexly or simply, indicators that are stimulated to change by a greater or lesser number of determinants, or to change them, a greater or lesser number of determinants must be activated. Indicators of performance and growth sorted by sensitivity to the number of determinants are economic results 2021 (influenced by 5 determinants), ln sales avg (4), ln revenues avg (3), hosp. result avg (3), ln sales 2021 (2), ln revenues 2021 (1).

5. Discussion

5.1 Positive Determinants

In particular, the number of employees and their ambitions have a positive effect on the company's performance and growth. The number of employees is a broad and immediate factor that, unlike production capacity, does not require significant investment. For firms that do not require a highly skilled workforce, which is the majority in the research sample, additional employees are relatively easily available from local sources. However, increasing the number of employees will eventually reach a limit beyond which a suitable workforce structure is no longer readily available. Brozović et al. (2023) also consider the lack of competent employees as an obstacle to SME growth. Growth ambitions drive the firm forward; they are evidence of the courage and self-confidence of the founder and his dissatisfaction with the performance and size of the firm. Other authors use modified terms for ambitions, such as desire for success (Ismail, 2022) and idiosyncratic characteristics of an entrepreneur (Vaz, 2021), which are positively and significantly associated with SME growth. Other ambition sources are questionable but likely to come from other identified determinants, namely the diversity of education and employees' work experience; diversity is recognized as a source of development and prosperity. Owalla et al. (2022) recommend a comprehensive approach to understanding human capital in SMEs, which also explains the growth opportunities for SMEs. The education and experience of employees as a growth factor are also mentioned by Vaz (2021), but only as a result of the literature review. The determinant of the level of education of employees confirms that education plays an important role in the development of society and business. Business growth is also based on the excellence of the product, which is probably related to all the positive determinants already mentioned.

5.2 Negative Determinants

The age of the company has a negative effect on its performance, which can be attributed to fatigue from long-term business, the exhaustion of innovative ideas, but also the reduction of business opportunities and the activity of competitors. The company grows over time, but at the same time, it ages over time, and therefore its growth slows down. The negative effect of the age of SMEs is also reported by Ur Rehman et al. (2019), but it becomes less significant in the later stages of the company's development. The age of SMEs is positively associated with growth according to Bartoloni et al. (2020), but this is not the case for the group of very small enterprises. Although they can be very strong in themselves, psychological reasons for starting a business seem to weaken the real interest in entrepreneurship because they are more idealistic than situational reasons, which are usually a life or career necessity. Psychological factors are, therefore weaker than situational factors in real entrepreneurship and have a negative effect. Evidence of product excellence makes the impact of product excellence on business performance more realistic; evidence of excellence is more real than the supposedly exceptional object of evidence. Companies in NACE M (professional, scientific, and technical activities) disrupt the usual picture of the positive impact of innovation on company performance or complement it in that innovation is also risky, and its positive link to company performance is not self-evident. Explicitly formulated financial goals are associated with a negative impact on performance, which again disrupts the conventional wisdom about the impact of formalizing business activities on firm performance. The reason for this phenomenon is probably that the formalization and explicit expression of precise goals conflicts with the informal internal processes of SMEs and the mostly opportunistic behavior of SMEs.

5.3 The Power of Influence of Determinants

The dominant qualitative factors are product excellence, ambition, education, and work and management experience, combined with a weak influence of the number of employees. Other researchers focus on innovation rather than product excellence. Innovation is considered a critical growth factor by Arcuri et al. (2023), Restrepo-Morales et al. (2019) write that the performance of SMEs depends on their internal innovation efforts focused on product development, and Dalgıç and Fazlıoğlu (2021) state that innovation fundamentally increases the probability of a firm becoming a high-growth firm. The age of the firm has a negative effect on the firm's performance, but the effect is very weak. Positive factors are the result of the selection and improvement of human resources, which are scarcer than traditional resources of a material and quantitative nature, which are freely available on the market. This also results from the relationship between the influence of the qualitative characteristics of human resources and the influence of the number of employees on performance indicators. The number of positive determinants clearly exceeds the number of negative determinants, and the power of influence of positive determinants also exceeds the power of influence of negative determinants. From the point of view of positive influence, the number of employees and the ambitions of the company's management can be considered as key factors in the growth of the company's performance. From the point of view of negative influence, the age of the company and evidence of product excellence can be considered as key factors that limit the growth of the company's performance. From the point of view of the power of influence, product excellence, ambition, education, work, and management experience can be considered as key factors in the growth of the company's performance. The intersection point between the view of the number of influencing factors and the view of the power of influence is the ambition of the company's management.

5.4 Short-term Determinants

Among the short-term determinants appeared: the number of employees, because it is a quickly mobilized positive factor; situational reasons for starting a business, because they work better in the short term than psychological reasons, but El Shoubaki et al. (2020) found that reasons for starting a business mediate the relationship between firm growth and the quality of human capital, especially managers; the impact of higher education, because it has immediate effects; ambition, because it is a necessary condition for growth, but it plays a smaller role in the short term than in the long term; Proof of product excellence does not support short-term growth, probably because excellence is initially misunderstood by customers; the business of SMEs in the NACE M industry category has a negative impact on their performance and growth, as it appears to require high-quality resources and the business results are subject to higher risks than in other NACE categories.

5.5 Long-term Determinants

The effect of firm age on performance and growth is manifested as long-term firm fatigue, which weakens growth. Still, persistent/sustained leadership ambition promotes growth and compensates for firm fatigue. The founder's experience from the previous business remains the engine of growth, driven by the employees' diversity of education and work experience. The influence of the founder's experience on SME growth has also been identified by Rafiki (2020) and Meressa (2020). Product excellence (impression) and evidence of product excellence (reality) have contradictory effects on long-term growth. Customers respond positively to the impression a product creates but confirmed exceptionality corrects that impression. The effort to formulate explicit long-term financial goals has a negative effect because it seems to place unattainable demands on SMEs given their size, position in the economy, competition, and volatile future. In the short term, the key determinant of the company's performance is the number of employees. In the long term, the critical determinant of the company's performance is the ambition of the leading person.

5.6 Range/Scope of Influence of Determinants on Performance Indicators

The influence of the determinants on the performance indicators is not equal. The largest influence is the number of employees, the age of the company, the ambition, and the evidence of excellence. Other factors have an impact on only one performance indicator. The four factors with the greatest impact can be divided into quantitative factors (number of employees and age of the company) and qualitative factors (ambition and evidence of excellence). Quantitative factors can be considered less sophisticated factors and qualitative factors can be considered more sophisticated factors. Looking further at the sophistication of the factors, it is clear that all other factors that affect only one performance indicator are sophisticated or qualitative. The predominance of sophisticated factors is obvious but not sufficient because the determinants work together and therefore all determinants identified as relevant (statistically significant) are necessary.

5.7 Sensitivity/Perception of Performance Indicators to Influential Determinants

Each performance indicator is influenced by at least one statistically significant determinant at the 0.05 level. However, there is no single universal, broad determinant that would affect each performance indicator. The largest number of determinants (5) affects the economic result 2021 indicator, which measures short-term profit. The economic result is a more complex indicator compared to revenues and sales because it is "pulled" by sales and "pushed" by costs; it is the difference between sales and costs, while sales and revenues are unidirectional indicators that are "pulled" by demand. The number of relevant determinants probably reflects this complexity. However, the economic result avg, which measures profit in the long run, is influenced by fewer determinants (3) and in a different composition. The long-term indicators ln sales avg (4) and ln revenues avg (3) are influenced by a larger number of determinants than the short-term indicators ln sales 2021 (2) and ln revenues 2021 (1). Sales are affected by one more determinant than revenues because sales are more subject to market influences.

The more determinants affect the company's performance indicator, the more difficult it is to achieve this performance indicator, but in addition, the mobilization and actionability of individual determinants must also be assessed. The number of determinants expresses the complexity and difficulty of achieving a specific performance indicator and business growth.

Conclusions

The main result of the research is two groups of determinants that have positive or negative impact, the power of influence, the extent of influence on several indicators of performance and growth, and their influence is short-term or long-term. The positive determinants are ambition (strong, extensive, and long-term influence), number of employees (strong to weak influence, extensive and short-term influence) and product excellence, diversity of educational level and work experience, educational level of employees, managerial experience of the founder (all with strong but limited long-term influence). The negative determinants are the age of the firm (small, medium, and long-term effects), evidence of product excellence (larger, medium, short-term, and long-

term effects), explicit formulation of financial goals (larger, limited, and long-term effects), and sophisticated NACE M business (larger, limited, and short-term effects).

The results of the research contributed to the deepening and broadening of the knowledge about the positive causes of business performance and growth, which are mainly the ambition and managerial experience of the leading person of the company, the quality of the company's employees expressed in terms of education and work experience, and an exceptional product. Equally important are the negative causes of business performance and growth, which are the effort to formalize some parameters of business activity, e.g., explicit setting of financial goals and argumentation of product excellence, operating in a sophisticated industry has a negative effect on performance, and performance slightly declines with increasing age of the company.

The practical consequences of the new knowledge are to respect and strengthen the positive determinants of performance and growth, the cultivation of which is mainly a matter of quality and targeted management of human resources. The influence of negative determinants can be weakened by leaving more room for the company's adaptive actions and by placing less emphasis on the fulfilment of clearly defined business parameters, which are generally incompatible with the opportunistic behaviour of SMEs. The slightly negative effect of the company's age can be corrected by revitalizing the corporate culture, conditioned by human resource diversity.

Research findings are naturally limited by the sample size, which in turn is limited by research capacity. Research studies work with different numbers and types of determinants. Still, the resulting number of statistically significant determinants is usually not large, suggesting that more reliable determinants would be identified in a larger sample. However, further research can also go in a different direction, such as increasing the sample size, by investigating a more profound and broader background of the already identified determinants and the form, content, and conditions of their influence.

References

Ahinful, G. S., Boakye, J. D., & Osei Bempah, N. D. (2023). Determinants of SMEs' financial performance: Evidence from an emerging economy. *Journal of Small Business & Entrepreneurship*, *35*(3), 362–386. https://doi.org/10.1080/08276331.2021.1885247

Al Malki, M. (2023). A Review of Sustainable Growth challenges faced by Small and Medium Enterprises. *International Journal for Global Academic & Scientific Research*, *2*(1), 53–67. https://doi.org/10.55938/ijgasr.v2i1.39

Arcuri, M. C., Gandolfi, G., & Russo, I. (2023). Exploring the impact of innovation intensity on the growth of female-led entrepreneurial firms. *Journal of Small Business and Enterprise Development*, *30*(5), 947–966. https://doi.org/10.1108/JSBED-04-2022-0209

Barbero, J. L., Casillas, J. C., & Feldman, H. D. (2011). Managerial capabilities and paths to growth as determinants of high-growth small and medium-sized enterprises. *International Small Business Journal: Researching Entrepreneurship*, *29*(6), 671–694. https://doi.org/10.1177/0266242610378287

Bartoloni, E., Baussola, M., & Bagnato, L. (2020). Waiting for Godot? Success or failure of firms' growth in a panel of Italian manufacturing firms. *Structural Change and Economic Dynamics*, *55*, 259–275. https://doi.org/10.1016/j.strueco.2020.08.007

Batrancea, L. M., Balcı, M. A., Chermezan, L., Akgüller, Ö., Masca, E. S., & Gaban, L. (2022). Sources of SMEs Financing and Their Impact on Economic Growth across the European Union: Insights from a Panel Data Study Spanning Sixteen Years. *Sustainability*, *14*(22), 15318. https://doi.org/10.3390/su142215318

Brozović, D., Jansson, C., & Boers, B. (2023). Strategic flexibility and growth of small and medium-sized enterprises: A study of enablers and barriers. *Management Decision*. https://doi.org/10.1108/MD-05-2022-0577

Cesinger, B., Gundolf, K., & Géraudel, M. (2018). Growth intention and sales revenue growth in small business: The mediating effect of firm size growth. *International Journal of Technology Management*, *78*(3), 163. https://doi.org/10.1504/IJTM.2018.095628

Cicea, C., Popa, I., Marinescu, C., & Ştefan, S. C. (2019). Determinants of SMEs' performance: Evidence from European countries. *Economic Research-Ekonomska Istraživanja*, *32*(1), 1602–1620. https://doi.org/10.1080/1331677X.2019.1636699

Coad, A., & Karlsson, J. (2022). A field guide for gazelle hunters: Small, old firms are unlikely to become high-growth firms. *Journal of Business Venturing Insights*, *17*, e00286. https://doi.org/10.1016/j.jbvi.2021.e00286

Dalgıç, B., & Fazlıoğlu, B. (2021). Innovation and firm growth: Turkish manufacturing and services SMEs. *Eurasian Business Review*, *11*(3), 395–419. https://doi.org/10.1007/s40821-020-00176-4

Dobbs, M., & Hamilton, R. T. (2007). Small business growth: Recent evidence and new directions. *International Journal of Entrepreneurial Behavior & Research*, *13*(5), 296–322. https://doi.org/10.1108/13552550710780885

Dvouletý, O., & Blažková, I. (2021). Determinants of competitiveness of the Czech SMEs: Findings from the global competitiveness project. *Competitiveness Review: An International Business Journal*, *31*(3), 361–378. https://doi.org/10.1108/CR-01-2020-0007

Eggink, M. (2021). Determinants of Small, Medium and Micro Enterprises' Performance: A Structured Literature Review. *Proceedings of The 5th International Conference on Business, Management and Economics*, 15–38. https://openscholar.ump.ac.za/handle/20.500.12714/530

Ekinci, Y., Gordon-Wilson, S., & Slade, A. (2020). An exploration of entrepreneurs' identities and business growth. *Business Horizons*, *63*(3), 391–401. https://doi.org/10.1016/j.bushor.2020.02.003

Eklund, C. M. (2020). Why do some SME's become high-growth firms? The role of employee competences. *Journal of Intellectual Capital*, *21*(5), 691–707. https://doi.org/10.1108/JIC-07-2019-0188

El Shoubaki, A., Laguir, I., & Den Besten, M. (2020). Human capital and SME growth: The mediating role of reasons to start a business. *Small Business Economics*, *54*(4), 1107–1121. https://doi.org/10.1007/s11187-018-0129-y

Ergün, B., & Doruk, Ö. T. (2020). Effect of financial constraints on the growth of family and nonfamily firms in Turkey. *Financial Innovation*, *6*(1), 28. https://doi.org/10.1186/s40854-020-00188-z

Gilbert, B. A., McDougall, P. P., & Audretsch, D. B. (2006). New Venture Growth: A Review and Extension. *Journal of Management*, *32*(6), 926–950. https://doi.org/10.1177/0149206306293860

Grau, A., & Reig, A. (2021). Operating leverage and profitability of SMEs: Agri-food industry in Europe. *Small Business Economics*, *57*(1), 221–242. https://doi.org/10.1007/s11187-019-00294-y

Ha, S.-T., Lo, M.-C., Mohamad, A. A., & Ramayah, T. (2018). Determinants of innovation performance among SMEs: Moderating effect of entrepreneurial orientation. *Global Business & Management Research*, *10*(2), 241–252. https://ir.unimas.my/22415/1/Determinants%20of%20Innovation%20Performance%20among%20SMEs%20(abstract).pdf

Halim Perdana Kusuma Putra, A., Ashoer, M., Abdullah, A., Muhtasom, A., Farida, I., & Guntur, A. (2019). The Determinant of SME's Performance: The Main Role of Leadership Strategy, Knowledge, and Business Orientation. *Proceedings of the 1st International Conference on Life, Innovation, Change and Knowledge (ICLICK 2018)*. Proceedings of the 1st International Conference on Life, Innovation, Change and Knowledge (ICLICK 2018), Bandung, Indonesia. https://doi.org/10.2991/iclick-18.2019.91

Heilmann, P., Forsten-Astikainen, R., & Kultalahti, S. (2020). Agile HRM practices of SMEs. *Journal of Small Business Management*, *58*(6), 1291–1306. https://doi.org/10.1111/jsbm.12483

Ismail, I. J. (2022). Entrepreneurial Start-up Motivations and Growth of Small and Medium Enterprises in Tanzania: The Role of Entrepreneur's Personality Traits. *FIIB Business Review*, *11*(1), 79–93. https://doi.org/10.1177/23197145211068599

Kessler, A. (2007). Success factors for new businesses in Austria and the Czech Republic. *Entrepreneurship & Regional Development*, *19*(5), 381–403. https://doi.org/10.1080/08985620701439959

Khorshid, M., Rezk, M. R., Ismail, M., Piccinetti, L., Radwan, A., Helmy, O., & Sakr, M. M. (2023). Research, development and innovation in business enterprises: experience from Egypt. *Insights into Regional Development*, *5*(1), 41-58. https://doi.org/10.9770/IRD.2023.5.1(3)

Kim, S.-S. (2021). Sustainable Growth Variables by Industry Sectors and Their Influence on Changes in Business Models of SMEs in the Era of Digital Transformation. *Sustainability*, *13*(13), 7114. https://doi.org/10.3390/su13137114

Kindström, D., Carlborg, P., & Nord, T. (2022). Challenges for growing SMEs: A managerial perspective. *Journal of Small Business Management*, 1–24. https://doi.org/10.1080/00472778.2022.2082456

Kozielski, R. (2019). Determinants of SMEs business success – emerging market perspective. *International Journal of Organizational Analysis*, *27*(2), 322–336. https://doi.org/10.1108/IJOA-02-2018-1343

Ma'aji, M. M., Shrubsall, R. S., & Anderson, E. O. (2023). Determinants of SME Success or Failure in Frontier Markets. *International Journal of Banking and Finance*, *18*(1), 1–30. https://doi.org/10.32890/ijbf2023.18.1.1

Meressa, H. A. (2020). Growth of micro and small scale enterprises and its driving factors: Empirical evidence from entrepreneurs in emerging region of Ethiopia. *Journal of Innovation and Entrepreneurship*, *9*(1), 11. https://doi.org/10.1186/s13731-020-00121-9

Nalzaro, R. N. M., & Montaño, V. (2023). Determinants on the Survival of Small and Medium Enterprises: An Exploratory Analysis. *OPJU Business Review*, *2*(1), 1–25. http://www.opju.ac.in/opjubr/documents/volume2/1.pdf

Nizaeva, M., & Coskun, A. (2019). Investigating the Relationship Between Financial Constraint and Growth of SMEs in South Eastern Europe. *SAGE Open*, *9*(3), 215824401987626. https://doi.org/10.1177/2158244019876269

Owalla, B., Gherhes, C., Vorley, T., & Brooks, C. (2022). Mapping SME productivity research: A systematic review of empirical evidence and future research agenda. *Small Business Economics*, *58*(3), 1285–1307. https://doi.org/10.1007/s11187-021-00450-3

Pearce, D. D., & Pearce, J. A. (2020). Distinguishing attributes of high-growth ventures. *Business Horizons*, *63*(1), 23–36. https://doi.org/10.1016/j.bushor.2019.10.003

Prasanna, R., Jayasundara, J., Naradda Gamage, S. K., Ekanayake, E., Rajapakshe, P., & Abeyrathne, G. (2019). Sustainability of SMEs in the Competition: A Systemic Review on Technological Challenges and SME Performance. *Journal of Open Innovation: Technology, Market, and Complexity*, *5*(4), 100. https://doi.org/10.3390/joitmc5040100

Rafiki, A. (2020). Determinants of SME growth: An empirical study in Saudi Arabia. *International Journal of Organizational Analysis*, *28*(1), 205–225. https://doi.org/10.1108/IJOA-02-2019-1665

Restrepo-Morales, J. A., Loaiza, O. L., & Vanegas, J. G. (2019). Determinants of innovation: A multivariate analysis in Colombian micro, small and medium-sized enterprises. *Journal of Economics, Finance and Administrative Science*, *24*(47), 97–112. https://doi.org/10.1108/JEFAS-09-2018-0095

Runtuk, J. K., Ng, P. K., Ooi, S. Y., Purwanto, R., Nur Chairat, A. S., & Ng, Y. J. (2023). Sustainable Growth for Small and Medium-Sized Enterprises: Interpretive Structural Modeling Approach. *Sustainability*, *15*(5), 4555. https://doi.org/10.3390/su15054555

Safari, A., & Saleh, A. S. (2020). Key determinants of SMEs' export performance: A resource-based view and contingency theory approach using potential mediators. *Journal of Business & Industrial Marketing*, *35*(4), 635–654. https://doi.org/10.1108/JBIM-11-2018-0324

Salder, J., Gilman, M., Raby, S., & Gkikas, A. (2020). Beyond linearity and resource-based perspectives of SME growth. *Journal of Small Business Strategy*, *30*(1), 1–17. https://libjournals.mtsu.edu/index.php/jsbs/article/view/1644

Sarwoko, E., & Frisdiantara, C. (2016). Growth Determinants of Small Medium Enterprises (SMEs). *Universal Journal of Management*, *4*(1), 36–41. https://doi.org/10.13189/ujm.2016.040105

SBA. (2022). *Malé a stredné podnikanie v číslach v roku 2021 [Small and medium-sized business in numbers in 2021]*. Slovak Business Agency. https://monitoringmsp.sk/wp-content/uploads/2022/07/MSP_v_cislach_2021_final.pdf

Stenholm, P., Pukkinen, T., & Heinonen, J. (2016). Firm Growth in Family Businesses-The Role of Entrepreneurial Orientation and the Entrepreneurial Activity. *Journal of Small Business Management*, *54*(2), 697–713. https://doi.org/10.1111/jsbm.12166

Taipe, L. E. S., Mullo, D. C. U., Chuquin, M. S., Urrutia, X. M., & Sánchez, M. I. (2019). Key determinants for growth in high-growth Ecuadorian manufacturing firms. *International Journal of Management and Enterprise Development*, *18*(4), 293. https://doi.org/10.1504/IJMED.2019.102756

Ur Rehman, N., Çela, A., Morina, F., & Sulçaj Gura, K. (2019). Barriers to growth of SMEs in Western Balkan countries. *Journal of Management Development*, *38*(1), 2–24. https://doi.org/10.1108/JMD-09-2018-0273

Vaz, R. (2021). Firm Growth: A review of the empirical literature. *Revista Galega de Economía*, 1–20. https://doi.org/10.15304/rge.30.2.7190

Wiklund, J., Patzelt, H., & Shepherd, D. A. (2009). Building an integrative model of small business growth. *Small Business Economics*, *32*(4), 351–374. https://doi.org/10.1007/s11187-007-9084-8

Wiklund, J., & Shepherd, D. (2003). Aspiring for, and Achieving Growth: The Moderating Role of Resources and Opportunities*. *Journal of Management Studies*, *40*(8), 1919–1941. https://doi.org/10.1046/j.1467-6486.2003.00406.x

Yoo, W.-J., Choo, H., & Lee, S. (2018). A Study on the Sustainable Growth of SMEs: The Mediating Role of Organizational Metacognition. *Sustainability*, *10*(8), 2829. https://doi.org/10.3390/su10082829

Zhou, N., Park, S. H., & Ungson, G. R. (2013). Profitable growth: Avoiding the 'growth fetish' in emerging markets. *Business Horizons*, *56*(4), 473–481. https://doi.org/10.1016/j.bushor.2013.03.008

Zucchella, A., Mascherpa, S., & Strange, R. (2019). Which organizational capabilities matter for SME export performance. *European J. of International Management*, *1*(1), 1. https://doi.org/10.1504/EJIM.2019.10018432

Zygmunt, A. (2017). Innovation activities of Polish firms. Multivariate analysis of the moderate innovator countries. *Oeconomia Copernicana*, *8*(4), 505–521. https://doi.org/10.24136/oc.v8i4.31

Appendix

List of independent variables (verified determinants) and their measurement scales

Independent variables	Numerical codes	Scale
Number of employees	no	quantitative variable
Age of company	no	quantitative variable (years)
Excellence of product	1	local
	2	regional to national
	3	Central European
	4	International (extraordinary product)
Evidence of product excellence	0	no (no proofs)
	1	yes
Management experience of the founder/leading person before starting a business	no	quantitative variable (years)
Reasons of the founder /leading person for starting a business	1	situational
	2	situational - psychological
	3	psychological
Growth ambitions of the founder/leading person	1	local
	2	regional to national
	3	cross-border and international
Explicit formulation of financial goals	0	no
	1	yes
Prevailing level of education of employees	0	no
	1	without a high school diploma (trained)
	1,5	without a high school diploma (trained) + secondary school
	2	secondary school
	2,5	secondary school and university 1st degree
	3	university 1st degree
	3,5	university 1st degree + university 2nd degree
	4	university 2nd degree
Homogeneity ↔ heterogeneity of the level of education of employees	1	completely/almost homogeneous education
	2	prevailing homogeneous education
	3	balanced education
	4	prevailing heterogeneous education
	5	completely/almost heterogeneous education
Homogeneity ↔ heterogeneity of employees' work experience	1	completely/almost homogeneous experiences
	2	prevailing homogeneous experiences
	3	balanced experience
	4	prevailing heterogeneous experiences
	5	completely/almost heterogeneous experiences
NACE	C - R	industry incorporation of researched SME

Data Availability Statement: If interested, the data are available from the authors of the paper.

Author Contributions: Conceptualization: *Štefan Slávik, author*; methodology: *Štefan Slávik, Nadežda Jankelová*; data analysis: *Štefan Slávik, Nadežda Jankelová*; writing—original draft preparation: *Štefan Slávik, Nadežda Jankelová*, *Ivana Mišúnová Hudáková*, *Juraj Mišún*, writing; review and editing: *Ivana Mišúnová Hudáková*, *Juraj Mišún*; visualization: *Ivana Mišúnová Hudáková*, *Juraj Mišún*. All authors have read and agreed to the published version of the manuscript.

Štefan SLÁVIK is a full professor of Business Management at Department of Management, University of Economics in Bratislava, Slovakia. He has long been involved in the research of business models and start-ups. His research interests include strategic management, management of change, business models, start-ups, and entrepreneurship.
ORCID ID: https://orcid.org/0000-0002-2890-8091

Nadežda JANKELOVÁ is a full professor at the Department of Management, University of Economics in Bratislava. She teaches the courses Management, Managerial Decision Making at the bachelor's and master's degree level and Contemporary Topics in Management and Normative and Descriptive Conceptions of Decision Making at the doctoral level. In the research area, she focuses on soft factors of management, on the topics of organizational behaviour and corporate culture. She is also working on a project to develop a curriculum in economics and management reflecting the conditions of the digital age, the appeal of sustainability of economic activity and global citizenship.
ORCID ID: https://orcid.org/0000-0002-0045-4737

Ivana MIŠÚNOVÁ HUDÁKOVÁ successfully graduated with honours at the Slovak University of Agriculture in Nitra and defended her dissertation at the Department of Management and Marketing, Faculty of Economics and Management at this university. In 2015 she habilitated at the University of Economics in Bratislava in the study field of Economics and Business Management. She has been working at the Department of Management since 2003 and is currently an associate professor. She teaches Strategic Management and Management, participates in several research projects, and has a rich publishing activity with more than 230 outputs. Some of them are indexed in WoS and Scopus databases.
ORCID ID: https://orcid.org/0000-0001-8417-9762

Juraj MIŠÚN graduated from the University of Economics in Bratislava, where he subsequently earned his doctorate and associate professor. During his studies he authored articles on economics and management. For a long time, he has been focusing as one of the few researchers on management function of controlling. He has acted as a course tutor in Management, has published books and journals in this area and regularly speaks at scientific conferences. He has more than 200 publications to his credit, gradually increasing their quality towards indexed, impacted and peer-reviewed journals and scientific monographs.
ORCID ID: https://orcid.org/0000-0002-1586-1351