
Forecasting the Outsourcing Use in Small and Medium-Sized Enterprises: A Multiple Regression Model

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Abstract:

Purpose: The purpose of the study was to examine the relationship between the effects of outsourcing implementation and the decisions to use outsourcing by small and medium-sized enterprises in the short term.

Design/Methodology/Approach: The research objective was achieved using the effects of outsourcing implementation, selected on the basis of the literature review and recorded among the surveyed enterprises. The study was conducted by survey method using CAWI method, the research sample was 278 small and medium-sized enterprises. Based on the data obtained, two multivariate regression models were created, the first predicting the propensity to use outsourcing in the coming year, and the second in the two to three year perspective. Each is based on the same five independent variables, which were pre-selected effects of outsourcing implementation.

Findings: The results of the study suggest that multivariate regression models can be successfully used to predict the use of outsourcing by small and medium-sized enterprises over short periods. Regression analyses showed significant relationships between the independent variables and the propensity to use outsourcing. The first model explained almost 90% of the variation, and the second model, despite a lower coefficient of determination (over 60%), was also statistically significant. The research points to potential practical applications of the applicability of prediction models in the management of outsourcing in small and medium-sized enterprises, especially in the context of supplier quality.

Practical Implications: Despite limitations such as selected implementation effects and the characteristics of the research sample, predictive models can help companies predict the effects of short-term outsourcing decisions. Which may be important for small and medium-sized enterprises, which often have limited resources.

Originality/Value: To fully understand enterprise process delegation decisions, research should continue, taking into account the broader scope and diversity of factors influencing SMB decisions.

Keywords: Turbulent environment, outsourcing effects, prediction, supplier management, SME, CAWI.

JEL codes: D22, M21.

Paper type: Research article.

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1. Introduction

Outsourcing, as a business strategy has become a crucial element of today's business world, especially for small and medium-sized enterprises. The dynamics of economic change in the market require companies to apply new technologies and modern management techniques to increase their chances of maintaining or increasing their market competitiveness (Słonieć *et al.*, 2018; Ying *et al.*, 2021). Enterprises need solutions to support decision-making, rapid adaptation and change, and the development of strategies and business models (Pereira *et al.*, 2021).

Outsourcing, as an integral part of today's small-medium enterprise market, represents activities during which a company delegates the execution of selected functions or processes to external partners (Pizoń *et al.*, 2022; Zarzycka *et al.*, 2019). Transferring selected business activities to external service providers can increase efficiency, reduce operating costs and enable concentration on a company's most crucial aspects (Asatiani *et al.*, 2019).

Research presented in the literature reveals that to focus more on their core competencies, companies tend to outsource non-core and core processes. (Lam and Chua, 2009). This approach can be considered strategic due to risk minimisation associated with the absence or low competence in auxiliary process implementation. A strategic approach to supporting process implementation allows companies to focus on their core competencies (Khaki and Rashidi, 2012).

These can be considered competencies that are difficult for other companies to copy (Edvardsson *et al.*, 2011). The most commonly delegated auxiliary functions and processes include but are not limited to, finance and accounting, human resources management, purchasing and expenses, billing, order entry, payroll, cash and investment management (Jacobides, 2008).

Conversely, the ability to develop core competencies through the use of outsourcing and the delegation of auxiliary processes can significantly increase a company's competitiveness and market flexibility, as well as provide the opportunity to improve its financial position (López, 2014).

Gaining increased flexibility to adapt their business to evolving market conditions makes it easier to scale operations according to current needs without maintaining a permanent employee team. Responding quickly to seasonal changes in demand without reducing jobs or hiring new employees limits company costs.

Therefore, a company using outsourcing relies on the resources available from the partner. The same situation can occur during the launch of new products, delegating part of the processes involved in the implementation of a specific project to a partner can be a significant help in responding to the rapidly changing preferences of the company's customers or clients (Munjal *et al.*, 2019).

Furthermore, during market uncertainty, turbulent environments and crises, the ability to flexibly adapt the resources used can prevent possible financial losses. The right outsourcing partner can have a ready solution with the necessary resources, technology and knowledge to accelerate the pace of new projects in the company (Chawla, 2020). This will also translate into reduced expenditure to purchase new infrastructure, machinery, equipment or software or to employ a specialist with knowledge and experience in a particular area (Petersen *et al.*, 2022).

Focusing on core competencies, the possibility of reducing company costs and gaining access to a global pool of resources are the main determinants of outsourcing use (Edvardsson and Teitsdóttir, 2015; Gunasekaran *et al.*, 2015).

2. Literature Review

Enterprises are not required to have the resources, competencies and knowledge to use them in their operations. Resources include new technologies, which today include artificial intelligence, virtual reality and digital working platforms (Bhattacharyya and Mandke, 2021). For example, integrating operations through cloud capabilities can improve work efficiency and process execution quality (Rani and Furrer, 2021).

Using external resources, including digital implementation, supports companies in all economic sectors when increasing operational efficiency and creating effective administrative structures (Ponciano and Amaral, 2021).

The previously mentioned determinants or consequences of outsourcing indirectly influence one of the further possibilities of outsourcing, the quality improvement of process execution (Di Gregorio *et al.*, 2009). Firstly, process or function outsourcing is always underpinned by a formal contract to provide precisely defined services (Khalatur *et al.*, 2021).

Establishing clear expectations and quality standards, followed by activity monitoring and auditing, allows the quality of implemented processes to be maintained or progressed (Aronsson and Koskela, 2009). Secondly, using the resources, knowledge and skills of a new partner who is an expert in their offered services can translate into higher quality (AL-Sabbagh *et al.*, 2023). Compared to the process implementation by internal departments, which may be less advanced in a particular area due to specialisation and possessing core competencies from within the particular company's operations.

Thirdly, outsourcing enables the use of the latest technologies and tools available in the market (Ge *et al.*, 2021). Therefore, it increases control over the risk of holding internal resources rapidly evolving technology requires continuous investment and development (Kim, 2021). Fourthly, the opportunity to work with international suppliers allows companies to gain a global perspective and benefit from

international quality standards, helps to identify areas for improvement and increases efficiency levels (Jacobides, 2008).

High flexibility in the disposal of resources, the lack of need to employ staff with expertise and competence for ancillary process implementation areas, or the lack of need for a large number of internal resources, i.e. machinery and technology, allow the company to reduce costs (Dekker *et al.*, 2020).

Rising operating costs have always been a problem among small and medium-sized enterprises, and the use of outsourcing addresses this (Neves *et al.*, 2022). Outsourcers with the appropriate competence and resources can perform the same processes, maintaining or improving their quality at a lower cost (Kabiraj and Sinha, 2016).

Outsourcing in a company offers the possibility of transforming fixed costs into variable costs, paying for tasks performed or resources used in a strictly defined time (Aronsson and Koskela, 2009). Outsourcing often accompanies optimisation processes introduced by specialist suppliers. Through better practices and more efficient processes, companies can achieve cost savings (Christiansson and Rentzhog, 2020).

Using outsourcing, companies can focus on business-critical areas while eliminating the need to manage multiple internal processes. This, in turn, reduces the administrative costs associated with managing and maintaining the internal organisational structure (Potkany *et al.*, 2016).

There is a significant relationship between the cost of outsourcing processes and the decision to outsource within a company (Cioch and Kulisz, 2023; Premuroso *et al.*, 2012). The benefits achieved through outsourcing allow the company to realize its operational and strategic goals. Furthermore, the current perception is that outsourcing guarantees the company's profitability (Verwaal, 2017).

Successful outsourcing use in small and medium-sized enterprises requires a prudent approach besides foresight and planning skills (Serskykh and Britchenko, 2019). Forecasting is a crucial business strategy element, enabling companies to anticipate market changes, adapt to new challenges and maximise outsourcing benefits (Nyameboame and Haddud, 2017). In this context, using multivariate regression models becomes crucial, enabling the analysis of complex relationships between various factors and outsourcing effectiveness.

Multivariate regression has been used in various aspects of outsourcing, including customer behaviour modelling, cost-effectiveness analysis, selection of outsourcing service providers and the decision-making process for drafting outsourcing contracts (Danilczuk *et al.*, 2024). It has also been applied in a decision analysis framework

for manufacturing outsourcing, including value-focused thinking, influence diagrams and decision trees (Choobineh *et al.*, 2013; Kulisz *et al.*, 2024).

A linear programming model was also developed to analyse cost-effectiveness when selecting a supplier, considering material preparation, process transition, quality and lead time (Wang *et al.*, 2022). Another model was a model to support outsourcing provider selection, which, by considering the relationship between the selection criteria by assessing the performance of outsourcing companies in the telecommunications sector, provides a comprehensive picture of their profile (Liou and Chuang, 2010).

This research reveals the versatility of multiple regression concerning various outsourcing aspects, from risk management to cost minimisation and supplier selection.

Despite verification of outsourcing-related areas, few types of research focusing on the specific effects of outsourcing implementation in the context of small and medium-sized enterprises exist. This research is distinctive by focusing on 278 companies in the SME sector, excluding micro-enterprises. The impact of five different effects of the implementation of outsourcing on the decision to delegate processes and tasks in the short term was analysed.

The literature on the subject contains items combining the topics of multiple regression and outsourcing but in contexts other than the one presented in this article. Although studies are using multiple regression of the outsourcing area, there is no sufficiently detailed analysis of the impact of these specific effects on the decisions of small and medium-sized enterprises to use outsourcing in the short term (Chen *et al.*, 2021; Cioch *et al.*, 2024; Litwin *et al.*, 2023).

Therefore, the results presented here are a contribution that fills this research gap, providing a perspective on the outsourcing decision-making process.

The introduction of outsourcing in the structure of small and medium-sized enterprises' operations has significant effects that shape companies' attitudes towards delegating processes in the short term. Based on the literature, the following hypotheses were formulated:

H1. The impact of outsourcing implementation in small and medium-sized enterprises has a significant impact on their willingness to delegate processes over the coming year.

H2. The impact of outsourcing implementation in small and medium-sized enterprises has a significant impact on their willingness to delegate processes over a two- to three-year perspective.

This publication aims to identify and understand the relationship between the effects of outsourcing implementation and the decisions of small and medium-sized enterprises to delegate outsourcing services in the short term.

3. Research Methodology

Based on the literature review of the factors and aspects that companies consider when using outsourcing in their operations, a selection was made of the most commonly reported effects of implementing outsourcing in small and medium-sized enterprises. Table 1 presents these with an indication of the literature item in which the effect is mentioned. Furthermore, the table includes an effect identifier found in the raw data and used later in the article when developing multivariate regression models.

Table 1. Selected effects of outsourcing implementation

No.	Indication	Selected effects of outsourcing implementation	Position of literature
1	q6a_r4	Reducing operating costs	(Edvardsson et al., 2019; López, 2014; Mansor et al., 2018)
2	q6a_r5	Access to know-how, resources and modern technology	(Edvardsson and Teitsdóttir, 2015; Gonzalez et al., 2015; Ikumapayi et al., 2020)
3	q6a_r6	Increasing specialisation in core areas	(González Ramírez et al., 2015; Khaki and Rashidi, 2012)
4	q6a_r10	Maintaining or improving the quality of outsourced processes	(Chang et al., 2012; González Ramírez et al., 2015; Gunasekaran et al., 2015)
5	q6a_r12	Increasing competitiveness and market flexibility	(González Ramírez et al., 2015; López, 2014)

Source: Own elaboration.

Data were obtained through a questionnaire survey using the nationwide research panel Ariadna. The research population is small and medium-sized Polish enterprises. The research sample was selected based on company classifications by Regulation 651/2014 of the European Union Commission, considering the employee numbers and annual turnover.

Additionally, to map the current state of enterprises in Poland, a percentage breakdown of respondents - small and medium-sized enterprises - was considered in terms of share in GDP, number of enterprises, employment and sectors of activity, i.e. services, agriculture and industry. The above division is based on the latest Report on the State of the Small and Medium-Sized Enterprise Sector in Poland, PARP, 2019, which is the most recent for this time.

The survey was conducted in the above form using the CAWI (Computer Assisted Web Interview) method due to the possibilities associated with maintaining an

adequate response rate and with the sample's representativeness. Currently, Poland has approximately 2.15 million enterprises, of which 99.8% are SMEs and the remainder are large enterprises. The distribution of enterprises in the previously mentioned sector is as follows: micro (96.7%), small (2.4%), and medium (0.7%). On this basis, taking 100% of the population as small and medium-sized enterprises, the study population is approximately 67,000 enterprises.

The questionnaire used exclusion questions regarding the research sample, companies not falling within the definition of an SME in addition to micro-enterprises, and the lack of outsourcing services use. The survey was conducted during May and June 2022 and lasted four weeks, while the final sample comprised 278 companies.

The survey questionnaire in electronic form, available to the respondent, consisted of the first part of metrics and exclusion questions. So that the right questions can be reached by representatives of companies that belong to the limitations of the research sample. In the second part, there were general questions on outsourcing use, the implementation effects and the prospects for outsourcing use in the future.

R-Studio software version 4.3.1 was used to conduct statistical analyses and create multivariate regression models. Additionally, Microsoft Excel software version 2312 was used to present the selected elements in graphical form.

The starting point was to create predictive models based on the same independent variables (Table 1) and the two dependent variables $q14_r1$ and $q14_r2$. The predicted values correspond to the willingness to use outsourcing, analogously, within the next year and in a two- to three-year perspective. The values in the models are points from one to five, where one means *Very little (To a very small extent)* and five means *Very much (To a very large extent)*. The data set, containing 278 observations, was divided into training and test sets in a ratio of 80%:20%. The models obtained are as follows:

$$q14_j = \beta_{0j} + \beta_{1j}q6a_r4 + \beta_{2j}q6a_r5 + \beta_{3j}q6a_r6 + \beta_{4j}q6a_r10 + \beta_{5j}q6a_r12 \quad (1)$$

where:

$$j \in \{r1, r2\}$$

$\beta_j = (\beta_{0j}, \beta_{1j}, \beta_{2j}, \beta_{3j}, \beta_{4j}, \beta_{5j})$ - coefficient vector of the regression model for indicator j .

Quality assessment of the multivariate regression models was conducted using the determination coefficient (R^2), which shows the extent to which the variation in the dependent variable is explained by the model.

$$R^2 = \frac{\sum_{n=1}^n (\hat{y}_i - \bar{y}_i)^2}{\sum_{n=1}^n (y_i - \bar{y}_i)^2} \quad (2)$$

where:

y_i - calculated value q14_j,

\bar{y}_i - arithmetic mean q14_j,

\hat{y}_i - q14_j value obtained from the model.

To confirm the significance of the determination coefficient R^2 , the F statistic was used.

$$F = \frac{\frac{R^2}{k}}{\frac{1 - R^2}{n - p - 1}} \quad (3)$$

where:

R^2 - determination coefficient,

k - number of independent variables in the model,

n - number of observations,

p - number of parameters in the regression model.

The Student's t-test was used to determine the statistical significance of the individual independent variables of the models. The test coefficients assess the significance of the effect of the independent variables on the dependent variable.

$$t = \frac{\beta_j}{SE_{\beta_j}} \quad (4)$$

where:

β_j - coefficient vector of the regression model for index j,

SE_{β_j} - standard error of the regression coefficient vector.

4. Research Results and Discussion

The variables used in the open-ended questions related to outsourcing use in the surveyed companies were measured using a five-point Likert scale, ranging from *To a very small extent* to *To a very large extent*.

The research sample was divided into sectors based on the current division of the Polish economy. Table 2 presents the basic descriptive statistics of the survey sample.

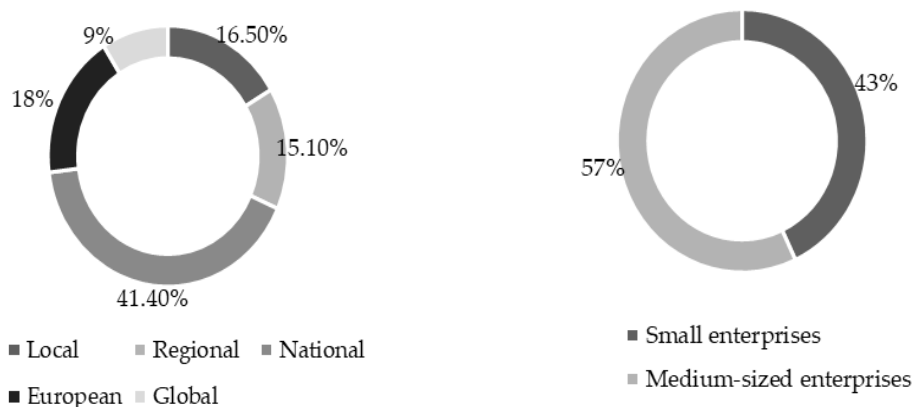
Table 2. *Descriptive statistics*

Research sample size		278
Position of the representative	Owner / Chairman / Member of the Board	35
	Management position	243
Size of employment	10 - 49	119
	50 - 249	159
The sector of activity and division into sections	Services	214
	Agriculture	6
	Industry	58

Source: Own elaboration.

The number of responses obtained for the whole sample is 278. The people representing the companies surveyed were predominantly employees in a managerial positions (243). Figure 1 presents the percentage structure of the survey sample by scope of activity and size of employment. The dominant sector among the companies surveyed is the services sector, partially influenced by the number of business sectors belonging to it. However, the situation is similar in the Polish market.

Figure 1. (a) *Structure of the survey sample by business coverage;* (b) *Structure of the survey sample by employment size*



(a)

(b)

Source: Own study.

National operational coverage is predominant for the companies surveyed at 41.4%, this figure can be increased by local (16.5%) and regional (15.1%) operational

coverage. This brings the total to 73% of businesses operating exclusively in the country. The remaining 27% is divided between European coverage (18%) and global coverage (9%). Furthermore, by employment size, the research sample includes 57% medium-sized enterprises and 43% small enterprises.

A multivariate regression model to predict the willingness of the surveyed companies to use outsourcing in the forthcoming year was constructed based on five independent variables. It is presented as follows:

$$\begin{aligned}
 q14_r1 = & -0.43745 + 0.50695 \times q6a_r4 + 0.13947 \times q6a_r5 \\
 & + 0.24671 \times q6a_r6 + 0.19960 \times q6a_r10 \\
 & + 0.12361 \times q6a_r12
 \end{aligned}
 \tag{5}$$

The regression results reveal that all Student's t-test values for the independent variables and the intercept are statistically significant (< 0.001). The test results and other indicators are presented in Table 3. The highest value was observed for the variable $q6a_r4$ (14.233), confirming the strong statistical dependence of this variable on the dependent variable.

Table 3. Model quality indicators $q14_r1$

	t-Student	Pr(> t)	R-squared	F-statistic	p-value (F)
(Intercept)	-4.772	3.35e-06 ***	0.896	374	< 2.2e-16
$q6a_r4$	14.233	< 2e-16 ***			
$q6a_r5$	4.870	2.15e-06 ***			
$q6a_r6$	8.062	5.01e-14 ***			
$q6a_r10$	7.085	1.92e-11 ***			
$q6a_r12$	4.148	4.82e-05 ***			

Note: '***' 0.001; '**' 0.01; '*' 0.05; '.' 0.1; ' ' 1.

Source: Own elaboration.

The R^2 determination coefficient is 0.896, indicating a good model fitting to the data. This means that 89.6% of the variation in the dependent variable can be explained by the independent variables. The high value of the F-statistic indicates the general significance of the model and the influence of the independent variables on the dependent variable. This indicator confirms a p-value close to zero.

In conclusion, the multiple regression model analysis suggests that the independent variables applied effectively explain the variation in SMEs' willingness to use outsourcing in the coming year. The results confirmed the research hypothesis (H1).

The model is statistically significant, and its predictive power is high, making it an adequate tool for forecasting outsourcing decisions in the group of companies surveyed. There is a strong statistical relationship between the selected effects of outsourcing implementation and the propensity of SMEs to delegate processes in the coming year.

All statistically significant regression coefficients for the individual effects (q6a_r4, q6a_r5, q6a_r6, q6a_r10, q6a_r12) are positive, indicating that these factors have a positive impact on companies' propensity to outsource.

A multiple regression model predicting SMEs' willingness to use outsourcing in the next two to three years was constructed using the same independent variables. It is presented as follows:

$$\begin{aligned}
 q14_r2 = & 0.75165 + 0.29321 \times q6a_r4 + 0.15723 \times q6a_r5 \\
 & + 0.22756 \times q6a_r6 + 0.11539 \times q6a_r10 \\
 & + 0.01510 \times q6a_r12
 \end{aligned}
 \tag{6}$$

The regression results indicate that not all coefficients are statistically significant, as confirmed by their p-values below the 0.05 significance level. The intercept is 0.75165 and is statistically significant ($p = 0.000334$). Table 4 presents selected model quality indicators. Among the independent variables, q6a_r4, q6a_r5, and q6a_r6 are statistically significant, while q6a_r10 (0.11539) reaches the significance limit at the 0.1 level. The variable q6a_r12 (0.01510) is not statistically significant.

Table 4. Model quality indicators q14_r2

	t-Student	Pr(> t)	R-squared	F-statistic	p-value (F)
(Intercept)	3.6450	0.0003 ***	0.6057	33.2	< 2.2e-16
q6a_r4	3.6600	0.0003 ***			
q6a_r5	2.4410	0.0155 *			
q6a_r6	3.3060	0.0011 **			
q6a_r10	1.8210	0.0700 .			
q6a_r12	0.2250	0.8221			

Note: '***' 0.001; '**' 0.01; '*' 0.05; '.' 0.1; '.' 1.

Source: Own elaboration.

The determination coefficient has a lower value compared to the previous model (0.6057). This means that the second model explains 60.57% of the variation in the dependent variable, indicating less predictive power over the previous model.

However, the F-statistic takes a relatively high value and the p-value close to zero, indicating that the model is statistically significant in explaining the variation in the dependent variable.

In conclusion, the second multivariate regression model indicates that not all selected effects of outsourcing implementation significantly affect the propensity of SMEs to delegate processes in a two- to three-year perspective. Statistical significance appears mainly for variables q6a_r4, q6a_r5 and q6a_r6. This model may be less suitable for forecasting outsourcing decisions in the longer term than the near-year model.

The analysis results indicate a statistically significant relationship between the selected effects of outsourcing implementation and the willingness of companies to use outsourcing in the future over two to three years. The regression coefficient values for variables q6a_r4, q6a_r5, and q6a_r6 are positive and statistically significant, suggesting that an increase in the value of these effects increases the propensity of companies to use outsourcing in the long term.

However, it should be noted that the variable q6a_r10 reaches a significance limit of 0.1, and its impact on the propensity to outsource during this period may be less clear. In contrast, the variable q6a_r12 is not statistically significant, meaning that it has no significant effect on the propensity of companies to delegate processes over a two- to three-year perspective.

Summarising, based on the analysis of the results of the second multiple regression model (q14_r2), hypothesis H2 can be partially confirmed. The impact of the variables q6a_r10 and q6a_r12 in this model may be less clear and require further analysis.

The research opens up the prospect of the practical use of predictive models for companies providing outsourcing services. It can improve the quality management of the services offered, facilitate decision-making and adapt its activities to the market's needs and requirements regarding good outsourcing practices. Importantly, in these times of dynamic market changes and a turbulent environment.

The literature has repeatedly addressed the issue and use of multiple regression in outsourcing. This confirmed the relevance of this method in the practical field of supporting modern business management techniques. Multivariate regression is a versatile method that, in a business context, allows the study of the impact of different factors on the occurring changes.

Therefore, it can support the decision-making process. In the outsourcing aspect, multivariate regression was used to verify the impact of executing selected processes by external partners on a company's industrial performance (Valiyattoor and Bhandari, 2020). Furthermore, the method supported refining safety-critical selection testing practices for defence industrial software in Turkey (Garousi *et al.*, 2018). In addition, it was used to evaluate and classify outsourcing service providers in manufacturing (Liaw *et al.*, 2020).

Research areas in the literature related to outsourcing and multiple regression, do not provide studies focusing on the specific effects of outsourcing implementation on small and medium-sized enterprises contexts. Difficulties were encountered in finding existing studies focusing on this particular area. While some research on multiple regression in the area of outsourcing may have been published, what is lacking is an analysis of the impact of these specific effects on the decisions of SMEs in the short-term context of process outsourcing.

Therefore, the results presented here are a contribution that fills this research gap by offering a perspective on the outsourcing decision-making process in small and medium-sized enterprises.

5. Conclusions, Proposals, Recommendations

The results of the multiple regression analyses conducted showed significant relationships between the independent variables and the dependent variable. The first model created, concerning the willingness to use outsourcing in the coming year, represented almost 90% of the variation in the dependent variable. However, the second model, which included a perspective of two to three years, explained more than 60% of the variability.

Despite the lower coefficient of determination in the second model, both models are statistically significant, meaning that the observed relationships between the variables are not random. The high coefficient of determination in the first model may indicate a strong effect of the independent variables on the dependent variable. This can be important, especially if the model has practical applications, for example, in forecasting or decision-making.

However, the statistical significance of both models indicates that they have some validity, although in different degrees. A high model's determination coefficient may indicate that a particular model will be more accurate in forecasting. This will be particularly relevant whether forecasting or planning the company's strategy.

Consequently, as a result of the multivariate regression analyses conducted, the set research objective was realised, exploring the relationship between the effects of implementing outsourcing and decisions regarding its use by small and medium-sized enterprises in the short term.

The results indicate significant relationships between the independent variables and the willingness to use outsourcing during the surveyed periods. Noteworthy is the fact that the two regression models developed, despite differences in the determination coefficients, have significantly contributed to a more complete understanding of the decision-making processes in outsourcing.

It is important to emphasise that no model is perfect, each has some limitations. This includes the models created in the pages of this publication, the limitations e.g., in the effects of the outsourcing implementation that were selected and not considered and the research sample chosen.

Company size, the number of employees, sector and industry of operation, scope and environment can significantly influence companies' willingness and predisposition to outsource use.

Therefore, further research is worthwhile, extending the range of variables and testing different models to obtain a more comprehensive perspective of the phenomenon under analysis.

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