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## The Level of Outsourced Tasks in IT and its Dependence on Selected Explanatory Factors

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**Abstract:**

**Purpose:** The main aim of this article is to determine the impact of selected factors on the level of activities outsourced in the organization to IT outsourcing (ITO). This goal was achieved by building a structural model where the modeled value was the level of outsourced IT activities. Next, it was indicated the factors that have a stimulating and limiting effect on the modeled quantity, and to determine the level of influence. The model was tested on data from economic practice (large Polish organizations).

**Design/Methodology/Approach:** A critical study by review literature and descriptive analysis method, with empirical and formal methods. For the collection of data, the research tool used is a questionnaire, statistical methods were applied to construct the research model and test the hypotheses with structural equations methodology.

**Findings:** The seven variables had an impact on the level of ITO. The stimulating effect had benefits of this service, reasons for using ITO (onshoring and offshoring), factors of a successful relationship with the service provider and factors determining the choice of an ITO service provider. The limiting effect had the risk factors of ITO (onshoring). The risk factors of ITO (offshoring) had a stimulating effect.

**Practical Implications:** The model shows factors that have a stimulating and limiting effect on the level of ITO. This allows the management of an organization that uses ITO or has the intention to do so, and organizations that provide outsourcing services in the IT area, to pay attention to particularly important factors and to ignore factors that are not important.

**Originality/Value:** Construction of the structural model of the level of outsourced IT activities. Identification of factors that stimulate and restrict the level of outsourced IT activities, and determination of the level of impact of these factors on the modeled variable.

**Keywords:** IT outsourcing, large companies, Poland, level of outsourced tasks, SEM, PLS-PM, explanatory factors.

**JEL codes:** M15, M10, C51.

**Paper Type:** Research paper.

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## 1. Introduction

The concept of outsourcing, as we understand it today, is a relatively new category and dates to the second half of the 20th century. The history of outsourcing dates to the 20th century, while the history of IT outsourcing begins in the 1980s. The history of IT outsourcing is mentioned in the research by McLellan *et al.* (1995). The method was used much earlier by other researchers. The business concept of outsourcing was developed at the beginning of the 20th century when Henry Ford formulated his basic principle: *“If there is a thing that we cannot do more efficiently, cheaper or better than our competitors, there is no point in doing it further – we should hire the one who does it better than we do”*.

The essence of outsourcing is purchasing specialized services from external suppliers (Alaghehband *et al.*, 2011). Therefore, it is a classic make-or-buy decision, assuming the implementation of activities that the organization can perform, due to its key competences, and the acquisition of those that an external supplier will do better and cheaper for us. On the other hand, outsourcing is the transfer to another company of some business functions or parts of the business process of the enterprise to optimize the enterprise management structure by focusing on the core business and transferring non-core functions to external specialized contractors.

### 1.1 Related Work in IT Outsourcing

In the literature on the subject, IT outsourcing is defined as:

- Significant input of the external supplier in a form of material and/or human resources related to all or selected components of the information technology infrastructure in the user organization (Loh and Venkatraman, 1992).
- Delegating some or all the organization’s IT systems and related services to other companies for management to achieve the desired result (Willcocks, Lacity, and Fitzgerald, 1995).
- The decision made by the organization to accept a contract or sell IT assets and/or employee activities to a supplier who will provide and manage the assets and services in return for a specified period for remuneration (Kern and Willcocks, 2000).

IT outsourcing is a dynamically developing field of business services. Research carried out in developed countries shows that IT outsourcing services are, or may soon become, one of the driving forces of many countries’ economies, especially in developing or transition countries. The United States of America is the homeland of modern outsourcing.

Outsourcing is one of the established business trends implemented by companies (Adams *et al.*, 2018), and decisions about IT outsourcing are of strategic importance

(Peukert, 2017; Poleto *et al.*, 2020). The specific factors influencing the strategic decisions of ITO are important (Pravesh, Chari, and Agrawal, 2021). A review of empirical research from 1996-2015 indicates that IT outsourcing can have a positive, negative, mixed, moderate, or significant impact on the company (Lahiri, 2016). The benefits of outsourcing identified in the literature are as follows, cost savings, management flexibility, efficiency, market access, higher product quality (Yang and Huang, 2000; McCarthy and Anagnostou, 2004; Lewin, Massini, and Peeters, 2009; Yao *et al.*, 2010; Dolgui and Proth, 2013). The importance of contracting in ITO is emphasized (Zhipeng and Jianyun, 2019).

Cha and Kim (2018) found that the critical factors in the supplier relationship management model at ITO are goal sharing, process innovation, information sharing and communication, collaboration for joint work, evaluation standardization and evaluation feedback. The types of outsourcing that have the greatest impact on the company's results were identified through meta-analysis (Awe, Kulangara, and Henderson, 2018). Attention is also paid to the unconscious aspect of outsourcing decisions (Das and Grover, 2018) and intercultural relations between ITO suppliers and customers (Wei *et al.*, 2021). The transfer of knowledge between customers and suppliers in outsourcing projects is also important (McGowan and Pole, 2019).

One should pay attention to the numerous publications presenting quantitative research on IT outsourcing (Barthélemy and Geyer, 2005; Fisher, Hirschheim, and Jacobs, 2008; Gonzalez, Gasco, and Llopis, 2010; 2015; Lacity *et al.*, 2011). The mentioned articles and the research results contained therein indicate the importance of the research area - IT outsourcing.

## **1.2 Related Work in Reference to Structural Models in IT Outsourcing**

Structural modeling is a multivariate statistical technique used to study and evaluate causal relationships. The technique was also used to model IT outsourcing. Various investigated variables were modeled in the ITO studies. The structural model of Vivek, Banwet, and Shankar (2008), presents the influence of three factors of the characteristics, transaction, key activity, and relation on investments in offshoring. The model of Ali and Green (2012), presents the impact of IT intensity and effectiveness of IT management on IT outsourcing decisions. In the model of Bahl and Wali (2013) it was assumed that the performance of an organization measured by tangible and intangible assets is influenced by the quality of the security service.

In the hierarchical three-tier model of overall satisfaction with ITO, Kim *et al.* (2013) argued that the effectiveness of management is influenced by the parameters of the contract and the proximity of the supplier - recipient relationship. In the Yu (2014) study it was assumed that the long-term cooperation of ITOs is influenced by equipment / investments and information sharing. These factors are influenced by trust and mutual dependence. Gorla and Somers (2014), modeled user satisfaction influenced by the quality of service, perceived usefulness, and extent of outsourcing.

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In the model of Adams *et al.* (2013) investigated the impact of strategic supplier, purchasing development level and purchasing complexity on relative organizational behavior. The three-tier ITO satisfaction model by Gonzalez *et al.* (2015) presents the impact of technological, strategic, and economic benefits on ITO satisfaction.

The studies present various approaches to IT outsourcing modeling. However, they indicate the legitimacy and advisability of using structural modeling to solve complex research problems in relation to IT outsourcing. Structural models indicate a positive or negative influence of factors and the size of the influence of individual factors on the modeled values. The use of the structural model allows to explain the studied phenomenon in a situation where the relationships between the factors are not directly observable. Dependencies that cannot be directly observed exist in IT outsourcing.

## **2. Materials and Methods**

From a methodological point of view, the following methods were used in the preparation, conduct, and development of the research, critical study of the subject literature and descriptive analysis, empirical and formal methods. While collecting the data, the research tool was a questionnaire, while the data were analyzed using statistical methods. To construct the research model and test the research hypotheses, one of the methods of modelling structural equations was used - a technique in the field of multivariate data analysis.

The data for testing hypotheses was obtained by the method of a diagnostic survey, in which the questionnaire technique was used. The research was conducted in 2016 using the CATI (*Computer Assisted Telephone Interview*) method. In total, research material was obtained covering 200 large Polish or foreign organizations (with their headquarters or branch in Poland) that use the IT outsourcing service in their activities. The study was purposeful and targeted at large organizations using IT outsourcing. 200 organizations participated in the study, including 196 business entities and 4 non-governmental organizations and state administration institutions (according to their first indication). 196 companies participating in the survey accounted for 14.3% of the population of large business entities using IT outsourcing. The licensed applications were used to develop, analyse, and graphically present the research results by MS Excel version 16.9 and Statistica version 13.1.

### **2.1 Problem Description**

The idea of using IT outsourcing assumes the improvement of the efficiency of the company's operations assessed with the benefits achieved using this service. However, the improvement of the company's efficiency does not mean the outsourcing of all IT activities (total outsourcing). A certain percentage of specific IT activities is externalized (selective outsourcing). Its size depends on the variables

that are hidden. Latent variables can be estimated through the values of observable (explicit) variables.

In a broader sense, the research problem concerns the advisability of using IT outsourcing. In a narrower sense, the problem consists in determining the impact of selected variables on the predicted amount - the level of ITO measured by the percentage of activities performed using ITO. It is proposed to solve the presented problem using structural modeling, in particular the PLS-PM method (*Partial Least Squares Path Modeling*). The proposed model is a soft model that allows us to study the relationships that occur between variables not directly observed. The structure of the constructed model is two-level hierarchical. Initially, the data was standardized. The PLS-PM modelling assumes the creation of two models, internal, describing the relationship between exogenous causal variables and the endogenous effect variable, and external, measuring exogenous and endogenous variables based on a survey. The proposed model is based on factor analysis, in particular confirmatory factor analysis, where it is assumed that there is a certain set of factors influencing the observed or predicted quantity. The model convergence was obtained in 10 iterations.

Model relates to a variable that is essential to the level and scope of IT activities that are externalized and is the percentage of IT activities externalized. The variable is a latent / latent quantity, it consists of observable variables - individual externalized IT activities. These are activities such as application development / modernization/ update, end-user support, data input / collection / processing, staff / client training, system implementation / modernisation, hardware maintenance, software maintenance, operation system, concluding transaction, programming, security, network services, telephone client support and e-business solutions.

### ***2.1.1 Hidden variables influence the ITO level***

Reasons for using IT outsourcing (onshoring and offshoring) - Why does the organization use or intend to use ITO? What is the organization's motivation to use the ITO service?

Benefits achieved through IT outsourcing – What will the organization get from it?

- The risk of using IT outsourcing (onshoring and offshoring) - What are the risks for the organization associated with the use of ITO?
- Factors influencing a successful/beneficial relationship with the service provider - What should be the right relationship between the service provider and customer? What characteristics should this relationship have?
- Factors determining the choice of an IT outsourcing provider - What should be the characteristics of the service provider that is most appropriate for the organization?

Hidden variables were selected based on a literature study in which IT outsourcing models were created (Gonzalez *et al.*, 2010; 2015; Lacity *et al.*, 2016; Kim *et al.*, 2013; Adams *et al.*, 2013; Gorla and Somers, 2014).

The listed factors are complex and not directly observable. We can characterize them by their components. The above-mentioned factors consist of 6 to 11 components (explicit variables), a total of 60 variables. They are also in mutual relation to each other, that is, an increase in the level of some variables may cause an increase in some and at the same time a decrease in the level of other variables. The use of IT outsourcing was measured by the percentage of externalized IT activities, the scale was divided into 6 percentage ranges: 0%, 1-20%, 21-40%, 41-60%, 61-80%, 81-100%. The level of other explicit variables was assessed on the seven-point Likert scale, with answers from 1 to 7, supplemented by the answer 8 – “I don’t know”, where 1 means “unimportant at all” and 7 – “very important”.

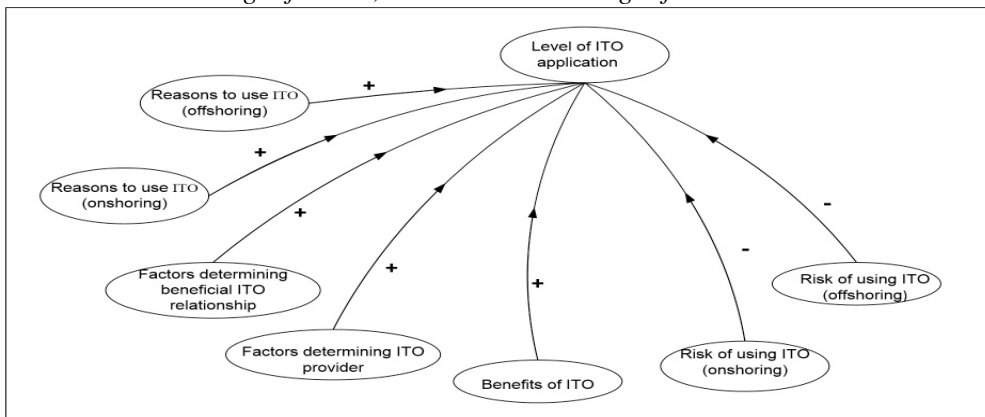
## 2.2 Hypotheses

Considering the presented problem three research hypotheses were formulated.

- H1: The level of ITO use will be influenced by the assumed variables: reasons for using ITO (onshoring and offshoring), benefits achieved thanks to ITO, risk of using ITO (onshoring and offshoring), factors influencing a successful and beneficial relationship with the service provider, factors determining about choosing an ITO supplier.
- H2: The level of externalized IT activities will be stimulated by the factors: benefits achieved through this service, reasons for using ITO (onshoring and offshoring), factors of a successful relationship with the service provider, and factors determining the choice of an ITO service provider.
- H3: Risk factors of using ITO (onshoring and offshoring) will have a limiting influence on the level of externalized IT activities.

Figure 1 shows schematically the dependencies included in the hypothesis - a simplified ITO level model.

**Figure 1.** Simplified ITO use level model with hypothetical assumptions, where: + means the stimulating influence; - indicates a limiting influence



Source: Own creation.

### 3. Results

The research was aimed at clients of ITO services (in onshoring and / or offshoring). However, some of them were also national or international ITO service providers. Table 1 shows the numerical breakdown of organizations by ITO customers and suppliers at national and international level.

**Table 1.** Number of clients and IT outsourcing suppliers at national and international levels

Clients		Providers	
National level	International level	National level	International level
188	28	11	4

*Source:* Own creation.

In the survey, ITO clients with domestic service providers were by far the largest number (92%). 8% of the surveyed companies used offshoring. Preliminary studies showed that some of the clients are also providers of this service, therefore the research questionnaire was supplemented with questions addressed to ITO providers. Service providers at the national ITO level accounted for 5% of all surveyed enterprises, and at the international level - 1.5%.

The average percentage of outsourcing applications was 38.4%. with seven types of activities below and above the average. The number of studied IT activities was 14, of which the sourcing rate of seven activities was below and seven above average. The most frequently outsourced activities were software maintenance and implementation/ modernization of the system, i.e., activities related to the introduction and maintenance of hardware and software, not related to the company's core activity, and the least frequently performed transactions and data entry/ collection/ development, i.e., related to company finances or related to its core activities.

The hypothesis was verified based on real data. The hidden variables in the ITO level model are reasons for using IT outsourcing *onshoring*, reasons for using IT outsourcing *offshoring*, benefits achieved thanks to IT outsourcing, the risk of IT outsourcing *onshoring*, the risk of IT outsourcing *offshoring*, factors influencing a successful/beneficial relationship with the service provider, factors determining the choice of an IT outsourcing provider. The estimated variable is the level of externalized IT activities. At the outset, the quality of the representation of the individual primary variables (answers to the questionnaire questions) by latent variables determining the factors influencing the level of ITO use was determined (Table 2).

The values of  $\alpha$ -Cronbach and the Dillon-Goldstein statistics exceed 0.7, which proves the coherence of the variables at an acceptable level. Then, the correlations of

primary variables with the created indices were determined. Hidden variables are reflective, i.e., the hidden value reasons for using ITO (onshoring and offshoring), ITO risk (onshoring and offshoring), factors affecting a favourable outsourcing relationship, factors determining the choice of supplier, ITO benefits are reflected in the measured observable variables.

**Table 2.** *Input Consistency (Ability to Create Common Indexes)*

Variable	Number of primary variables constituting the index	$\alpha$ -Cronbach	Dillon-Goldstein's statistics
Reasons to use ITO (onshoring)	10	0.896	0.915
Risks of ITO (onshoring)	11	0.934	0.944
Reasons to use ITO (offshoring)	7	0.961	0.968
Risks of ITO (offshoring)	6	0.943	0.955
Factors determining beneficial ITO relationship	8	0.855	0.888
Factors determining ITO service provider	8	0.773	0.835
Benefits of ITO	10	0.838	0,873

**Source:** *Own creation.*

The loads of 8 primary variables out of 14 tested making up the level of ITO use are greater than 0.6, which means that their contribution is significant. The following variables make the greatest contributions: *end-user support* (0.760), *operating system* (0.742), *security* (0.719), *web services* (0.677), *application development / modernization / analysis* (0.646). These are the services that are most often and to the greatest extent used (percentage of use) by the surveyed organizations. They make up the basic activities in the field of the functioning of IT systems. The lowest contribution is from the transaction (0.133). This activity is part of the key activity, therefore, it is outsourced the least frequently.

All primary variables that make up the hidden variables: the reasons for using ITO (offshoring) and the risk of using ITO (offshoring) significantly influence these variables. The influence of primary variables that make up the hidden variables: the reasons for using ITO (onshoring) and the risk of using ITO (onshoring) is also quite large. The impact of primary variables that make up a favourable outsourcing relationship, benefits achieved through ITO, selection of an ITO provider, and activities performed with the use of ITO is lower. Parameters of the internal model of the ITO level are presented in Table 3.

The values of the charges are also shown in Figure 2 - the highest values of the charges, both positive - having a stimulating effect, and negative - limiting influence, are marked with a bold line.

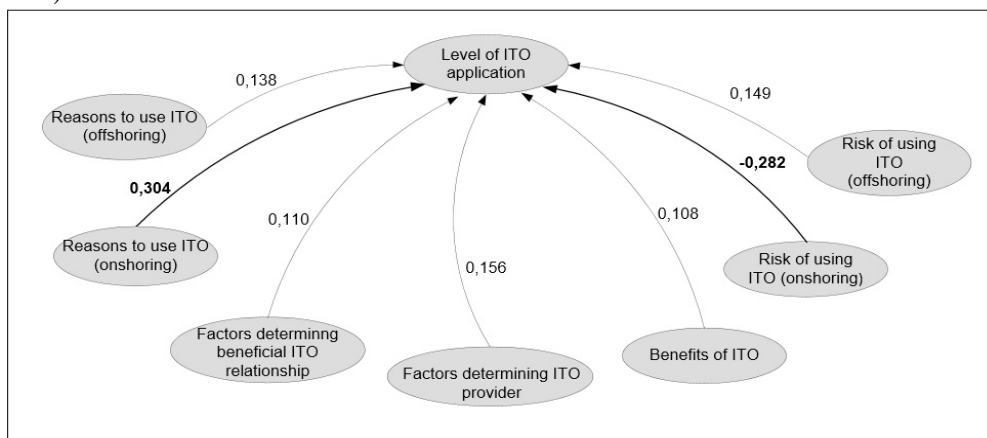


**Table 3.** Structural parameters of the internal model

Variable	Parameter value	Standard deviation	Test statistics	P
Reasons to use ITO (onshoring)	0.304	0.085	3.581	0.000
Risks of ITO (onshoring)	-0.282	0.077	-3.642	0.000
Reasons to use ITO (offshoring)	0.138	0.126	1.091	0.277
Risks of ITO (offshoring)	0.149	0.119	1.248	0.214
Factors determining beneficial ITO relationship	0.110	0.070	1.578	0.116
Factors determining ITO service provider	0.156	0.074	2.096	0.037
Benefits of ITO	0.108	0.076	1.429	0.155

Source: Own creation.

**Figure 2.** Loads with which hidden variables affect the estimated hidden variable - the level of ITO application (variables with the highest impact load in bold)



Source: Own creation.

All variables included in the model have an impact on the level of ITO use, some stimulating, others limiting, which was assumed in the first part of the main hypothesis. Table 4 shows the quality of the model fit.

The quality of the model fit is low/moderate because  $R^2 = 0,258$  - a quarter of the overall variability of the dependent variable is explained by the model. Variables: reasons for using ITO (offshoring), risk of using ITO (offshoring), factors influencing a successful and profitable outsourcing relationship, factors influencing supplier selection, and benefits of IT outsourcing do not contribute significantly to explaining variance - they have little impact on the estimated variable - the level of ITO use.

**Table 4.** *Quality of the model fit*

Latent variable	Typ	R <sup>2</sup>	Explained variation	Average redundancy
Reasons to use ITO (onshoring)	External	0.000	0.00	0.504
Risks of ITO (onshoring)	External	0.000	0.00	0.580
Reasons to use ITO (offshoring)	External	0.000	0.00	0.810
Risks of ITO (offshoring)	External	0.000	0.00	0.771
Factors determining beneficial ITO relationship	External	0.000	0.00	0.345
Factors determining ITO service provider	External	0.000	0.00	0.313
Benefits of ITO	External	0.000	0.00	0.399
Intensity of using ITO	Internal	0.258	0.09	0.351

**Source:** *Own creation.*

#### 4. Reference to Assumptions Formulated in the Hypotheses

In hypothesis 1, it was assumed that seven variables would have an impact on the estimated ITO level, which was confirmed.

In hypothesis 2, it was assumed that the benefits of this service would have a stimulating effect - impact 0.108, reasons for using ITO (onshoring and offshoring) - impact 0.304 and 0.138, factors of a successful relationship with the service provider and factors determining the choice of an ITO service provider, which was found confirmation - impact 0.110 and 0.156.

In hypothesis 3 it was assumed that the risk factors for the use of ITO (onshoring) would have a limiting effect, which was confirmed - the effect of -0.282. It was also assumed that the risk factors for the use of ITO (offshoring) would have a limiting effect, which was not confirmed - a stimulating effect 0.149. When analyzing the stimulating influence of the factors, the risk of using ITO at the international level, it should be noted that, first, the percentage of companies using offshoring in Poland is small, in the studied sample it was 8%. Secondly, if most large companies in Poland use domestic outsourcing, the increase in the level of offshoring risk may increase the level of outsourcing use, but at the national level.

Summarizing, it should be stated that hypotheses 1 and 2 were positively verified, while hypothesis 3 was partially positively verified.

The most important conclusion that can be drawn from these considerations is that the reasons for using ITO at the national level have the greatest stimulating effect on the level of externalized IT activities, while the risk of using ITO at the national level has the greatest limiting impact. In the model constructed and verified on real data, ITO causes and risk (both variables concern onshoring) have the most

significant impact on the level of outsourced IT activities. The more important the reasons for ITO (onshoring) are for a company, the more IT activities are outsourced. The more important ITO (onshoring) risk factors are for a company, the less IT activities are outsourced. Among the factors mentioned, the benefits achieved thanks to ITO have the weakest (stimulating) effect. How widely IT outsourcing is used in large organizations is more influenced by motivation and risk, and less benefits.

Analyzing in detail the reasons for ITO (onshoring) that had the greatest impact on the level of outsourced IT activities, these were in the following order: increasing the flexibility of the IT department, ability to focus on strategic issues, improving the quality of services offered, getting rid of routine and problematic activities, cost savings in using technology. The level of externalized IT activities is mostly influenced by strategic reasons. Among the detailed ITO risk factors (onshoring), the following factors had the greatest limiting impact on the level of outsourced IT activities: possible resistance from workers, failure by the supplier to comply with the contract, hidden contract costs, the service provider's company personnel qualifications and security issues.

Some of the factors mentioned are dependent on the recipient of the service (employee resistance, hidden contract costs), while others depend on the provider (non-compliance with the contract by the provider, qualifications of the service provider's staff, security issues). The high position of the factor possible employee resistance may indicate a lack of knowledge of the client's employees about outsourcing. And the hidden cost factor of the contract shows a possible inadequate outsourcing contract design.

The importance of factors dependent on the ITO service provider proves either the client's lack of competence or the negative previous experience of the client with outsourcing (unreliable contractor, lack of appropriate competences of the service provider). It should be noted that no cause-and-effect studies of factors influencing the level of IT outsourcing application were found.

## **5. Discussion and Conclusion**

In a broader sense, the subject of the article concerns the concepts and methods of management, and in a narrower sense, IT outsourcing. The progress in the field of information technology is leading enterprises to enter the "industry 4.0" path. This means an increase in the importance of IT applications, and thus IT outsourcing.

The implications of the presented research are twofold - theoretical and practical. The theoretical value lies in the fact that the presented research shows the cause-and-effect relationships of outsourcing decisions regarding IT services. Practical implications apply to companies-customers and companies-ITO service providers. The model shows factors that have a stimulating and limiting effect on the level of

ITO. By determining the load of the influence of individual factors, their importance in determining the level of ITO was found. This allows the management of an organization that uses ITO or has the intention to do so, and organizations that provide outsourcing services in the IT area, to pay attention to particularly important factors and to ignore factors that are not important.

Practical implications were highlighted in the publication by Yu (2014) when it was stated that long-term outsourcing relationships should have the character of a partnership and be enriched with innovative ideas. When considering the level of outsourced IT activities, Gonzalez *et al.* (2015) stated that higher levels of outsourcing contribute to greater service benefits and greater customer satisfaction. Therefore, a higher level of outsourcing is beneficial for customers.

In the ITO level model, significant relationships ( $p < 0.05$ ) were identified between the level of IT outsourcing used and reasons for using ITO onshoring (0.304) and ITO onshoring risk (-0.282). Also, moderate-level relationships between ITO levels and factors determining the choice of an ITO supplier (0.156), ITO offshoring risk (0.149), reasons for using ITO offshoring (0.138), factors influencing a favorable ITO relationship (0.11), benefits achieved through ITO (0.108).

Using structural modeling, it was possible to show the cause-effect relationships between selected hidden variables determining the use of IT outsourcing. The level of ITO use is higher the higher the reasons for using ITO (onshoring) are assessed and the lower the risk of ITO (onshoring) is assessed as well as the higher the reasons for using ITO (offshoring), choosing an ITO supplier, factors influencing a favorable ITO relationship, benefits achieved thanks to ITO.

The stimulating effect is mostly due to the causes of ITO (onshoring), and among them strategic reasons (the possibility of focusing on strategic issues, increasing the flexibility of the IT department, getting rid of routine and problematic activities, improving the quality of services offered), lower economic reasons (saving costs of using from technology). The limiting impact was to the greatest extent from strategic risk factors (qualifications of the service provider's staff, non-compliance with the contract by the provider, possible employee resistance), to a lesser extent economic (hidden contract costs) and technological factors (security problems). Schwarz (2014) lists similar factors, but their impact on the success of outsourcing was examined. The influence of strategic factors was noted by Burdon and Bhalla (2005) and Gonzalez *et al.* (2015), also in relation to the success of outsourcing. Pravesh *et al.* (2021) argues, however, that company-specific factors influence strategic IT outsourcing decisions.

In summary, the following conclusions can be drawn from the conducted research:

- Using the method of structural modeling, it is possible to construct complex models that define the dependencies existing areas of the organization's

- activity. Using SEM, a model of the IT outsourcing level in the organization was built and the factors influencing this level were determined.
- SEM is therefore an appropriate method for modeling IT outsourcing, because both the estimated variable and the variables influencing it are hidden (not directly observable).
  - When testing the model on real data from economic practice (200 large organizations, most of them in Poland), it was found that the level of IT outsourcing use in an organization is influenced by the following factors: reasons for using ITO (onshoring and offshoring), risk of using ITO (onshoring and offshoring), reasons for using ITO, factors influencing a favorable outsourcing relationship, factors determining the choice of an ITO supplier.
  - ITO causes have the greatest stimulating effect when the service is provided by a domestic provider, especially those of a strategic nature. Risk factors have the greatest limiting impact when the service is provided by a domestic provider, especially strategic factors. Strategic reasons should be primarily considered by company management when considering a decision to use ITO or to extend its scope. Strategic risk factors should be considered by the company's management when deciding to use ITO or extend its scope.
  - The management of IT service providers should also pay attention to strategic causes and risk factors.

The presented research results and formulated conclusions lead to posing new questions regarding the studied area. The publications in which the impact of various factors on the success of ITO were examined do not provide an unambiguous answer to the question about the most important factors - stimulating and limiting the success of ITO. These are the questions and prospective research problems as well as the directions for further research.

- Holistic approach to IT outsourcing, which would consist in analyzing the phenomenon from the client's point of view and would make it possible to explain and predict the decisions and results of IT outsourcing.
- Technological progress, especially the development of cloud computing, has a significant impact on the IT outsourcing industry. What factors influence the success of IT outsourcing provided as a service?

The prospects for the development of the IT services industry in Poland are good, which is why the issue of researching IT outsourcing is more current and necessary. The results of scientific research in this area may help in the development of the ITO industry in Poland, create conditions for its more dynamic development on a national, regional, and global scale, and optimize the use of resources.

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