

Reality of aligning IT with business in Czech organizations

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ABSTRACT

Information technologies (IT) supporting business strategies and business processes are often the most important factor for successful organizations. Aligning IT with the business depends on many factors, including communication and cooperation between the top management of organizations and the top management of IT departments in strategic decision making and planning.

This paper discusses the outcomes of a survey conducted in six hundred organizations operating on the Czech market. The aim of the survey was to verify whether organizations operating on the Czech market meet basic assumptions for business/IT alignment or, in other words, to find out the reality of business/IT alignment in practice.

KEYWORDS

Business/IT alignment, strategic decision making, IT investments, investment priorities, survey

1 INTRODUCTION

The purpose of information systems, and information and communication technologies (IS/ICT, or in short IT) is to support business activities. The way organization conduct business, with support from the IS/ICT, has evolved since the first enterprise application systems appeared on the market. Timely implementation of new technologies,

tools and applications often brings competitive advantage.

In 2003 N. G. Carr published a controversial article "IT Doesn't Matter" [1]. This article provoked a lot of discussions [2, 3, 4]. Conversely other articles [5, 6, 7, 8] and surveys [9, 10, 11] show that organizations which seek to achieve the alignment between business needs and IT capabilities, are successful in the current competitive environment. Business/IT alignment means that IT supports business needs and IT investments are made in accordance with business strategy. It is a long term process to achieve this.

Organizations go through different levels of maturity as a transformation to process management. An approach for assessing the maturity of business/IT alignment was described in an article by Luftman [12]. His alignment maturity model involves five levels of maturity described in terms of six evaluation criteria.

The model has been repeatedly tested. The first verification was performed in 25 companies in November 2000 [12]. Other verification was performed for instance within European research in 2007 [9]. Six hundred and forty one companies from seven countries participated in this research. Its goal was to find rules for business/IT alignment, and to specify a guideline that can help to understand how alignment can be achieved in practice. From the final conclusions of this research, it was clear

that business/IT alignment is a complex and a multidimensional matter.

Our team followed the research results that the most important prerequisites of a highly aligned organization are:

- an integrated business and IT strategic planning processes,
- a good understanding of the IT impact on the business.

Within the survey we verified if organizations operating on the Czech market meet assumptions to achieve some level of business/IT alignment maturity and what priorities they have when deciding on investments in IT.

2 SURVEY STARTING POINT

The starting point of the survey was the current grant project, "Advanced Principles and Models for Enterprise ICT Management". This grant project is tackled by the members of the Department of Information Technology at the University of Economics in Prague. Our team deals with new principles and models for enterprise IT management. Some results of our work were published for instance in several articles [13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23].

Within this project we are working on the proposal of the IT performance management model. The model is permanently verified in a practice and adapted to changing business environment. One of the most monitored aspects of IT is its efficiency. IT efficiency reflects business/IT alignment and reflects how close business and IT managers are in strategic decision making. Our survey covered several research issues. In this paper I comment only on part of the survey which focuses on the strategic level of management.

3 SURVEY METHODOLOGY

Information, the way in which organizations implement decision making and planning processes, may provide important data for modification of our model. As our model is conceptual, covering organizations of all sizes and industry sectors, we needed to perform a wide national survey.

3.1 Data Collection

On the basis of initial offers of several professional companies, we contacted the Czech company "Ipsos Tambor, s.r.o." (<http://www.ipsos.cz>). This company is a part of an international company Ipsos (<http://www.ipsos.com>) with offices in 66 countries. The selected company has more than thirty years of experience within research realization. The company was responsible for compliance with the structure of organizations surveyed. The company used the computer-assisted telephone interviewing method for data collection. Data was collected on the basis of a questionnaire. All interviewers received the questionnaire with detailed instructions on how to proceed with the interview. All interviews were monitored. The survey was performed in October 2010.

3.2 Data Sample

The total number of surveyed organizations was six hundred. This number was limited by time and the financial demands of data collection. Organizations were selected, by quota sampling, with the following criteria. The survey had to cover different industry sectors, but a third of all surveyed organizations should be so-called highly dependent on IT organizations. These are banking and

insurance, utilities, telecommunications, government and public services.

The second restriction was that organizations operating in the IT industry were not included in the survey. These organizations could misrepresent results because they see the relationship between IT and business differently.

The survey had to cover organizations of three sizes according to the number of employees: 10 – 49, 50 – 249, 250 and more. As we expected that the results of our survey would be most interesting for middle size organizations, organizations with 50 – 249 employees were preferred.

3.3 Questionnaire Structure

Although the questionnaire had a lot of questions divided into six sections, this paper focuses only on selected questions from the first three sections, which are related to the topic of this paper.

The first section included questions designed to detect characteristics of the organizations examined and their respondents:

- the number of employees,
- the organization's industry sector,
- establishment of the organization,
- respondent's job position.

The second section included questions about strategic decision making:

- How often is IT strategy and its implementation discussed by the top management of your organization?
- Who makes decisions about financial investments in IT in your organization?
- Who makes decisions about application architecture, i.e. which applications will be developed and purchased in your organization?

The first and second sections were similar in the fact that respondents always chose one item from the list.

The third section included question about investment priorities: "What are the organization's priorities for investment in IS/ICT?" From the following list of possible answers respondents chose up to three:

- BI (Business Intelligence),
- CRM (Customer Relationship Management),
- ERP (Enterprise Resource Planning),
- ERP II (Enterprise Resource Planning of second generation integrating ERP and other applications, i.e. BI, CRM),
- e-Business,
- ECM (Enterprise Content Management),
- specific applications,
- ICT infrastructure (information and communication technology – networks, servers ...),
- Information System Security,
- respondent does not know.

The aim of these four research questions was find out if the organizations deal with enterprise strategy, if business and IT managers participate in decision making about IT investments and application architecture, and which IT investments are prioritized.

4 SURVEY RESULTS

Respondents from organizations operating on the Czech market were contacted according to organizational structure. After their agreement to participate in the survey, they received a questionnaire and then, at the appointed time, they answered the questions in a monitored phone call. We received the data collected in the form of a Microsoft Excel table. The analysis was performed using the statistic functions of this software.

4.1 Basic Characteristics of the Data Sample

The total number of participating organizations was 600. The number and proportion of organizations according to the characteristics monitored were as follows.

Number of employees:

- 10 – 49: 100 organizations, 17%,
- 50 – 249: 380 organizations, 63%,
- over 249: 120 organizations, 20%.

Industry sector with:

- high dependence on IT (banking, insurance, utilities, telecommunication services, government and public services): 204 organizations, 34%,
- medium dependence on IT (retailing, real estate, accommodation and catering, manufacturing, healthcare, wholesale business): 202 organizations, 34%,
- low dependence on IT (stocking, culture and recreation, construction, education, mining industry, forestry and fishing, agriculture): 194 organizations, 32%.

Establishment of the organization:

- original Czech organization without offices abroad: 488 organizations, 81 %,
- affiliate of multinational organizations: 79 organizations, 13%,
- original Czech organizations now with offices abroad: 33 organizations, 6% .

Respondent's job position:

- member of top-management (non IT): 232, 39%,
- member of middle management: 98, 16%
- CIO: 148, 25%,
- ICT specialists: 122, 20%.

Dependencies between these basic characteristics and respondent's answers

on the research questions were then analyzed.

4.2 Data Analysis

The data analysis results are divided according to single questions.

Respondents had the following list of answers on the first question, "How often is IT strategy and its implementation discussed by top management of your organization?":

- At almost every meeting.
- Regularly according to the schedule, at least once a year.
- Sometimes – depending on the status of IT projects.
- Never.
- IT strategy is not established.

Four out of five organizations have developed an IT strategy, and discuss it at least once a year (35%), or occasionally according to the status of IT projects 38%), or in almost every meeting (11%). The remaining 16% of organizations have not established an IT strategy yet (11%) or they never discuss it (5%).

More often the strategy is being discussed, so better alignment between IT and business can be expected. The survey showed that the larger the organization, the greater the chance that the top management will also work with IT strategy (see Figure 1).

The probability that the IT strategy is developed and discussed (with varying regularity), is higher for organizations that are an affiliation of a multinational organization or have offices abroad. More detailed analysis showed that more than half of them were small organizations. A connection with the industry sector was not apparent.

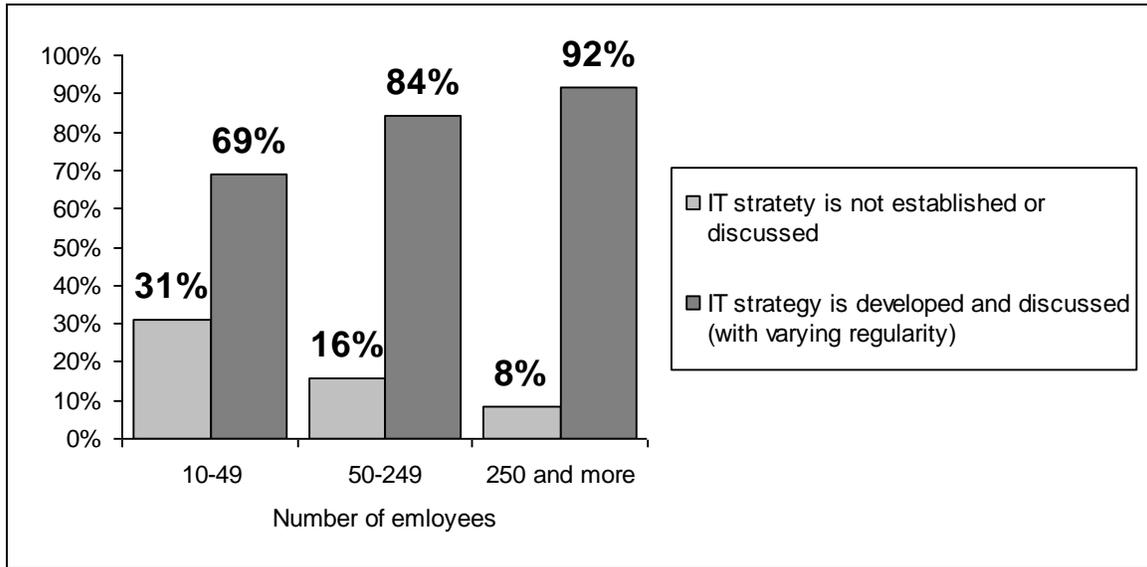


Figure 1. Comparison of organizations according to the frequency of IT strategy discussion

Respondents had the following list of possible answers for the second question, "Who decides on financial investments in IT in your organization?":

- CEO (chief executive officer) or top management of organization,
- CIO (chief information officer) or top management of ICT department,
- managers of business departments,
- top management, in cooperation with concerned business department,
- ICT management, in cooperation with concerned business department,
- different managers decide in different situations.

The largest group of respondents (75%) chose the first answer – CEO or top management of organization (see Figure 2). The remaining 25% of answers were divided among other options in the range from 2% to 9%.

Further analysis showed that the first answer proportion is slowly decreasing with an increasing number of employees. Conversely, the proportion of CIO and

top-management in cooperation with concerned business department increases with increasing number of employees. The probability that the top-management makes decisions about IT investments is doubled if the organization is not an affiliation of a multinational organization. Decision making on IT investments is moved from top-management to lower levels at multinational organizations. The top-management of organization takes the largest proportion at the organization with the low dependence level on IT.

As respondents were people with different job position, the dependence of two variables (respondent's job-position and his answer on the second question) was tested by Pearson's chi square test (with result 0.297 from the range 0 to 0.866) and Cramer's coefficient (with result 0.049 from the range 0 to 1). These results mean that respondent's job-position did not influence their answer.

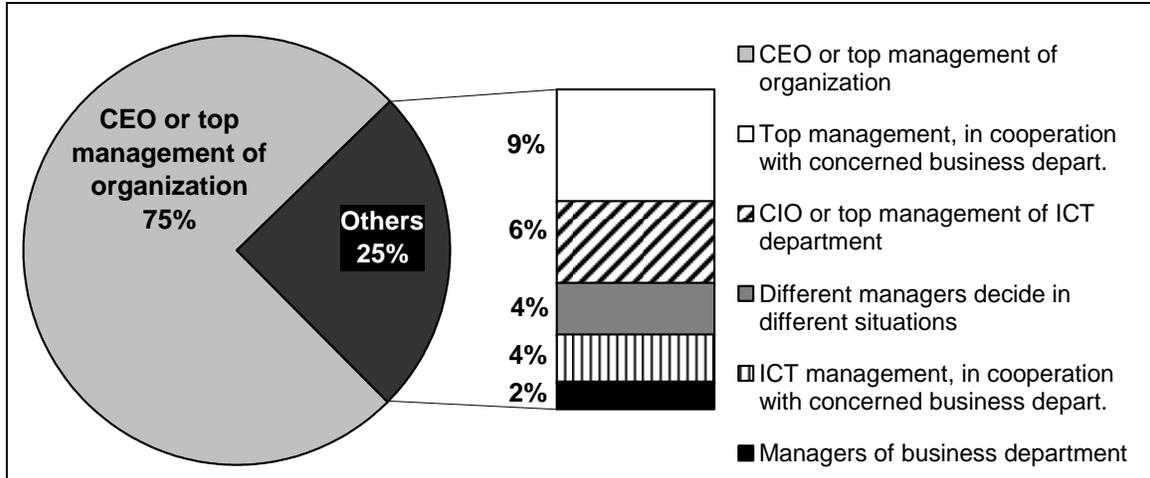


Figure 2. Proportion responses to the question "Who makes decisions about financial investments in IT in your organization?"

The third question, "Who decides on the application architecture, i.e. which applications will be developed and purchased in your organization?", has the same list of possible answers as the second question. The most common respondents' answer was "CEO or top management of organization" again (55%). With an increasing number of employees the proportion of this answer decreases, and on the contrary a proportion of "CIO or top management of ICT department" increases (see Figure 3).

Dependence on industry sector was not apparent. The proportions of single answers were similar at all sectors.

The analysis showed significant differences in results according to the establishment organization. The CEO makes decisions about application architecture in 61% of original Czech organizations, while the CIO makes decisions in only 14% of organizations. CIOs have the largest share (27%) at affiliates of multinational organizations, whilst CEOs make decisions at 20% of these organizations.

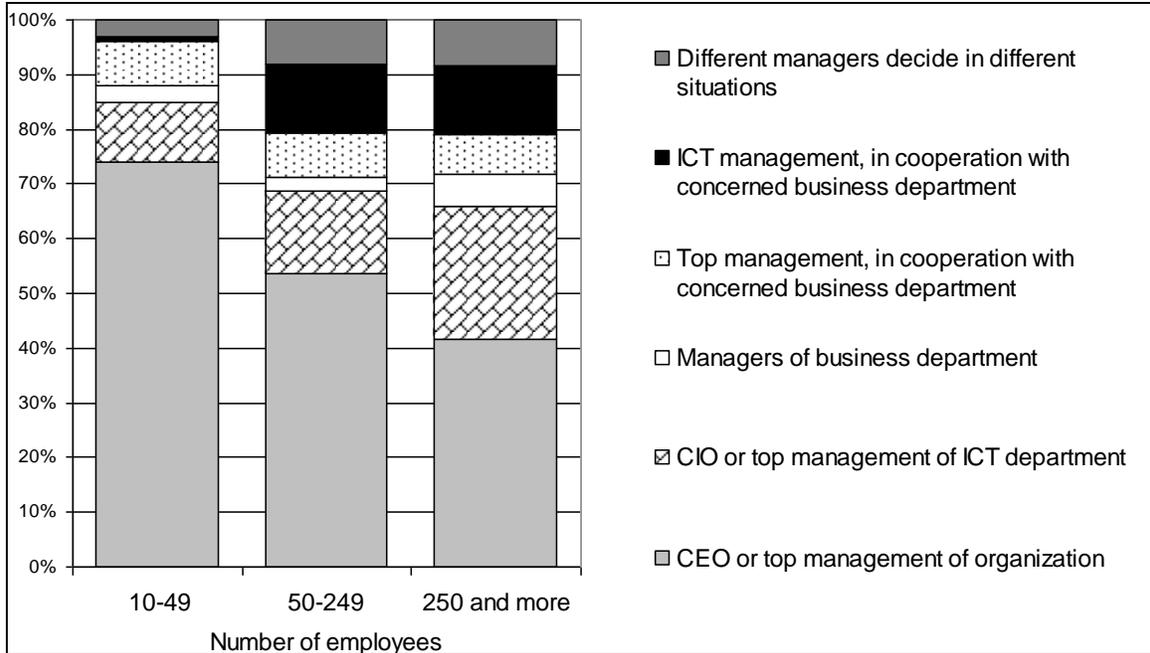


Figure 3. Proportion responses to the question "Who decides on the application architecture?" according to number of employees

Answers to the fourth question, "What are the organization's priorities for investment in IS/ICT?", consisted in the selection of up to three options from the list mentioned above and seen in Figure 4. Fifty-one respondents (9%) answered that they do not know.

Therefore the detailed analysis was performed with the sample of 549 respondents. Respondents who did not know the answer were primarily from original Czech organizations with low dependence on IT and with 50 – 249 employees.

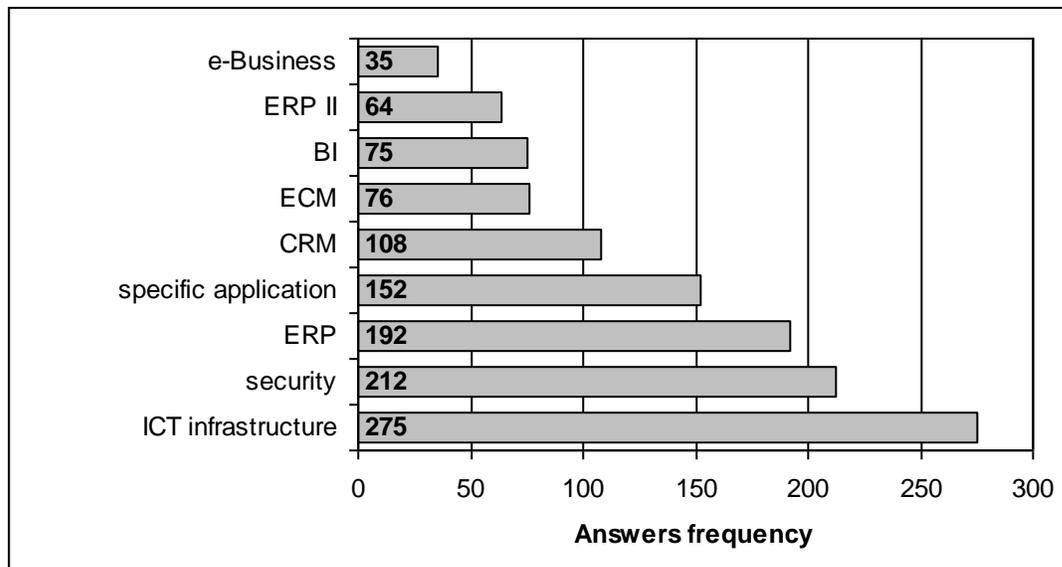


Figure 4. Investments priorities

Although respondents could choose up to three options, only 263 (48%) respondents used this opportunity. The second largest proportion of respondents had one choice (31%, 169 respondents) and finally two choice (21%, 117 respondents).

Frequencies of single options are shown in Figure 4. These results mean, that every second respondent marked ICT infrastructure as one of investment priorities. Security (39%) and ERP application (34%) followed.

The research question did not distinguish between new investments and maintenance investments. This is logical in terms of the budget administrator, who always has a certain amount of funds. Priorities should be determined completely. It is not possible only to consider investing in new

applications because the maintenance of existing ones must also be financially guaranteed. It is also evident that ensuring the operation of IS/ICT and its security has the highest priorities.

Detailed analysis results of option combinations correspond with previous result (see Figure 5). The order of the three highest frequencies in the case of only a single priority is: ERP, ICT infrastructure and security. The order of the three highest frequencies in the selection of just two priorities is ICT infrastructure and security, ICT infrastructure and specific application, ICT infrastructure and ERP. ICT infrastructure, security, ERP and specific application repeated again in the groups consisting from a combination of the three options.

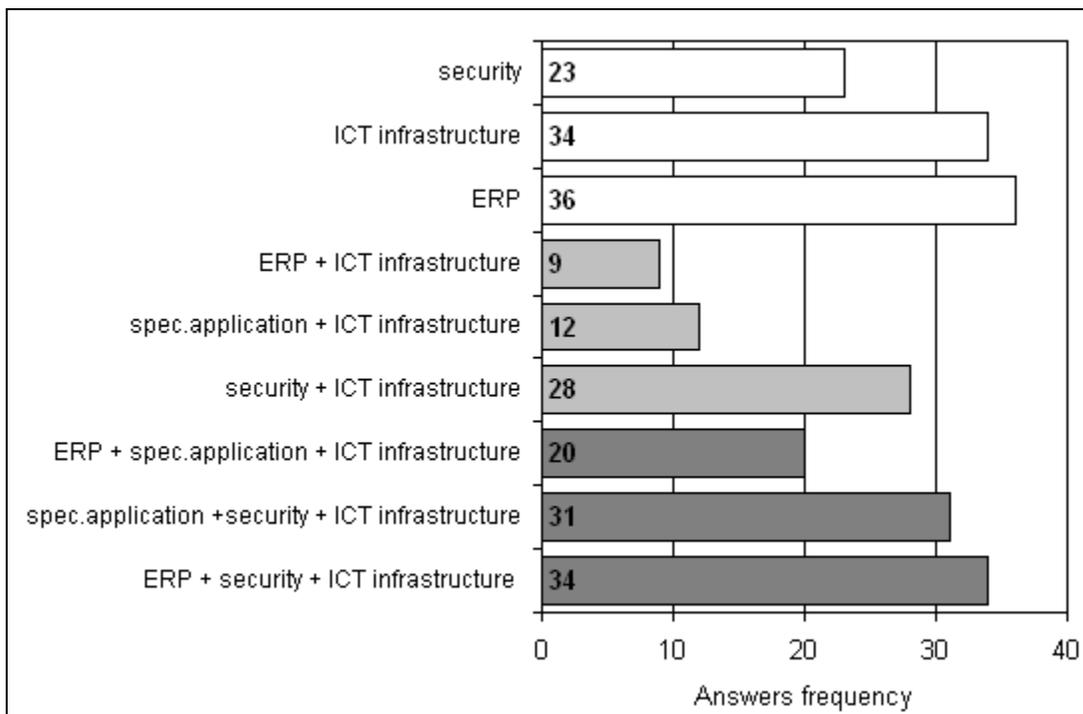


Figure 5. The most frequent combination of answers on the question “What are organization’s priorities for investment in IS/ICT?”

5 CONCLUSION

This paper describes our investigation of whether organizations operating on the Czech market meet assumptions for business/IT aligning. Our research questions were based on two prerequisites of a highly aligned organization which are integrated business and IT strategic planning processes and a good understanding of the IT impact on the business.

The results of the survey showed that organizations operating on the Czech market meet assumptions for business/IT alignment. We also identified a group of organizations which can achieve higher maturity levels. Respondents of these organizations answered that IT strategy is developed and is discussed at top management meetings (with varying regularity) and that the CEO, top managers and CIO cooperate in decision making about IT investment and application architecture. Respondents were from organizations with 50 and more employees, without offices abroad, operating in any industry sector.

ERP applications, ICT infrastructure and security are the main investments priorities in Czech organizations. A low priority of investments into ERP II, BI and ECM was surprising. Influences on this result may be the global economic crisis and efforts to reduce IT investments. Investments into strategic enterprise applications are not a condition for achieving some business/IT maturity level but promise that the business is under the control of IT.

ACKNOWLEDGMENTS

This paper was supported by the "Advanced Principles and Models for Enterprise ICT Management" grant, from the Czech Science Foundation, under the number P403/10/0092.

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